

B A S I C PHYSICAL TRAINING

BY
MARGARET MORRIS
C.S.M.M.G.

Fifty-five Exercises
in Diagrams and in Words

Introduction by
The Most Honourable
THE MARQUESS OF CHOLMONDELEY

Note on the Training of Girls
MARY WOLSELEY-LEWIS, B.A.

Note on the Training of Boys
R. St. G. T. HARPER, M.A.



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THIS BOOK IS DEDICATED TO ALL THOSE
WHO, REALISING THE INTER-DEPENDENCE
OF MENTAL AND PHYSICAL WELL-BEING,
ARE WORKING
TO RAISE THE STANDARD OF HEALTH

AUTHOR'S PREFACE

BASIC Physical Training aims at establishing health and correcting faults of breathing and posture, to counteract the lack of natural movement in civilised life. **BASIC PHYSICAL TRAINING**

The fifty-five exercises in this book are selected from the technique of Margaret Morris Movement: but as this technique consists of over 300 exercises this selection must not be taken as fully representing the method. **FIFTY-FIVE SELECTED EXERCISES**

These—the basic exercises—apply equally to boys and girls, to men and women, the anatomy and physiology of the lungs, heart and digestive organs, the circulatory and the nervous systems, being the same in both sexes. But for later training, involving more specialised muscle work, the difference between the masculine and feminine way of moving should be emphasised. For the bony structure and the muscles of the male and female body are, or should be, markedly different in their development. **DIFFERENCE IN TRAINING MEN AND WOMEN**

In the early training of young people, leap frog, head over heels, cartwheels and handstands should be included, as they are always very popular. Children always try to do them, so they may as well learn the right way from the beginning. I have not dealt with the teaching of the above in this book, as the ground is amply covered by books issued by the Board of Education. **GIRLS AND BOYS**

Men need much stronger physical work, developing muscular strength and endurance, and the training should be a preparation for athletics, boxing and games. **MEN**

Training on the women's side should be by dancing towards flexibility and ease of movement. Women should not have big muscles, for besides the obvious æsthetic reasons, there is the most fundamental reason that over-development of muscles makes child-bearing more difficult. **WOMEN**

FOR WHOM THIS WORK IS INTENDED This book is intended for—
 1. People who have had a few lessons and wish to practise the exercises either for health or as a foundation for more strenuous training.

2. For teachers and gymnasts who have attended M.M.M. Intensive Courses that they may be sure of teaching the most essential exercises correctly.

3. For M.M.M. students in training, to help them to understand and master the basis of the technique in as short a time as possible.

LEARNING THE EXERCISES The exercises are described in diagrams and in words, and their effects and uses given. But it is not expected that the full benefit will be derived if the exercises are learnt only from the book. Those for whom circumstances make it impossible to get any instruction, can take a special correspondence course arranged in connection with this book. But if they wish to continue training for a higher standard, they should study "The Notation of Movement,"* because in this system of notation, the very smallest detail and expression can be accurately written. Teachers leaving the school have successfully studied for a higher diploma by means of this notation.

LYING EXERCISES The breathing exercises and the lying pelvic exercises will be found most suitable in convalescence after illness, or surgical operations, but there are many other exercises for this purpose.†

I cannot emphasise too strongly that in the above conditions, or in chronic ill-health, general debility or after middle age, *no* exercise should be taught or practised except with the authority of a physician or surgeon. Our teachers undertake such cases only under medical direction.

ACKNOWLEDGMENTS My thanks are again due to Betty Simpson, my assistant director, for her help in compiling the word descriptions of the exercises, and to Isabel Jeayes for correcting the proofs.

I am indebted to :—Raymond Duncan for the "Basic Held Positions" which he collected from Greek vases in various

* "The Notation of Movement," Margaret Morris (Kegan Paul, 2s. 6d.).

† "Maternity and Post-operative Exercises," Margaret Morris (Heinemann, 7s. 6d.).

parts of the world.—Miss M. Randell (Sister in Charge of the Massage School at St. Thomas's Hospital) under whom I trained, on whose suggestions the pelvic exercises are based.—Lord Cholmondeley and R. St. G. T. Harper for their assistance in the selection of the exercises that form this Basic Physical Training. Also to several of my teachers and many medical men and athletes who have at various times made suggestions and criticisms which, together with my own personal experience, have caused important changes and additions to be made to the exercises during the past twenty-seven years.

For the "Eye Mobility" exercise I am indebted to Miss Beswick, who explained to me the importance of exercising the muscles of the eyes as well as the rest of the body. Miss Beswick's work in correcting defective sight by exercises is based on the theories of the late Dr. W. H. Bates of U.S.A.

It is essential for the success and continuance of any method of physical training, to combine stability of foundation and purpose, with adaptability and openmindedness. For the life of the method must depend on its power to adapt itself to meet the ever-changing conditions of life and the requirements of modern human beings.

MARGARET MORRIS.

31 CROMWELL ROAD,
LONDON, S.W. 7.

March 10th, 1937.

INTRODUCTION

IN writing an introduction to this book, I am actuated by a desire to see a standard system of physical training throughout the country. We could then all help each other, and an instructor or instructress could take on any pupils, no matter where, and their training could be continued on the same lines on which it had been started.

First. Can we find a British method that could be used ?

Second. Can we find a system that will suit young, old, schoolchildren, invalids, mentally deficient, delicate people and would-be athletes ?

I emphatically answer " Yes " to both these questions.

In Miss Morris's " Basic Physical Training " you have a system which most continental nations would have adopted years ago if they had known it. It has the great advantage of being able to hold one's interest and to encourage one to continue to progress to attain the various standards, that follow on after these, the most fundamental exercises. For the complete method can be developed either on the athletic or the æsthetic side.

But as the exercises given in this book are a *basis* for all physical training, any established method can be supplemented by exercises from this system.

With the aid of this book, with its clear illustrations, one can learn the system without any or with very little instruction. Teachers can keep their minds refreshed by frequent revision, and such revision is very important in maintaining a high standard of work.

Having practised this Basic Physical Training for several years myself, I know the great benefit I have derived from it. If I had wanted further convincing I had only to see a team of young people trained in this method and compare them with those who had done other systems, or none at all, to realise the advantages.

So my great hope is that this British method will be made use of on a large scale, so that Miss Morris will have the satisfaction of knowing that millions instead of thousands are benefiting in health and strength by her life's work in evolving a method of physical culture suitable for all types. For it is at long last admitted that physical education (which combines mental with physical training) is a thing we cannot do without if we want to hold our own with other nations in physical fitness.

CHOLMONDELEY.

HOUGHTON HALL,
NORFOLK.
January, 1937.

NOTE ON THE TRAINING OF GIRLS

It is a great pleasure to me to record my strong sense of the value of the Margaret Morris Movement training as a contribution to physical culture in the case of girls, and of the help which this clearly written account of the methods of the movement may be to teachers. I have seen the good effect of the Margaret Morris Movement on improving posture, an all-important factor in the health of girls, as well as in their good appearance, for which also the stress laid on the æsthetic side on grace and ease of movement is essential. I am convinced that the association of breathing with all exercises is of great moment. I feel that Miss Morris' willingness to co-operate with other Schemes of Physical Culture marks her movement as a contribution of the greatest benefit to national health and especially to the work done in girls' schools.

MARY WOLSELEY-LEWIS,

*Late Headmistress of
North Foreland School for Girls.*

March, 1937.

NOTE ON THE TRAINING OF BOYS

It is with pleasure that I take this opportunity of expressing my great admiration for the Margaret Morris system of Basic Physical Training. Both as schoolmaster and athlete I have had opportunities of studying and applying her system. Just now, when this problem of physical education is taking so prominent a place in the deliberations of our statesmen and ourselves, I hope that this "All-British" system, thought out to suit British needs and British tastes, will be given fair consideration in competition with the many from other countries.

As the result of several years of using the Margaret Morris exercises with boys of seven to fourteen in my school, I recommend them with the greatest confidence and enthusiasm: in fact, in the light of considerable experience of a number of other systems, I consider them far the best I have come across.

The main point that I would stress is that it is possible, by the careful application of the different grades of the exercises to sustain interest and enjoyment in what is customarily regarded as one of the duller items of the curriculum. The superiority of these exercises has been obtained by the inspiration which lies behind their preparation. Such is their construction that the mind as well as the body is exercised in the performance of even the simplest of them. "Vain repetitions" of a single movement, or even a short series of movements are avoided. Where in other systems it is necessary to do one exercise for legs, another for arms, another for head, and so on, in this system a single exercise, which may take several minutes to perform once, will probably include the majority of the muscles of the body, and the brain as well! The splendid practice this gives in co-ordination of mental and physical effort has, in some cases, produced spectacular improvement in a boy's work as well as

in his physique, and in almost every case a course of these exercises produces increased control, confidence and all-round efficiency.

On first acquaintance with them I have known many adults express the opinion that the exercises would be far too difficult for children to learn. Experience has proved that this is by no means the case. In fact, there have been instances of apparently slow and stupid boys grasping the work particularly quickly, to their great benefit.

What I have said about Preparatory Schools would apply equally well to Public Schools, in fact the exercises can be adapted for those of either sex and any age.

In every case, whether at school or later, the exercises can, and should, be used as a BASIC TRAINING for more advanced physical endeavours, whether these are to take place in the gymnasium, boxing ring, or on the track or playing field.

R. ST. G. T. HARPER.
Olympic Athletic Team, 1932.

March, 1937.

CHAPTER I

GENERAL AIMS OF BASIC PHYSICAL TRAINING *

BASIC Physical Training has evolved from the method of physical and mental training known as Margaret Morris Movement, which has a history of twenty-five years.

BRIEF HISTORY OF M.M.M.

It started entirely from the æsthetic side; as I was a dancer and an artist.

I rebelled against the artificial technique of the Italian Ballet School, and began to evolve a technique that would give all the possibilities of movement (such as spring and balance) without artificialities or contortions, and so allow a true freedom of expression. In the course of training numbers of people, I became more and more aware of the imperfections of most human bodies, and of the absolute necessity of correcting these, improving the breathing capacity, and strengthening weak muscles, *before* strenuous and complex movements were attempted. From this I became interested in the remedial possibilities of the work as well.

Corrective exercises have, of course, been used for many years—with excellent results when persisted in long enough—but they were terribly boring to do (consisting mostly of single movements isolating muscular activity) and getting patients to continue treatment has always been a problem. Also the question of breathing was almost ignored, which, being essential to life, should be of the first importance.

About ten years ago it became evident to me that, as everything in nature is of such perfect harmonious design, and our own bodies anatomically masterpieces of balanced construction, it followed logically that all movements per-

* "Basic Physical Training," an article by Margaret Morris. Reprinted from the *Journal of the Army Physical Training Staff*, 1936, by kind permission of the Editor.

formed for the establishment of health and the correction of defects, *must* combine the æsthetic as well as the medical values of movement.

In order to be able scientifically to realise this combination (my previous experience having been artistic, and my ideas on curative exercises entirely intuitive) I took the full training in Swedish Massage and Medical Gymnastics at St. Thomas's Hospital, qualifying as a Chartered Masseuse in March, 1930. Since then most of my time has been given to developing the remedial sides of the work, both medical and orthopædic.

HOW BASIC PHYSICAL TRAINING EVOLVED

In the last few years, however, the terribly low standard of physique of the nation as a whole, and of the male population in particular, so impressed me, that I began to consider how I could make use of my medical experience in a practical way by selecting essential health and corrective exercises to form a basic physical training. Such a training to lay the foundations of health, and be a preparation for any other harder physical training.

In this work I have had the co-operation of athletes and experts in games and physical culture, who have studied the method and tested the exercises themselves. So this basic physical training which we are presenting now, is not merely theoretical, but the outcome of over twenty years' experience and experiment with all kinds of people.

We do not claim that the movements are specially original. In dealing with such a concrete form as the human body, this would be absurd, as every possible movement must have been tried at some time or other of the world's history, but the way in which positions are combined, and the composition of sequence of movements may be comparatively new, and have a more carrying form than has been used before, and so be more interesting to do, and the value more easily appreciated.

In this way, and in the choice of the essential aims, and the balance of mental and physical work, I think we have a contribution to offer. For even our most elementary exercises are composed, the smallest movement having a definite scientific aim, at the same time being a part of the composi-

tion. The memorising of the sequence of the movements combines mental with physical activity, and the pleasure taken in their performance stimulates both mind and body, with a resultant co-ordination of mental and physical faculties that makes for general efficiency in mental as well as in physical work.

It is not possible here to describe the method in detail, but it includes the *beginnings* of all bodily movement, and muscular control, and forms a starting-off point from which all the possibilities of muscular activity can be developed to the greatest advantage.

At the beginning of training, the LUNGS, the ABDOMEN and the FEET receive the *first* attention. These most essential parts have been badly overlooked in the past, largely because exercises that concentrated on breathing, abdominal or foot movements, *were not capable of any spectacular development.*

I print the names of these parts in capitals, because their efficient functioning is unquestionably *of the first importance for success in any form of physical activity whatsoever.*

There are, of course, many other things in physical training of great importance, but I would call the *lungs*, the *abdomen*, and the *feet* the most important links in the chain, because they are apt to be the weakest. Of what use are the strongest muscles, or the most perfect muscular control, if one of these links gives way? This should be borne in mind by the physical training enthusiast, because the temptation is to do most often what is done most easily, and to develop more and more the stronger parts and overlook the weak.

The following are the main aims in this Basic Physical Training. They are, of course, all closely inter-related, but for practical purposes of getting the quickest and best results it has been found convenient to tabulate them in order of importance.

SPECIAL AIMS

1. BREATHING

The development of the lung capacity by special breathing exercises, and by timed breathing with *all* the exercises, either

“Deep,” “Synchronised” or “Expiratory,” according to the kind of movement, and the amount of exertion involved.

2. ABDOMINAL MUSCLE TRAINING

The strengthening of the abdominal muscles by their constant use in the special method of breathing (the retraction of the lower abdomen on *expiration* using particularly the transversus muscles) by special exercises using particularly the oblique muscles, and all the trunk rotators, and, lastly, by graduated work for the recti muscles.

Note.—Over-emphasis is often laid on the development of the recti muscles, and these may in consequence become *over thickened*, which does not make for efficiency in action. Besides, the recti are the muscles most used in daily occupations, the obliques hardly working at all except in definite trunk or pelvic rotation, so these, and the transversus, should receive the first attention.

3. STRENGTHENING AND SUPPLING OF THE FEET

A. The strengthening of the arches of the feet (transverse and longitudinal) by development, firstly, of all muscles directly concerned, particularly the interossi, and secondly, all postural muscles.

B. The using of the feet in walking exercises in the normal straight position (so that the joints of knees and ankles work in alignment) with the proper use of the heel as a lever, emphasising the transference of weight from the heel to the toes.

C. The mobilising of foot and ankle joints to give the full range of movement.

Strains and tearing of ligaments are much more apt to occur when the ligaments are too tight, or adhesions are present, limiting movement.

Note.—A certain amount of exercise should be done each day with the feet bare, as only when the toes are completely free can the small intrinsic muscles work fully, and on their proper functioning depends the maintenance of the anterior transverse arch of the foot.

Besides special foot exercises, any balance exercise per-

formed with bare feet will use the intrinsic muscles strongly, as the toes inevitably spread and grip the ground in the effort to balance.

4. POSTURE

The teaching of correct posture, training the postural reflex so that the standing position can be maintained without fatigue.

Correcting any weakness or defect, such as "hollow back," "flatback," or exaggerated tilt of pelvis.

Strengthening all postural muscles (if posture is bad, in lying exercises first) and particularly the extensors.

Note.—It is most important that the extensors, particularly of the back and arms, shall be developed *before* strong work for the flexors is given,

- (a) because it is the extensors of the spine that maintain good posture.
- (b) because all occupations, carpentering, gardening, etc., use mainly the flexors, and most muscular training, apparatus, lifting weights, etc., develop the flexors often at the expense of the extensors.

5. STRETCHING

The gradual stretching of all the tendons of the body, particularly the ham-strings.

Note.—It is most important that this should be done *before* the flexors are developed, otherwise the strengthening of these muscles contracts the tendons, seriously limiting the range and speed of movement.

6. RELAXATION

The teaching of conscious relaxation, to develop the power of unconscious relaxation essential to any quick muscular action; speed in movement depending on the instantaneous and simultaneous alternation of muscular contraction and relaxation.

Through graduated exercises in muscle control, this becomes spontaneous, so that eventually every movement is

performed with the minimum of effort and the maximum of efficiency.

7. MOBILISING OF ALL JOINTS

The mobilising of all the joints of the body to give the full range of normal movement of which each individual is capable, with particular attention to the cervical and lumbar regions of the spine, and pelvic joints.

Note.—The opposition movement of the body (as right arm and left leg forward in running) involving strong trunk rotation is the basis of almost all free movements calling for strength or speed.

Again, the mobility of the spine should be established *before* strong muscles are built up that may limit movement in that region.

Once the body has been thoroughly stretched and loosened, and a good degree of mobility obtained, it is quite possible to *keep this suppleness and consequent wide free range of movement*, while building up muscles to any strength desired.

8. BALANCE

The teaching of balance progressively, from lying (to strengthen back muscles with spine in good position) and normal standing to difficult balances on one leg, the idea being to obtain a fairly high standard of control of the balance mechanism on the ground, before balancing at a height is attempted.

9. SPRING

To teach easy spring and good landing, that strain on knees, ankles and feet, may be avoided when more difficult springing and jumping is tried.

GENERAL AIMS IN ALL EXERCISES

SENSE OF RHYTHM AND TIMING OF MOVEMENT

This is admittedly essential to success in any form of athletics, boxing or games. It is, of course, one of the hardest things to achieve, but the foundation can be laid in

the basic physical training, though specialised study in relation to each particular form of movement is necessary in later stages of training.

SENSE OF BODY POSITION IN SPACE

The development of the sense of body position in relation to surroundings, people, and the aim in view.

This is intimately linked with the sense of timing, and is as important, and about as difficult to realise fully. But again the foundations can be laid by accuracy in the basic exercises. Placing the limbs at an exact level in relation to the body, feeling the position on the limbs and body in space while balancing, taking up a prescribed position quickly and accurately.

CONTINUITY OF MOVEMENT

The joining of one movement to another with the greatest ease, so that there is the least possible expenditure of energy in the transition from one position to another.

It is necessary to explain that the above aims of "rhythm" and "continuity" do *not* mean that all the exercises are done to even swinging rhythms. A very important feature of the exercises is that they are most carefully thought out to begin the training (though in a simple form) of varied rhythm and timing.

Some movements are quick, some slow, with sudden stops—accents, and held positions, involving different degrees of muscular tension, and varying speeds of movement.

Captain Webster has pointed out that constant practice of exercises with an even swinging rhythm is not a good preparation for events where the rhythm is uneven, and varied, and leading up to a maximum effort, as a punch in boxing.

All the exercises are composed to special tunes that are chosen to suggest the kind of movement required (quick, slow, strong, etc.), and the *way* in which they should be performed.

When possible, a piano or a drum accompaniment is used,

and special gramophone records have been made of the music and the drum rhythms.

The music and the drum rhythms are certainly a great help in getting concerted rhythm, and maintaining the interest and enthusiasm of the class, but all the exercises can be performed to counting or clapping of the hands.

These basic training exercises, some of which were demonstrated at Aldershot on July 23rd, 1935, and of the aims of which I have here tried to give some idea, are, of course, only a very small part of the whole M.M.M. training—they are selected from the first three standards of “normal” exercises—of which there are nine standards. As I have already said, they are only intended as a *groundwork and a preparation* for any other form of training.

The later stages of M.M.M. technique bring in more and more advanced balance, spring, agility co-ordination, etc., developing strong, supple muscles, and the powers of endurance and concentrated mental and physical effort to a high degree.

Still, we do not for a moment claim that this technique gives all that is required for *every* kind of muscular development, as it does not aim at any *specialised* muscle building.

We believe in co-operation with all those who have the same objectives, even if they have experimented along other lines, and come to other conclusions. For the more one believes in one's own ideas, the more one should be ready to learn from others. So while hoping our contribution may prove of some use, we welcome any constructive criticisms or suggestions.

There is still so much to be done, and concrete results would be obtained far quicker by broad-minded co-operation and concerted effort. Physical training should be acknowledged as the greatest power the nation has, for raising the standard of health and efficiency.

CHAPTER II
FIRST OBJECTIVES IN TECHNIQUE
BREATHING, POSTURE, WALKING
BREATHING *

THE science of breathing is probably the oldest in the world, having formed a basic part of the religious and health cults of the most ancient civilisations.

But many fundamental truths have to be rediscovered and presented in a form intelligible and acceptable to the modern mentality. The speed of this mechanical age makes us disinclined to be interested in, or give time to, anything that is not obviously of immediate utility. Therefore much of value has been lost that we could have learnt from the more contemplative, though perhaps less practical, peoples.

The breathing described here has formed a basic part of Margaret Morris Movement for the past fifteen years, with certain modifications to suit different types of movement as described later.

Previous to this, for ten years I worked on the belief —(which is still very prevalent)—that it is inadvisable to breathe to any set rhythms, and that if plenty of varied and energetic movements are given, the breathing will look after itself, and a good breathing capacity be developed. Ten years' experience with all types and ages of people has shown me this does not happen, and the fifteen following years with the amazingly better results obtained, have convinced me of the necessity of teaching breathing before anything else, and making it an essential part of all the exercises, not only of the special breathing exercises.

Hardly anyone breathes fully naturally, and the large majority who start with poor capacity, flat chests, etc., do *not* improve except with systematic attention to respiratory movements. They may exercise conscientiously for years

* Reprinted by permission of Margaret Morris from "Breathing Exercises," published by Margaret Morris, 1935.

with little or no improvement in their breathing, and it is possible even to become a good athlete, and still remain flat chested and breathe badly. But in the end this leads to exhaustion when strenuous physical work is undertaken.

TO TEACHERS

I cannot emphasise too strongly the importance of teaching the breathing and getting the correct timing, *before* any new exercise is taught (not only the special breathing exercises), and insisting on the breathing being done with *each part* of the exercise (arms, legs, etc.) when these are taught separately. Then by the time the exercise is mastered the correct breathing will have become habitual, and will be found to assist the performance of the exercises. It is only when the teaching of the breathing is left till after the exercise has been learnt that it is found boring. For then, instead of being part of the exercise and assisting the performance of the movements, it is just an extra thing to remember, and is therefore apt to be forgotten.

If a pupil, by the fifth lesson, does not feel that the breathing is part of the exercises, and therefore fails to remember it, it is the fault of the teacher for not having made clear the importance of the breathing, or made the teaching of it sufficiently interesting.

The above applies to every exercise, not only to the special breathing exercises.

TEACHERS AND PUPILS PLEASE NOTE

No exercise may be taught to (or should be undertaken by) any person over middle age, delicate, in convalescence, or suffering from any disability or complaint whatsoever, without the consent and advice of a physician or surgeon.

Where there is no medical adviser, a doctor who has knowledge of M.M.M. should be recommended.

THE IMPORTANCE OF BREATHING

Our life begins and ends with breathing. As long as there is breath there is life, yet how little attention people pay to this most important function. A human being can live for weeks without food, and for days without water, but not many

minutes completely without oxygen. One thinks of the food that one eats as nourishing the body and giving one strength and energy, but it is impossible to absorb the nourishment in the tissues of the body without oxygen. Oxygen is carried in the blood to every part of the body, and is essential to the combustion and assimilation of food substances.

I want to impress on the mind of everyone that *breathing* is an essential part, sometimes the most important part of both the "Normal" and "Remedial" M.M.M. exercises.

If the exercises are performed holding the breath or with the minimum of breathing, half the value of the exercise is gone; and if the chest is contracted and the abdomen sagging as well, the value of the exercise, however conscientiously performed, is *nil*.

The question of posture is inseparable from breathing as it is almost impossible to stand well and to breathe badly. But when the normal standing position is bad, special posture and often foot exercises as well, are necessary to correct it.

The object of breathing exercises is to fill and empty the lungs as completely as possible. As in normal, unconscious breathing we only use a small part of the lung capacity, and the majority of people take very little exercise to stimulate lung activity, the importance to health of doing special breathing exercises should be easily appreciated.

The form of breathing described here does not claim to be "normal breathing"; its function is definitely to ventilate every portion of the lungs, and develop lung capacity. But it follows the same physiological laws as normal breathing, only broadening and emphasising the natural respiratory movements. No muscular effort interferes with the descent of the diaphragm on inspiration, and the drawing in of the lower abdomen on expiration merely assists and accentuates the normal ascent of the diaphragm on expiration.

By systematic exercise the lung capacity is developed, and therefore the intake of oxygen is increased also in *normal breathing*, better enabling us to meet varying and sudden demands. When the "Basic breathing" has been learned, it will be found quite easy to perform it while walking or standing in the street without being at all noticeable. And

in this simple way, health can be enormously improved without devoting any time exclusively to exercises, though if five minutes are given morning and evening to other exercises as well, of course, quicker and better results will be obtained.

The proper aeration of the lungs is essential to health for *everyone*, but more particularly for all those who lead sedentary lives.

For athletics and games, breathing and the strengthening of the feet is of *supreme* importance, and should have the *first* consideration.

For it is only by careful attention to breathing at the beginning of training, and continued insistence on breathing throughout training, that those who start with poor breathing capacity can hope to develop the staying power necessary to achieve success in sports, athletics, or games. Many a promising young athlete is kept back by his inability to "stay the course." And numbers of athletes suffer from disabilities due to over strain, most of which could be avoided if the breathing capacity had been developed *before* strenuous training was undertaken.

As a preventive measure the value of breathing exercises has hardly been appreciated. Colds, coughs, influenza, and even serious respiratory diseases would largely be avoided by fully ventilating the lungs even once every day.

In reducing excessive deposits of fat, the increased intake of oxygen alone is of the greatest value, being so intimately concerned in the combustion of fat, and when combined with active contraction of the abdominal muscles, goes far towards reducing weight in that region.

If *ten minutes'* breathing with stretching and relaxing (in the open air) formed part of the *daily* routine of every school child, astonishing improvements in health statistics would inevitably result.

DIFFERENT TYPES OF BREATHING AND THEIR RELATIVE VALUES

With conscious effort the lungs can be expanded far more than they are expanded in normal breathing, and the intake of oxygen in consequence greatly increased.

The various types called "abdominal," "lateral costal," "upper thoracic," consist in emphasising the breathing in one part of the lungs more than another. This limiting of the expansion to one part is extremely useful in medical work where there is marked deficiency either in the bases or the apices, or lack of mobility in some part of the thoracic cage. But for general lung exercise for normal people *every part of the lungs should be worked*, and any method that neglects any part must be incomplete.

In medical and orthopædic exercises, more use could be made of localising and limiting the breathing to one portion of the lungs, or even to one lung. For it is possible with practice, in carefully chosen positions, to inhibit the working of one lung almost completely while fully expanding the other.

Breathing exercises are, of course, used in the treatment of scoliosis to expand the contracted side, but this could be developed a great deal more; in fact we are only at the beginning of the possibilities of treatment by combining specialised breathing with movement and held position.

The "abdominal" type of breathing is advocated by those who feel the filling of the bases of the lungs to be the most important. But there is a great danger in emphasising the pressing down of the diaphragm, as this forces the abdominal contents downwards and forwards.

I think one may, without exaggeration, say that, in the majority of adults the abdominal viscera tend to drop too low owing to a slack abdominal wall, or lack of tone in the intestinal muscle tissues; and therefore any exaggeration of the downward pressure is bad.

In the upright posture of the human, gravity is of necessity all the time exerting a downward pull on the organs of the body, so it is of the utmost importance that every conscious muscular effort in the pelvic and abdominal regions should be in the *upward* direction, bracing and pulling up, never pressing down.

Insistence on the drawing in and pulling up of the abdomen on expiration as described in "Basic breathing" is of the greatest value in the treatment of digestive and intestinal troubles.

While realising the danger of this downward pressure, it must be remembered that the bases of the lungs being their largest part, full expansion here is of great importance. But expansion of the bases is most complete if the *lateral* movement of the lower ribs is insisted on, rather than the downward movement of the diaphragm. And if the abdominal muscles are relaxed on inspiration the diaphragm descends freely and naturally, but *without* unduly pressing down the contents of the abdomen. While if emphasis is laid on so-called "abdominal breathing," it often happens that the abdomen is pushed forward while the lateral portions of the bases of the lungs are barely expanded at all. It should be easily appreciated how bad this type of breathing is for anyone with even a tendency to visceroptosis.

On the other hand, we have the people who, realising the dangers of "abdominal breathing," insist that the abdomen should be drawn *in during inspiration!*

A moment's consideration will show that this is not physiologically sound, as pulling *in* the abdomen on inspiration must check the normal descent of the diaphragm, and interfere with the complete filling of the bases of the lungs.

It is interesting to note that, whereas deficiency in respiration, particularly in women, used to be mostly in the bases of the lungs, at the present time it is usually the apices that are neglected. The fashion of standing with the chest flattened and the hips pushed forward is largely responsible for this.

In some old physiology books it is stated that men breathe mostly with the bases of the lungs and women with the apices! The reason for this was that the fashion of that day being to have small waists, the women wore such tightly laced stays that it was impossible to expand the ribs at all! And even when these were removed for a medical examination the muscles would be so atrophied and the thorax so constricted that probably the ribs would hardly move at all.

Anatomically, the thoracic structure and the organs of respiration being similar in men and women, it is of equal importance to both that *every* portion of the lungs should be used.

I have already touched on the possibility of facilitating

the action of one lung while inhibiting the other, to encourage mobility of the lungs generally, and for medical purposes.

As this is a comparatively new idea it seems necessary to say a little more about it, and to record here that it was Mr. McCrae Aitken, F.R.C.S., who pointed out that if the weight of the body is transferred to one foot, the lung on that side will expand much more fully than the other. This can be accentuated by lifting the elbow to flare the ribs on the expanded side, while drawing up the hip on the opposite side, the contraction of the intercostals and other muscles involved in the hip lifting, limiting the movement of the lung on that side. (See diagrams on pp. 138 and 140.)

Mr. Aitken explained this to me some years ago. I would like to acknowledge our great indebtedness for what has proved of inestimable value, both in normal and remedial work.

The exercise "Alternate lung breathing" combines the changing of weight from one side to the other with deep breathing, to develop more elasticity in the lung tissues for general use. I am convinced that the application of Mr. Aitken's idea on a large scale in certain medical as well as orthopædic cases, would have far reaching results.

Another method of breathing has recently been brought to my notice which deserves consideration, though I cannot agree with the originator, Mr. Arthur Lovell, that it is all sufficient in itself. It consists in concentrating entirely on trying to draw the air up into the cranial sinuses; the theory being, that if this is done efficiently, the proper filling of the lungs is inevitable.

Merely thinking of drawing the air up into the head, certainly tends automatically to draw up the chest and so facilitates the filling of the apices, but the lateral portions are not so affected. And as in a great many people the respiratory powers are quite undeveloped every part of respiration needs to be explained, considered, and practised, with special attention to the particular deficiency of each individual.

The question of the part played in respiration by the cranial sinuses should, however, be investigated farther.

If the lungs are fully expanded from the bases to the apices, the air being *drawn in through the nose with mouth closed*, it seems that the air should enter the cranial sinuses if there is no obstruction. But by conscious effort this can be accentuated and the soft parts of the nasal passages expanded. Respiration will be more complete if towards the end of inspiration the mind is concentrated on taking the last particle of air possible up to the root of the nose, feeling as if it were filling the whole frontal region right to the top of the head.

Stressing this part of breathing should be of great value in the treatment of nose and throat complaints post-operatively, and in some cases, might render operative measures unnecessary.

Little seems to be known and little research seems to have been made into the possibility of or the effect of full oxygenation of the cranial sinuses by respiration directed to that end, nor how far lack of ventilation in this region is responsible for ill health. But it seems reasonable to suppose that it must affect the nervous mechanism, and consequently to some extent the metabolism of the whole body.

FUNDAMENTALS OF BASIC BREATHING

It is best at first to think of the inspiration and expiration each in three parts, concentrating on each part in turn, but making them continuous one into the other.

Inhale always through the nose, but in most exercises exhale through the mouth.

POSITION

The best position in which to practise breathing to begin with, is on the back with the knees drawn up. A small pillow may be put under the head. The spine is thus kept in a good position without any mental or muscular effort, and the whole attention can be given to the exercise. Afterwards other positions may be used, sitting on a chair, on the floor with legs crossed, or standing (see starting positions for exercises, p. 112).

It is essential that the air should *always be taken in by the*

nose, or it is not fulfilling its proper function in breathing, of filtering, warming, and moistening the air. If, by reason of some obstruction or chronic catarrhal condition nose breathing is found difficult, a specialist should at once be consulted. In the case of children it is of the utmost importance to their development that any tendency to breathe by the mouth should at once be noticed and attended to.

INSPIRATION

On inspiration the abdominal muscles should be relaxed, since any contraction of the abdominal wall interferes with the normal descent of the diaphragm. If the lungs are expanded laterally so that the ribs are flared and the thorax lifted, there can be no sagging of the abdomen on inspiration and good posture is inevitable.

The soft parts of the nasal passages should be expanded on inspiration to facilitate the drawing in of the air. There must not be any *sniffing* in of air, or forced inspiration.

EXPIRATION

On expiration on the contrary, if as the lungs are emptied the abdomen is left relaxed, the thorax will be depressed and the abdomen *will sag*, therefore it is on *expiration that the lower abdominal wall should be contracted*, thus assisting the normal ascent of the diaphragm on expiration, and *maintaining good posture*. This produces a most valuable auto-massage of the intestines, the alternate descending of the diaphragm and drawing inward and upward of the lower abdominal wall encouraging intestinal peristalsis.

In normal breathing the air should be inhaled *and exhaled* entirely through the nose. In slow deep breathing this may still be done, and is advisable in all special relaxation exercises and to induce sleep. But in all breathing that is what we call "synchronised" or "expiratory," it is better to exhale the air through the mouth for the following reasons :—

REASONS FOR EXHALING AIR THROUGH THE MOUTH

1. Less resistance is met by exhaling through the mouth than through the nose.

2. A more complete expiration therefore is possible if the air is consciously blown out through the mouth at the same time as the abdomen is contracted and the thorax relaxed. (It is necessary that the teacher should observe the breathing very carefully inasmuch as a false appearance can be conveyed by pushing out the chest and holding the thorax expanded without any breath having been taken.)

3. The extent of inspiration can only be measured by the extent of expiration, which in turn can be appreciated only by the pupil breathing out through the mouth, as expelling the air through the nose is relatively noiseless.

4. The air cannot be as completely expelled through the nose as through the mouth. (This is proved by the fact that after exhaling through the nose as fully as possible, more air can always be expelled through the mouth.)

It should be remembered that in breathing, the emptying of the lungs is as important as the filling, as the more completely the lungs have been emptied, proportionately greater will be the intake of oxygen.

Strong exercises with bending and twisting of the trunk are not suitable for deep inspiration, so they are called exercises of *expiration*, as it is the expiration that is emphasised. The doubled-up position of the body assists by mechanical pressure the emptying of the lungs, the inspiration being largely automatic as the body is straightened. In such expiration the air can be expelled through the mouth more completely and with greater speed than is possible through the nose.

By slightly contracting the lips and blowing out the air with a soft whistling sound the muscles of the face are also exercised.

It is sometimes objected that it is not "natural" to breathe out through the mouth. I would point out that *no* organised method of exercise is "natural" in the sense of being what human beings do unconsciously like normal breathing. But if the pupils learn *always to breathe in through the nose*, and this habit is established in all exercises, there is no danger that breathing out through the mouth will ever become a habit in normal circumstances, *because it is a*

conscious effort and therefore much more trouble than letting the air out through the nose.

EXCEPTIONS TO BREATHING OUT BY THE MOUTH

All special relaxation exercises, any deep breathing exercises when a sedative effect is desired, and the outdoor walking exercise (so that the breathing may not be noticeable).

EXCEPTIONS TO CONTRACTING ABDOMEN ON EXPIRATION

All special "relaxation" exercises.

EXCEPTIONS TO BREATHING IN BY THE NOSE

In very strenuous and prolonged exercise such as athletics, vigorous games, and violent dancing, when the breathing must become more and more rapid, and also in swimming.

In such cases and for physiological reasons connected with the increased rate of respiration and heart action, and the need of the body for quicker intake of oxygen and quicker expulsion of carbon-dioxide, it is impossible, and not even desirable to continue breathing in by the nose.

ADAPTATIONS OF THE BREATHING

The breathing is adapted to suit different types of movement, and is arranged under three headings: "DEEP," "SYNCHRONISED," "EXPIRATORY." (See p. 113.)

POSTURE

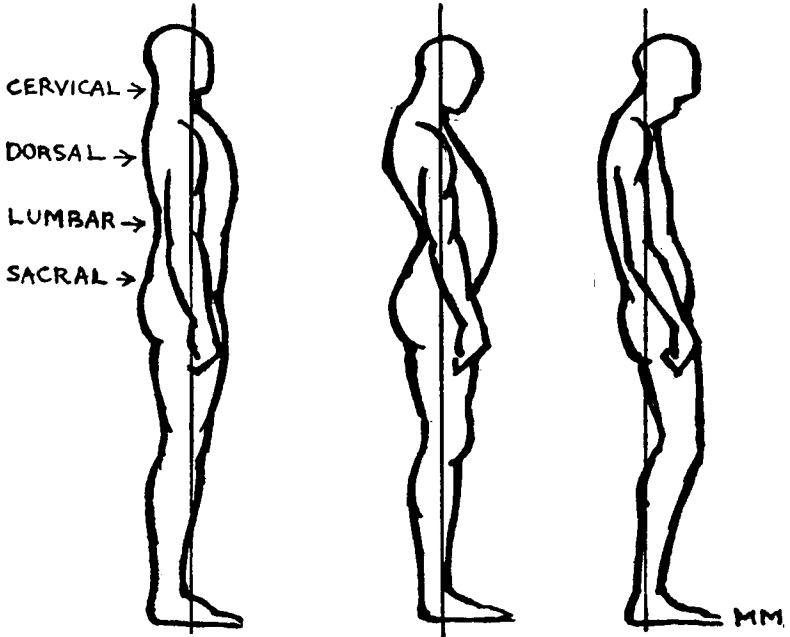
Good posture is of the utmost importance both in maintaining and re-establishing health, and the question of posture is really inseparable from that of breathing.

Posture diagrams are included as a guide both to pupils and teachers, to help them to notice and correct faults of posture in themselves and in others.

GUIDE TO GOOD POSTURE

1. The *ear, shoulder and hip bone* should be over each other.
2. If the body is correctly poised it is possible to raise and lower the heels at any moment without effort or losing balance.

GOOD POSTURE, TWO TYPES OF BAD POSTURE



Note the four physiological curves of the spine.

Hollow back and round shoulders (kypho-lordosis).

Flatback (may become a lumbar-kyphosis) and sagging abdomen (visceroptosis).

As will be seen from the diagrams, if the body is held in a bad position it is impossible for the lungs to function fully.

Also habitual bad posture leads almost invariably to sagging and displacement of the internal organs, and consequent disorders.

Note where the vertical line passes, and how the weight is placed in good and bad posture diagrams. A pole is useful for correcting and explaining the correct position.

The following is the best way of correcting faults of posture, working from the feet up.

1. FEET. Straight together, toes and heels touching, if balance is found difficult, a little apart but parallel.

2. KNEES. Straighten but do not *brace back*.

3. PELVIS. Tighten gluteal and lower abdominal muscles, tilting the pelvis *as required* for correcting "flat" or "hollow" back.

4. THORAX. Take a deep breath, expanding the ribs and the chest. Carry thorax forward till shoulders are over hip bones (the shoulders are most often carried too far back behind hips).

5. NECK AND HEAD. Straighten neck, drawing up head as high as possible, keeping chin *in*.

Continue the inspiration endeavouring to draw the air into the cranial sinuses, feel as if the air were filling the whole of the forehead to the top of the head.

On expiration begin by contracting abdominal wall as in "Basic breathing," but then *let whole body relax, the head dropping forward*. Repeat the correction as previously described. When the corrected position has been learnt, and can be maintained without undue fatigue, "Basic breathing" as described in standing should be done, and also "Spinal raising."

The relaxation of the body on expiration gives a period of rest, and is much less tiring than keeping a good position, as is necessary in the performing of the exercises.

There are many varieties and varying degrees of bad posture. The two illustrated are, I think, the most common.

In the descriptions of the breathing exercises a note is given of the best corrective positions in which to do the

exercises for "Hollow back" and "Flat back." Two special corrective exercises are also included.

WALKING

In good walking, the leg should be freely swung forward from the hip and the heel used as a lever, the weight being quickly transferred from the heel to the ball of the foot.

The progression should be smooth and easy, the body weight always being carried forward over the front foot.

In normal walking the heel of the foot touches the ground first, therefore in all "walking" exercises this natural rule should be kept.

If a "fancy" kind of walk (putting the toes down first) is practised, even although it may be gracefully performed, it will not help to improve the walk in everyday life, as it is quite impossible to walk "toes down first" for any length of time and with any speed.

There are still some people who claim that walking with heels down first is simply a bad *habit*; but the fact that *everybody*, walking unconsciously, adults or children, instinctively put the heel down first, even children starting to walk, is sufficient ground for calling it the natural way of walking.

I have not space here to discuss the muscle work of walking, but to explain briefly, as the foot is swung forward the muscles that dorsiflex the foot are in tonic contraction so that the heel automatically touches the ground first.

In order to put the *toes* down first, the above muscles have to be consciously relaxed and lengthened, which means that with every step an *extra* muscle action and ankle movement takes place. In quick walking it is quite impossible to get in this extra movement. If, however, the foot is slowly brought forward and *held* off the ground for several seconds, gravity will draw the toes down (I can only suppose this is how the error has occurred), but even in slow walking the foot is not held in front long enough for this to happen. Walking is essentially a progression by a series of *movements*; there are no static positions.

THE HEEL AS LEVER

The condition in which the toes do naturally touch the ground first in walking is known as "dropped foot" and is very troublesome to cure. But though the heel should touch the ground first, it must be remembered that it is only to be used as a *lever*. The weight must not be kept on the heel but quickly transferred to the ball of the foot, the centre of gravity being carried steadily forward.

FEET STRAIGHT

To walk with grace and the minimum of fatigue the feet must be kept absolutely straight, as even a slight turning out of the feet upsets the mechanics of the knee and ankle joints. For the joints to work without strain the knee must bend in line with the ankle over the foot, so that if the foot is turned out the knee should bend obliquely out over the foot in the direction in which the toes are pointing.

KNEES AND HIPS

The knees should never be quite *fully* extended in walking or a jarring is caused, giving a jerky effect which is both tiring and ugly. At the same time it is not good to walk with the knees *bent*. The leg must be swung freely from the hip and the knee should feel as if it were extended.

BODY AND HEAD

The body must be kept erect, the thorax being carried forward over the hip bones as in a good standing position. The body must on no account be held stiffly; the shoulders must swing (but very slightly) to balance the forward swing of the opposite leg (right leg, left shoulder forward). If the arms are free they should also swing slightly in opposition to the legs.

The head must be carried high, but the chin in, not poking forward.

When walking is done in this way, particularly if it is combined with deep breathing, it is a most excellent exercise.

The health will benefit greatly if whenever walking in the

open air rhythmic deep breathing is practised. It can be done quite inconspicuously, and besides improving the lung capacity, and greatly increasing the daily intake of oxygen, the mechanical pressure on the intestines by the retraction of the abdomen on expiration has a beneficial effect on the digestion and improves the circulation. Described on p. 118.

CHAPTER III

FURTHER OBJECTIVES IN TECHNIQUE

GENERAL MUSCLE CONTROL, SUPPLENESS, RELAXATION,
TIME AND RHYTHM, ACCURACY, BALANCE, SPRING

GENERAL MUSCLE CONTROL

By that is meant the conscious and unconscious control of the alternation of muscular contraction and relaxation. Of course, muscle control is inseparable from posture and breathing, as reflex and voluntary muscle action is involved. But it will be found more convenient to think of them separately, as good breathing and posture should have become habitual (and therefore unconscious) fairly early in training, whereas muscle control becomes more and more specialised as the technique progresses, and therefore has to be thought of throughout the period of training.

On the proper functioning of the muscular system depends not only the ease of movement and conservation of energy essential to any sustained muscular effort, but also the avoidance of fatigue in daily life. All bodily movement should be performed with the least possible expenditure of energy.

The muscles not in use should be relaxed, and therefore at rest; the antagonists, or opposing muscle groups, should offer just the necessary resistance—no more. Most people waste a tremendous amount of energy because their nervous system is constantly sending messages to contract, to muscles that should be relaxed, with the result that most of their lives they are tense and strained, instead of relaxing while in repose, as any healthy animal does.

Sometimes special relaxing, "letting go," exercises have to be given, but it is a different aspect of relaxation that I wish to speak of here, and one that concerns every phase of movement.

It is often not realised that besides the relaxation that is essential for rest, in order to perform any series of quick, vigorous movements (boxing, rowing, fencing, etc.), it is necessary that all muscles concerned should relax immediately and automatically on transition from one position to another.

All awkward movement is due to tenseness on transition or to the necessary relaxation coming too slowly after the movement. The perfect alternation of muscular contraction and relaxation is the secret of all good movement, and can be acquired by practice on the lines indicated.

It is necessary to concentrate on getting the main movement or position *strong and clean*, as it is much easier to relax from a strong muscular contraction than from a weak one, the difference in muscular sensation being more obvious.

Natural beauty of movement can only come from strength, NEVER FROM WEAKNESS. The muscles must be healthy and well-developed in order to be able to perform even relaxed movements. Muscle "sense" can only be developed by use of the muscles, and strong contractions and static muscle work, as in the "Basic held positions," are necessary for muscle growth.

At the same time, it must be remembered that too much insistence on contraction without the necessary period of relaxation, and on continued heavy muscular work (particularly in early training), will make the subject *muscle bound*, which is fatal to speed and efficiency in movement.

The "Basic held positions" should be strong, but the relaxation as complete as possible while changing from one position to another. In the above-mentioned positions, it is not easy to obtain this relaxation, because the trunk rotators have to work strongly to turn the trunk, *while* the other muscles not in use are relaxed, but this makes them particularly valuable for teaching muscle control.

Soft or "half relaxed" movements need much more specialised muscle control, but if the control of alternation of strong movements with relatively complete relaxation is practised first, the more subtle half-relaxed movements will be found a natural progression. On the other hand, if the

half-relaxed movement is made the *first* aim, the result can only be weak, uncontrolled jerky movement, lacking in continuity.

IMPORTANCE OF TRAINING THE ABDOMINAL MUSCLES

The foregoing applies to the muscle action of the whole or any part of the body. But the muscles that are of the most importance to develop for athletics or games, as well as for general health, are the abdominal muscles.

The viscera being kept in position by the abdominal wall, and good posture depending almost as much on the proper tone and functioning of these as of the spinal muscles, the supreme importance of abdominal exercises should be obvious.

If the necessity of training the abdominal muscles is mentioned, one finds that to most people it means exercise of the recti muscles, such as lying on the back and raising the legs slowly from the ground.

These kind of exercises are not only unnecessary, as the recti are the abdominal muscles that come into play most easily in daily actions, but may actually be harmful, as unless the pupil is carefully trained and sufficiently strong, the lifting of both legs may cause strain in the lumbar and sacro iliac joints.

Also it should be noted that thick, heavy muscles on the abdomen are not desirable, they should be strong and elastic, but *flat*, not thick.

Surprise is often expressed that fat collects so quickly round the abdomen (women especially are concerned at losing their figures), and it is mostly quite unnecessary once it is realised that fat collects round muscles that are out of action, and that the abdominal muscles (especially the *obliques*) get little or no exercise in the daily life of the present civilisation. So the reason that fat collects there is obvious.

For people who do not play games, one may say that their oblique muscles get practically no exercise at all. The arms and legs get a certain amount of exercise in walking and in daily actions, but the trunk is never twisted or the pelvis turned from side to side, and these are the only movements

that use the oblique muscles fully. That is why so many exercises with twisting at the waist are given, and also so many positions using the right arm and left leg. The "Basic held positions" are particularly valuable in this respect, using all the trunk rotators both moving and statically.

In breathing, the contraction of the lower abdominal wall on expiration should always be remembered. This uses especially the transverse abdominal muscles, and keeps the abdomen flat between the iliac crests.

SUPPLENESS

I put suppleness next, not because it is of supreme importance, for with good muscle control it is possible to give the *effect* of suppleness to an amazing degree, but because it is possible to develop suppleness gradually, if it is tried for fairly early in the training.

A little time should be given daily to exercises that stretch the ham strings and adductors of the legs, that stretch the pectorals and increase the range of the shoulder joint, that increase the mobility of the dorsal and lumbar spines, that stretch the cervical spines and increase the range of head movements.

Plenty of stretching for the above-mentioned parts comes into the exercises in this book, if they are done with stretching as the objective, but so often the exercises are only half done, with the result that no stretching takes place at all. Some judgment is required to draw the line between reasonable stretching and over-stretching.

It is always easier to stretch in, or just after, a moderately hot bath (excessively hot baths should not be taken), and it should be remembered that it is the *gradual daily stretching* that gets results. A violent stretching will probably result in so much stiffness that any movement will be acutely painful for many days.

The part of the body where suppleness is of the most importance is the lumbar region. By moving the thorax on the pelvis and the pelvis on the thorax laterally, by all twisting and tilting movements of the pelvis, suppleness together with muscle sensibility and control may be developed.

Lumbar mobility exercises are invaluable for regaining and establishing health, for when the loosening movements are combined with the retraction of the abdomen, the alternately compressing and stretching of the larger vessels, by stimulating the digestive tract, the liver, indeed all the abdominal organs, assists the elimination of waste products from the body, and goes far towards curing constipation.

This mobility of the lumbar region is much more a matter of *muscle control* and relaxation than of suppleness in the spine, and therefore it can be attained with practice.

These pelvic and trunk exercises contain all the pelvic and body movements in simple forms.

CONSCIOUS RELAXATION

Relaxation is, of course, inseparable from suppleness (as indeed from all phases of muscle action), but conscious relaxation should be thought of as a separate objective as well.

Complete relaxation is only possible lying down, the whole body being supported as for the "Easy relaxation" exercise, and everyone would benefit by practising this for tiredness or sleeplessness, but the relaxation we speak of in connection with standing exercises can only be a *relative* relaxation. It is even more difficult to achieve, as it is a relaxation of only certain muscles at a time.

Graduated muscle control should be aimed at. (1) *Obvious tension and relaxation* should be learnt. (2) *Conscious full relaxation* should be the objective. (3) The control of *partial relaxation*, which is the secret of all smooth continued movements, should be achieved.

This last is far more difficult than full relaxation, as it is a matter of quick nerve response and muscle sensibility, and may take long training to achieve.

TIME AND RHYTHM

Time and rhythm are, of course, intimately related and interdependent, but for purposes of practice it is useful to study them separately. By "time" I mean the actual number of main beats in a bar, and the actual timing of movement in relation to those beats, so that each position is

complete on the actual beat on which it is intended to be, and that positions are held exactly the intended number of beats and no longer.

There is often a tendency to anticipate or to lag behind according to the temperament of the individual. The correct timing of movement must be consciously striven for to begin with, but must, of course, become instinctive before even an exercise can be said to be well performed. Some people have a natural good sense of "time," but others have to work hard to achieve the same result.

In either case, the "time" of each exercise should be carefully learnt, as the correct timing forms a large part of the value of the exercise, both as a mental exercise and as a training in muscular control.

By "rhythm" I mean something more personal, more instinctive. It is possible to have good rhythm of your own and yet be "out of time" with the music.

Good personal rhythm is essential in games or athletics, but I believe that it is just as important to the happiness of all human beings, as on your own rhythm of movement depends your capability of adapting and timing all movements in daily life.

There are two ways in which the sense of rhythm may be developed.

1. Practice of rhythms without music, either taking an exercise and doing it in your own time, emphasising the rhythm as you feel it, without being worried as to the actual number of beats—or creating your own rhythms and improvising in that rhythm with stamping, clapping or beating of drums.

2. Practice of rhythms with music—in this case following the rhythm of the music—not worrying about accuracy of movement so much as conveying the *character* of that rhythm—whether soft, smooth, jerky, strong, or whatever the main characteristics of the music happen to be.

ACCURACY

Accuracy of movement is closely associated with accurate timing of movement, but again it is as well to make a study

of accuracy of movement separately, *as well as* in relation to any given rhythm or music.

That is to say, each part of an exercise should be studied separately; every movement of the arms and hands, the legs and feet, the head and body, should be analysed and practised before a glass, the aim being to get each position exact, the level at which each position occurs, *i.e.*, shoulder, waist, head, etc., accurate, concentrating on the accuracy and precision of position only for the time being, in order to train the muscle sense of position in space, develop co-ordination between muscle groups, and quick muscle response to nerve messages.

BALANCE

The balance mechanism is, of course, involved in all movements performed in the upright position, but when balance is spoken of as a particular objective, a much higher development of this faculty is meant than is normally employed, or is considered necessary in daily life.

For efficient functioning of mind and body, every human being should be capable of doing *more* (in any direction) than he expects to be called on to do. For instance, many people have only just sufficient control of their balance mechanism to get them through life without falling down, and if any emergency arises which calls for any extra control of balance, such as jumping out of the way of a car, or slipping on orange peel, they are not equal to the occasion.

It seems obvious that, for practical purposes, it is more generally useful to be able to balance well *on the ground* than on a bar. While admitting that balancing at a height may have a value for developing "nerve," I would emphasise that it should only be introduced in the later stages of training, the main reason being that the effort to keep the balance at any price often results in accentuation of faults of posture when the pupil is poorly developed and little trained.

In this Basic Physical Training, balance is taught progressively from the simplest co-ordination in lying, to sitting and standing, till movements involving complex co-ordination can be performed with ease.

The value of a high standard of balance as general preparation for athletics, games and boxing, hardly needs to be pointed out.

SPRING

To spring high or leap off the ground, landing with ease and precision is not necessary for the normal individual, but a certain amount of muscular elasticity is needed even to *walk* with an easy springing step.

The simple springing and hopping exercises given here are sufficient training in spring for ordinary purposes, but for the athlete much regular practice of special exercises is needed.

In every case, the important thing to remember is that *ease of landing* must be mastered *first of all*. The height of the spring depends mainly on the development of the quadriceps. This can be achieved by gradually increasing the work for these muscles, not only by springing, but by slow knee-bending and stretching exercises as well, gradually increasing in severity.

But it is dangerous to increase the height to which you can spring into the air unless you are trained to *land correctly*, otherwise a jarring of the spine and straining of the ligaments of the feet may occur, and sometimes a bad sprain of the ankle or knee. Correct landing consists of distributing the shock, not only by taking the body weight first on the ball of the foot, but letting *the ankle and knee bend at the time of landing*. They may be immediately straightened again; indeed the necessary recovery of balance depends on quick tensing of the muscles following the partial relaxation on landing.

In practising, first exaggerate this relaxation, letting the knees and ankles flex to about a right angle, then tensing the muscles straightening the leg or legs. The same rule applies whether a spring from one foot to the other, or on to both feet, is being performed.

The second important thing to remember, to avoid any undue strain on ankle and knee joints, is that the flexing of those joints must take place with the said joints in *alignment*, that is to say, bending in the direction (in relation to each

other) in which they are mechanically meant to bend, *i.e.*, if the foot is turned out, the hip must also be outwardly rotated so that the knee will bend in the same direction as the ankle joint, and conversely.

If the foot is straight on landing, the knee must not be allowed to fall *out* or *in*, but bend straight forward over the foot, or a strain of ankle or knee is apt to occur.

If these two rules are followed, there is no danger in the practice of springing and jumping exercises. The legs will gradually be strengthened and the necessary reflex muscle control developed.

CHAPTER IV

LEARNING AND TEACHING THE EXERCISES

SOME readers of this book will be already experienced teachers, while others may be students, or athletes, or people merely doing the exercises for health, so the following notes only give the salient points that will be useful to anyone learning or teaching these exercises. They do not attempt to cover the ground of theory and practice of teaching, but only to give the method of approach that has been found to give the best results.

Note that when learning an exercise alone it is essential to practise it before a looking glass. The book should be open where it can be seen, and each position practised separately, looking in the glass, then with the eyes shut trying to "sense" the muscle work and get the feeling of the position without seeing it.

1. EXPLAIN AIM AND CHARACTER OF EXERCISE

First notice the character of the exercises (whether quick, slow, smooth, etc.), read carefully the "uses" of the exercise, and the general notes about it. Note the tempo, rhythm, and kind of breathing.

In teaching, explain all the above before beginning the exercise, not at too great length (in the case of children only *very briefly*), and guard against long explanations with the class standing. They should always be seated in good and comfortable positions.

2. DEMONSTRATE EXERCISE

Next, if teaching, demonstrate the whole exercise with music if possible, two or four times through, according to

length of exercise. Emphasise the breathing, point out the *main aim* of the exercise and any special difficulties to be overcome.

3. EXPLAIN AND TEACH THE BREATHING

Notice the *kind* of breathing, whether "deep," "synchronised," or "expiratory," whether evenly in and out during the whole exercise, or whether some breaths are shorter and some longer in order to synchronise with the movements. Practise the breathing first (with the music if possible) *before* learning the exercise.

In teaching, explain the foregoing very clearly, and always make the class practise the breathing alone with the music (reminding them of the contraction of the lower abdominal wall on expiration) *before attempting to teach the exercise*. This point is insisted upon because one sometimes hears teachers say that it is so difficult to get pupils to remember the breathing. This is either because the breathing has been badly taught, or because it has not been taught till *after* the exercise has been learnt. The pupils in this latter case are very apt to resent being asked to remember something else just when they begin to feel they know the exercise.

If, on the other hand, the breathing is taught *first*, and repeated with each part of the exercise as these are learnt, without and with the music, by the time the whole exercise has been mastered, the correct timing of the breathing will be found quite easy, and will soon become automatic.

It is essential that the teacher is herself convinced as to the value and importance of the breathing. She will then be able to pass on her convictions with enthusiasm to the pupils, and will have no difficulty in getting their interest and co-operation.

4. TEACHING OF THE EXERCISE

Always dissect the exercise ; *i.e.*, teach the movements for the different parts of the body separately first ; legs, feet, body, arms, head, each part first without music, counting and beating rhythm with drum or hands, then with music, and in each case repeating the breathing.

Sometimes the body movement goes with the arms and is best taught together with them.

After each part has been learnt separately, then take the whole exercise through without music, and then finally with music.

This may appear to be a slow method, but by far the quickest and most accurate results are obtained this way.

5. CORRECTIONS

When learning the exercises, read carefully the "Special Remarks," and correct faults before a mirror.

In teaching, be sure to get *the essentials* of the exercise right first ; it is impossible to get every detail done perfectly straight away, so go for the main things, these being *the things that have most relation to the main uses of the exercise*. The small details are better corrected later to avoid confusion.

Be quick to notice faults. A careful study of the "Special Remarks" will be found most helpful, as all the most important points are given. The ability to pick out individual mistakes in a large class comes with practice ; give plenty of corrections, but give them in an encouraging way, and as far as possible make them *general corrections*, and avoid singling out one person. Demonstrate the movement again to the whole class, and then repeat the exercise ; all concerned will benefit by the repetition.

When a personal explanation is necessary, be sure not to discourage the pupil. Always notice and remark on faults that have been well corrected, and the progress of the class when this is good.

Always let the class do the exercise again once or twice *after corrections have been given*, that they may profit by them and memorise them.

6. RELATIVITY OF "GOOD" AND "BAD" IN CRITICISM

"Good" and "bad" in a beginner's performance is entirely relative to their own capabilities, and not to any objective standard.

If this were not so it would be impossible ever to give any encouragement by saying something has been well done, for

it could not possibly be well done if judged by the standard of an accomplished and inspired performer.

Again, what would be "good" for a pupil of very poor capabilities, might be "very bad" for someone who was potentially a great athlete or dancer.

So it must be understood and explained to the pupils that in giving praise or criticism it is the *individual* that is being dealt with, and that all degrees of "good" or "bad" are in relation to the rate of progress that the teacher expects from that particular person, taking into consideration their mental capacity and pliability, their physical ability or *disability*, their age and the length of time they have studied.

7. REPETITION OF DEMONSTRATION

Do not be afraid to demonstrate the exercise again if some part has not been well understood. With children especially, demonstrate several times, as they learn best by imitation.

In any case, when the exercise has been learnt thoroughly, repeat the demonstration, and ask the class to notice specially the rhythm and the kind of movement, explaining that each exercise has its own special character which should be brought out as soon as the exercise has been memorised.

As much accuracy as possible is desirable if the full benefit is to be derived from the exercises, but if they are *merely accurate*, then their object is defeated and they become entirely lifeless.

For an exercise to look interesting and to be interesting to do, it must *gain new life every time it is performed*, and this is done by the performer entering into the spirit of the exercise, and bringing out the intended character, combined with their own interpretation of it. Thus every exercise, however simple, becomes a vehicle for individual expression.

GENERAL NOTES ON TEACHING

Everyone who teaches this method of movement, whatever kind of class or private pupils they are taking, should always remember two things.

1. That the *keynote* of the method is the union between the medical and the æsthetic points of view.

2. That the co-operation of the pupils *through interest and enjoyment of the work is essential.*

Though every movement in the exercises aims at being at once medically sound and æsthetically satisfying, naturally some exercises emphasise the corrective side and some the æsthetic, and necessarily some are more interesting and stimulating to do than others.

Therefore in arranging a class, sequences of exercises should be well balanced, always bearing in mind that a class has not been well taught, nor the method adequately represented unless every pupil has benefited both *physically* and *mentally*, so that by the end of the class they have a feeling of physical and mental well-being.

In the complete method, all the variety of material is there to make each class of absorbing interest, and it is a confession of failure on the teacher's part if the pupils do not enjoy every moment of it.

In this book, as only fifty-five of the simpler exercises are given, it cannot be taken as representing the whole movement. A book of the æsthetic side for women is in preparation.

The first aims of the corrective side are, of course, to improve bad posture and teach full breathing (the reasons are given in Chapter I.), but a word of warning is sometimes necessary to young teachers, not to give the entire class to posture work, however bad the posture of the class may be. The teacher must, of course, notice all faults that need correcting, and return to them again and again, and not be satisfied *until they are corrected*, but at the same time realising that immediate results are not to be expected, though signs of improvement and increasing ability to correct should be looked for at each class. If improvement seems impossible in some cases, it should be suggested that medical advice be asked, and private lessons given.

When teaching children, it should always be remembered that they are not, and *should not be*, concerned about health, and that it is much better to get them to make the necessary effort to correct postural defects for the sake of improving their games rather than for physiological reasons.

Also if children get bored and lose interest in the performance

of the movements, no good results of any permanence will be obtained, for even if they can be coerced into standing well in class, no sufficiently strong mental impression will have been made to carry over into their daily lives, and make the improved posture habitual.

The same applies to a great extent to grown up people too, though if they are wanting to improve their health and figures they may be interested to know the physiological aims of the exercises.

But never let any pupils feel that this Basic Physical Training is nothing but a correction of their defects ! Be sure that in part at least of every class they realise the pleasure of free rhythmic movement.

With large classes of adults only attending once a week and mainly for the sake of amusement, the interest and whole-hearted enjoyment of the work by all the pupils should be the *first consideration*. It is unreasonable to expect such a high standard as that demanded from our own students ; and though the fundamentals of posture and breathing must be insisted upon, a good proportion of amusing and stimulating work, and free work must be given.

Occasionally it is even permissible to teach an exercise from the next standard, and simple dances should be constructed of combinations of exercises already learnt. In this way the exercise is repeated with the added interest of co-operation in a dance form. Simple forms of group improvisation should be given at such classes.

Sample classes for three whole terms are given in Chapter VI. ; these may be varied by changing over the exercises. But if the interest of the class is to be maintained over many terms, it is essential for the teacher to learn more exercises, in order to have something new to teach the class.

POSTURE OF TEACHER

It must be remembered while teaching that every position and movement has an effect on the class, and that the teacher is watched, criticised and copied, especially by children. A well-carried body gives a feeling of assurance and competence to the teacher and to those being taught.

For these reasons good posture must be maintained, not only throughout the class, but in ordinary life as well, so that it becomes an effortless habit.

POSTURE OF CLASS

(a) Interest class in the vital necessity of good posture for health and appearance.

(b) Emphasise that grace and ease of movement only come as the result of a well-poised body.

(c) Encourage a consciousness of muscular sense and of position of body.

(d) Interest class in the uses of exercises and give simple anatomical descriptions.

The following points should be looked for in pupils :

1. That they apply what they learn in class to their everyday lives.

2. That besides breathing and standing well, they improve in everyday movements such as running and walking.

3. That all movements show an increasing grace, continuity and ease, and are performed with decreasing waste of nervous and muscular energy.

4. That the response of body to mind is quicker, and that there is a definite improvement in games and athletics, in all pupils who do them.

If the teacher has understood the principles of the method and taught them well, all these points will show in the pupils very quickly.

SECTIONAL ORDER OF CLASSES

The order in which the various groups of exercises are given in class should be kept to, though the exercises are varied, as after years of experience this sequence has been found to be the best framework for class arrangement, and for progressively building up the interest throughout the class.

The order given below, with a few explanations, may make the reasons for keeping to this scheme most apparent.

1. Running and hopping.

2. Walking and posture exercises.

3. Special breathing exercises.

4. Basic held positions.
5. Balance exercises.
6. Special mobility exercises.
7. Continuity exercises (or running or hopping to end class).

1. RUNNING AND HOPPING

In order to begin the class with some free movement. Useful for increasing the rate of the circulation, and in the case of excitable children to give them a chance to "let off steam."

Note.—Very little hopping and running at a time should be given to elderly people, and they must be allowed to rest after even a little.

2. WALKING AND POSTURE

Give quiet walking and foot exercises next, and then, after the class have recovered their breath, give the special breathing exercises. (There are physiological reasons why deep breathing is difficult, and not advisable immediately after strenuous exercise, but it is not necessary to go into it here as the matter has been fully dealt with by other writers.) Also it is advisable to put these very simple exercises early because they are the least interesting to perform.

3. SPECIAL BREATHING

Deep breathing exercises should be done near the beginning of the class for two reasons. The first reason is that as breathing is the most fundamental part of the technique, it is well, before any more difficult exercises are done, to fix the attention of the pupils on the importance of gaining control of this function by exercises where the whole attention is centred on it. This reminds them that in every exercise the breathing should be mastered first, so that it becomes an unconscious but integral part of each exercise.

The second reason is that special deep breathing should come before any strenuous work has been done, and never immediately after any exercise causing breathlessness.

4. BASIC HELD POSITIONS

These are some of the most difficult exercises in the technique, by far the most difficult exercises in the standards of "White" or "Yellow," so it will be obvious that they require the utmost concentration and effort to master, and therefore they should be given fairly early while the pupils are still fresh. Also as they are not usually thought as interesting to do as the balances, they should always be done before these.

5. BALANCE EXERCISES

These come as a certain relaxation after the "Basic held positions" as, though requiring practice, they do not call for such intense concentration. When the "Balance progression" is taken, the first part, being on the ground, requires the minimum of effort.

6. SPECIAL MOBILITY

These exercises are for mobilising the various parts of the body, and usually form the most strenuous part of the class. The body having been prepared by the previous work is ready to meet the bigger demands to be made on it. These exercises do not require so much mental concentration as the "Basic held positions," but in many cases quicker and stronger muscle action, and much more suppleness.

7. CONTINUITY, COMPOSITION AND IMPROVISATION

This last part of the class should be mainly to get freedom and ease of movement, and continuity between a sequence of positions. It may be best to begin with composition or improvisations, and finish with "steps." If steps are not yet learnt, end the class with running and hopping, or running improvisations. The class should finish with some exercise or movement not too difficult, and done all together, that everyone can enjoy.

CHAPTER V

DAILY PRACTICE

VALUE OF MORNING EXERCISES, PERSONAL PRACTICE, RAISING THE STANDARD OF HEALTH IN SCHOOLS, TEN-MINUTE TABLES OF BASIC EXERCISES FOR DAILY PRACTICE, CHARTS OF DAILY SCHOOL PRACTICES OVER ONE TERM

VALUE OF MORNING EXERCISES

It is possible in ten minutes (if not one moment of time is wasted on useless movements) to start the body, as it were, on the road to health, so that it will continue to travel along it the rest of the day. This will go far to counteract the unhealthy sedentary conditions imposed by civilised life.

By full breathing, relaxing and stretching of the muscles, mobilising all the joints in the body (particularly the spine), strengthening the muscles of the abdomen and the extensor muscles of the spine, the intake of oxygen is increased, the lymphatic and venous circulation is improved, the processes of assimilation and elimination are stimulated, the postural muscles are strengthened, resulting in general conservation of energy, and fuller functioning of the mind as well as the body.

PERSONAL PRACTICE

The charts given for schools will be found a useful basis for the arrangement of daily personal practice charts. More variety can be had by using the other exercises in the book as well, but care should be taken to see that the *seven objectives* are included in each practice.

The number of times each exercise is done can be adjusted to suit individual needs.

As a general guide, the ones found the most difficult should

be repeated most often. If lessons are being taken, the teacher will indicate the exercises most useful to each person and the amount of practice desirable. Ten minutes in the morning, and evening, should be enough for those in reasonable health or fairly good condition. If there are faults of posture to correct, excessive deposits of fat, or bad habits of movement to overcome, more time may be needed to begin with.

RAISING THE STANDARD OF HEALTH IN SCHOOLS

Young children want to be constantly moving because the body grows by movement. If they are forced to spend hours a day sitting still, some special daily exercises must be given for normal health and growth to be maintained.

Standing and running in a playground, even weekly gymnastic classes and games are not sufficient in themselves, as is proved by the low standard of health and posture in many of our schools.

It is the *daily repetition* of constructive movements that count for so much more than a longer period of exercise once a week.

To raise the standard of health in school children, the most important thing is to introduce into the daily routine *ten minutes'* breathing and other basic exercises to be done immediately before starting lessons.

The exercises suggested here for this purpose do not require any kind of apparatus, so when the weather permits they can be done in the playground. When this is not possible they can be done equally well in the schoolroom standing between the desks, as they are all done in one spot.

Ideally, some exercises lying and sitting on the floor should be included (particularly when the standard of posture is bad), but this is not possible in most schoolrooms or playgrounds owing to lack of space and condition of ground.

A further suggestion that I believe would have an immediately perceivable result in increasing the powers of concentration, and quickening the intelligence of the children is that *two minutes* should be given at the end of each lesson to deep breathing, with stretching and relaxing of the body. These

movements can be done sitting at the desks so that the class need not be disturbed. This would only be possible if every single teacher were capable of conducting these exercises, but I believe that every teacher *should* be taught to teach *basic breathing and postural exercises, chair, and eye exercises*.

It must be understood that this plan for daily exercises is an attempt to face conditions *as they are*, and to present a scheme to counteract the hours of sitting involved in our civilised education—a scheme that is practical under the present conditions.

I hope that the day will come when all schools will be open-air schools, with gardens and swimming-baths, and that more time will be spent in moving occupations. Then special exercises may be unnecessary. But as things are now, in the great majority of schools a plan such as I have outlined is certainly badly needed.

Schools that can arrange to adjust their time-tables so as to give twenty to thirty minutes to the morning practice, letting the children change and work with bare feet, will find a proportionately quicker result in improvement of health and physique. Running and hopping, and exercises with wider movements can be added to the table. In boarding schools, practices should be before breakfast, followed by a shower bath or a quick plunge in a swimming-bath.

TEN-MINUTE TABLES OF BASIC EXERCISES FOR DAILY PRACTICE

The following tables of exercises are from those given in this book, and are marked with a star in the index. They have been carefully selected with two main objects in view.

PRACTICABILITY. In relation to conditions, *i.e.*, size of schoolrooms, inability to move desks, to sit or lie on the floor, to change clothes or shoes.

SERVICEABILITY. To combine all the most essential aims in ten minutes' work, with the fullest benefit possible *under the above conditions*.

BASIC PHYSICAL TRAINING

BASIC EXERCISE TABLE A

SEVEN OBJECTIVES	NINE EXERCISES
1. FULL DEVELOPMENT OF THE LUNGS. 2. RELAXATION AND MUSCLE CONTROL 3. MOBILITY OF THE NECK. 4. STRENGTHENING OF ABDOMINAL MUSCLES AND TRUNK ROTATORS. 5. MOBILITY OF LUMBAR REGION, FOR STIMULATION OF THE INTERNAL ORGANS. 6. STRETCHING OF MUSCLES. 7. BALANCE AND CO-ORDINATION. (Breathing for poise and sedative effect to end practice.)	Every Easy breathing practice. A (relaxed knees) or B (deep knee bend). (1) Basic breathing (standing). (2) Tension and relaxation A (in stride standing). (3) Head circling. (4) First opposition exercise (with deep knee bending). (5) Thoracic twisting A. (6) Second stretching. (7) Easy balance. (8) Expansion breathing (with heel raising or inner border raising).

BASIC EXERCISE TABLE B

SEVEN OBJECTIVES	NINE EXERCISES
1. FULL DEVELOPMENT OF THE LUNGS. 2. RELAXATION AND MUSCLE CONTROL 3. MOBILITY OF THE NECK. 4. STRENGTHENING OF ABDOMINAL MUSCLES AND TRUNK ROTATORS. 5. MOBILITY OF LUMBAR REGION, FOR STIMULATION OF THE INTERNAL ORGANS. 6. STRETCHING OF MUSCLES 7. BALANCE AND CO-ORDINATION. (Breathing for poise and sedative effect to end practice.)	Every Easy breathing practice. A (relaxed knees) or B (deep knee bend). (1) Upper and lower thoracic breathing. (2) Tension and relaxation C (with deep knee bending). (3) Head nodding and turning. (4) First strong opposition step (in stride standing). (5) Trunk circling. (6) Side stretching. (7) Twisted balance. (8) Upstretch breathing (with heel raising or inner border raising).

Note.—Movements for ankles, knees, hips, and shoulders, come into each table, but are not given as a particular objective. "Easy breathing" is not numbered as every practice should begin with this exercise as an introduction.

Two complete tables of exercises have been given ; they can be practised alternate days, or alternate weeks, or they can be varied by changing one or more of the exercises.

Tastes vary, according to temperament, as to the method of practice preferred. Some people like to repeat the same Table exactly for a considerable time, while others must have constant change to hold their attention. There is no harm in making changes if the new exercise is put in the place of one *with the same number* so that the balance of the objectives is kept the same.

A good method is to change one exercise each day, or every two days, in the following manner :—

Start with full Table A, doing it, say, for one week ; then begin to change over, substituting Table B exercises thus :—

Monday.—Put the first B exercise in the place of the first A exercise.

Tuesday.—(Leaving in the first B exercise.)

Put the second B exercise in the place of the second A exercise, and so on, till the complete Table B has taken the place of Table A. (This will take eight or sixteen days, according to whether one exercise is changed each day or every other day.)

Practice B Table for one week ; then repeat the same changeover, but substituting A exercises for B. The following charts of school practice illustrate how this is done.

Note.—The exercises that are new to each practice are printed in italics.

CHARTS SHOWING HOW PRACTICE TABLES A AND B MAY BE USED OVER A TERM OF TWELVE WEEKS

The first three weeks are worked out for a new class who know none of the exercises.

The next three weeks the changeover from Table A to Table B is made.

The third three weeks repeat last three weeks' plan, but changing back from B exercises to A exercises.

The last three weeks can change back again from A to B exercises. Or if found more stimulating to the class, the full A and B Tables can be done alternate days.

For classes that know the Table A exercises, the full Table A could be practised for a week, then the change over to Table B begins, then the change back to Table A, etc. With a class that is familiar with all the exercises in both tables, if preferred A and B Tables can be done alternate weeks throughout the term.

The following Table C is definitely a more advanced practice than Tables A or B. It should not be taken till Tables A and B have been thoroughly learned and memorised, and can be correctly performed.

When this has been achieved, then the change over can be made to Table C as described for the first tables, but as the exercises are much more difficult to learn and to perform, it is better to take longer over the change, leaving three to four days between each new exercise.

As the class will by then have been learning some time, and may be getting tired of Tables A and B, it will probably be advisable to keep to Table C for some considerable time, then ring the changes between the three tables.

Learning Table A during First Two Weeks,
Practising Full Table A Third Week

TEN-MINUTE TABLES OF BASIC EXERCISES

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1st week	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>Repeat easy breathing.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>Repeat easy breathing.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>Repeat easy breathing.</p>	<p>Repeat last practice.</p>
2nd week	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p> <p>7. Easy balance.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>1. Basic breathing.</p> <p>2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p> <p>7. Easy balance.</p> <p>8. Expansion breathing.</p>	<p>Repeat last practice.</p>
3rd week	<p>Repeat Table A all this week.</p>					

*Changing from Table A to Table B During
Three Weeks*

TEN-MINUTE TABLES OF BASIC EXERCISES

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
4th week	<p>Easy breathing.</p> <p>B1. <i>Upper and lower thoracic mobility.</i></p> <p>A2. Tension and relaxation A.</p> <p>3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p> <p>7. Easy balance.</p> <p>8. Expansion breathing.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>B1. Upper and lower thoracic mobility.</p> <p>2. <i>Tension and relaxation B.</i></p> <p>A3. Head circling.</p> <p>4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p> <p>7. Easy balance.</p> <p>8. Expansion breathing.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>B1. Upper and lower thoracic mobility.</p> <p>2. Tension and relaxation B.</p> <p>3. <i>Head nodding and turning.</i></p> <p>A4. First opposition exercise.</p> <p>5. Thoracic twisting.</p> <p>6. Second stretching.</p> <p>7. Easy balance.</p> <p>8. Expansion breathing.</p>	<p>Repeat last practice.</p>
5th week	<p>Easy breathing</p> <p>B1. Upper and lower thoracic mobility.</p> <p>2. Tension and relaxation B.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>B1. Upper and lower thoracic mobility.</p> <p>2. Tension and relaxation B.</p>	<p>Repeat last practice.</p>	<p>Easy breathing.</p> <p>B1. Upper and lower thoracic mobility.</p> <p>2. Tension and relaxation B.</p>	<p>Repeat last practice.</p>

<p>3. Head nodding and turning. 4. <i>First strong opposition step.</i> A5. Thoracic twisting. 6. Second stretching. 7. Easy balance. 8. Expansion breathing.</p>	<p>Easy breathing. B1. Upper and lower thoracic mobility. 2. Tension and relaxation B. 3. Head nodding and turning. 4. First strong opposition exercise. 5. Trunk circling. 6. Side stretching. 7. <i>Twisted balance.</i> A8. Expansion breathing.</p>	<p>Repeat last practice.</p>	<p>3. Head nodding and turning. 4. First strong opposition exercise. 5. <i>Trunk circling.</i> A6. Second stretching. 7. Easy balance. 8. Expansion breathing.</p>	<p>Easy breathing. B1. Upper and lower thoracic mobility. 2. Tension and relaxation B. 3. Head nodding and turning. 4. First strong opposition exercise. 5. Trunk circling. 6. Side bending. 7. <i>Twisted balance.</i> 8. <i>Upstretch breathing.</i></p>	<p>Repeat last practice.</p>	<p>3. Head nodding and turning. 4. First strong opposition exercise. 5. Trunk circling. 6. <i>Side stretching.</i> A7. Easy balance. 8. Expansion breathing.</p>	<p>Repeat last practice.</p>	<p>Repeat last practice.</p>	<p>Repeat last practice.</p>	<p>Repeat last practice.</p>
<p>6th week</p>										

BASIC EXERCISES TABLE C

(Advanced Practice)

SEVEN OBJECTIVES	NINE EXERCISES
	Easy breathing (every practice)
1. FULL DEVELOPMENT OF THE LUNGS.	(1) Sustained retraction.
2. RELAXATION AND MUSCLE CONTROL.	(2) Swinging relaxation.
3. MOBILITY OF THE NECK.	(3) Head lateral bending.
4. STRENGTHENING OF ABDOMINAL MUSCLES AND TRUNK ROTATORS.	(4) Second opposition exercise (with heel raising on fourth basic position).
5. MOBILITY OF LUMBAR REGION, FOR STIMULATION OF THE INTERNAL ORGANS.	(5) Pelvic tilting and twisting.
6. STRETCHING OF MUSCLES.	(6) Lumbar stretching.
7. BALANCE AND CO-ORDINATION. (Breathing for poise and sedative effect to end practice.)	(7) Advanced balance.
	(8) Alternate lung breathing.

SPECIAL TABLES FOR MORNING AND EVENING PRACTICE

CONSTIPATION TABLE

Seven Exercises to be done for Five Minutes Night and Morning

This table is for a pupil of average health and strength, as the standing exercises are fairly strenuous, and should be done vigorously to obtain good results.

MORNING.

In bed or on the floor.

Pelvic Tilting.

Pelvic Turning (double quick time).

Standing.

Pelvic and Thoracic Mobility.

Pelvic Tilting and Twisting.

Swinging Relaxation.

Trunk Circling.

A ten-minute table of exercises as on page 48 should follow.

DAY

Three or four times during the day do "Basic breathing" sitting or standing, emphasising contraction of lower abdomen.

Walk in the open air doing the "Outdoor walking exercises."

NIGHT

The table should be reversed, starting with the last standing exercises.

If time, repeat Tables A or B as well.

USES

1. To increase intestinal peristalsis by twisting and bending body movements, and squeezing the contents of the abdomen by emphasising the abdominal contraction on each expiration.

2. To stimulate the nerve centres concerned in the process of elimination, by mobilising the lumbar spine.

3. To stimulate the action of the liver and other internal organs by pelvic and thoracic movements directed to that end.

Note.—It is usually found that if two large glasses of hot or cold water (with lemon or other fruit juice) are drunk night and morning before doing the exercises, better results will be obtained. Pupils should, however, consult their medical adviser, as opinions vary as to the amount and kind of liquid it is advisable to take.

These exercises are selected from this book, but there are a great many others, not included here, to stimulate the process of assimilation and elimination.

Also special exercises for removing excessive deposits of fat, but the above table will also be found a useful one for reducing, particularly the abdomen.

RELAXATION TABLE

Seven Exercises to be Done for Five Minutes Night and Morning

MORNING

In bed

Easy Relaxation.

Basic Breathing (crook lying).

Stretch and Relax Breathing (lying).

Sitting

Head Circling.
Expansion Breathing.

Standing

Swinging Relaxation (to be done without effort).
Alternate Lung Breathing or Upstretch Breathing.

A ten-minute table of general exercises should follow, such as A or B. It is advisable to see that all the exercises stress relaxation, and are performed *slowly and smoothly*, but, at the same time, rhythmically.

DAY

Three or four times a day do any of the above breathing exercises very slowly *sitting*, comfortably supported in the back by cushions.

Walk in the open air every day *without carrying a bag*, so that both arms can swing in an easy relaxed way. Take slow deep breaths, but do not emphasise the abdominal contraction, as until a natural relaxation of the muscles has been established, it is difficult to do this while walking, without tensing all the muscles of the body.

NIGHT

The Relaxation Table should be reversed, starting with the last standing exercise, ending in bed with "Easy relaxation," the repetition of which should merge into sleep if full relaxation has been obtained.

It is not advisable to do any other exercises at night, but the relaxation ones may be repeated more often.

REMARKS

"Basic breathing" should always be done emphasising the abdominal contraction on expiration, as this aids digestion and assists the return of the blood to the heart, and so has a sedative effect. But in the other breathing exercises general relaxation should be emphasised on expiration, the usual abdominal contraction being omitted.

USES

1. To combat the state of tonic muscular contraction, by conscious relaxation of the whole muscular system.

2. For tense and "nervy" people, to reduce nervous tension by deep breathing and easy relaxed movements that have a sedative effect.

3. For those who have difficulty in sleeping, by reason of the foregoing, these exercises will be found very helpful. They also improve the general condition by promoting the circulation and increasing the intake of oxygen. The mind too is occupied without mental effort in a more constructive way than by such devices as "counting sheep."

CHAPTER VI

ARRANGEMENT OF CLASSES

PLAN FOR THIRTY CLASSES, CLASS FORMATIONS

THE arrangement of a class may be varied in many ways. In the hands of an experienced teacher the order in which the exercises are taught, and the amount of new work given at each class, may be altered with success, to suit the needs of different kinds of pupils. But the following lists should be found helpful, as they have been carefully compiled in progression, the most fundamental and the simplest exercises first, gradually leading on to the more difficult ones.

The arrangement is based on years of teaching experience of what an average group of children or adults can take in at one class. So it is hoped that young teachers, or anyone who has only taken a short course, will keep to these lists, or err on the side of teaching *less* at a class, never more.

The most common fault when first teaching is to give too much new work at each class. At the end of each class the pupils should be asked to take down a list of exercises to practise specially before the next class. In the case of young children, the nurse or governess should write down the list.

The teacher must be sure always to see at the next class the exercises which have been practised, and comment on any improvement in technique.

Suggestions for practice lists are given in this chapter after each class list. These may be varied, however, if some class or individual does one exercise less well than another. Also if it is found that some of the exercises on the list have not been practised, it is better to reduce the number, but to insist that each exercise is thoroughly mastered.

FIRST COURSE

25 NORMAL, 3 CORRECTIVE EXERCISES

Basic Walking.
Outer Border Walk (only if needed for weak feet).
Easy Breathing.
Basic Breathing.
Tension and Relaxation A and C.
Pelvic Turning.
Inner Border Raising.
First Basic Held Position.
Easy Relaxation.
First Stretching.
First Scissors.
Stretch and Relax Breathing.
Corrective Posture Exercises (" Flat Back " and
" Hollow Back " as may be required).
Pelvic Tilting.
Head Circling.
Transverse Arch and Toe Lift.
Balance Progression.
Expansion Breathing.
Arm Circling.
First Heel Raising.
Second Basic Held Position.
Thoracic Twisting.
Second Stretching.
First Opposition Exercise.
Twisted Balance.
Trunk Twisting.
Second Scissors.

NOTES

1. Each whole new exercise taught is marked with a star. When only *part* of a new exercise is taught it is marked with a dot.
2. At the end of each class the teacher should give a list of six exercises to be practised for the next class.

The exercises new to each practice list are marked with a star.

3. In the sectional order, Section 6, **Mobility**, refers to mobility of the different parts of the body, and the exercises are usually performed in lines.

FIRST COURSE

Class 1

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|--|
| 1. Running and Hopping. | * Free Running (in one line following a leader). |
| 2. Walking and Posture. | * Quick Walking.
* Basic Walking (if pupil's feet are inclined to be weak, give "Outer Border Walking" as well).
* Teach correct standing position from feet up. Give pulling up into best position and relaxing in between. |
| 3. Breathing. | * Easy Breathing.
* Basic Breathing (in crook lying and standing). |
| 4. Basic Held Positions. | . First Basic Held Position (arms and legs separately only). |
| 5. Balance. | . Balance Progression (part 1 only, lying). |
| 6. Mobility. | * Tension and Relaxation A.
* Pelvic Turning (lying).
. First Stretching (1st part only, sitting). |
| 7. Continuity. | Repeat Running, changing leader. |

Practice list to follow Class 1

- * Easy Breathing.
- * Basic Breathing (lying and standing).
- * Correcting of standing position, relaxing between.
- * Basic Walking.
- * Pelvic Turning.
- * Tension and Relaxation A.

FIRST COURSE

Class 2

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Running (a different leader from last class).
2. Walking and Posture.	Quick Walking. Basic Walking. * Inner Border Raising. Correct Standing, with Relaxation between.
3. Breathing.	Easy Breathing. Basic Breathing (crook lying and standing).
4. Basic Held Positions.	* First Basic Held Position (arms and legs together).
5. Balance.	. Balance Progression (part 1, lying).
6. Mobility.	Tension and Relaxation A. * Easy Relaxation. Pelvic Turning. * First Stretching (1st and 2nd parts). * First Scissors.
7. Continuity.	Free Running, changing leader.

Practice list to follow Class 2

- Easy Breathing.
 Basic Breathing.
 * Inner Border Raising.
 * First Basic Held Position.
 * First Stretching.
 Tension and Relaxation A.

FIRST COURSE

Class 3

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Running (a different leader from last class).
2. Walking and Posture.	Quick Walking. Basic Walking. Inner Border Raising. * Corrective Exercise (for "flat" or "hollow" back, as required).
3. Breathing.	Easy Breathing. Basic Breathing (standing). * Stretch and Relax Breathing.
4. Basic Held Positions.	First Basic Held Position.
5. Balance.	. Balance Progression (parts 1, 2, 3 and 4, lying and sitting, to standing arms only).
6. Mobility.	Tension and Relaxation A. Easy Relaxation. Pelvic Turning. * Pelvic Tilting. First Stretching (1st and 2nd parts). First Scissors.

7. Continuity. Free Running (in three or more small circles changing to big circle).

Practice list to follow Class 3

- Easy Breathing.
 Basic Breathing (standing).
 * Corrective Posture Exercise.
 Inner Border Raising.
 First Basic Held Position.
 First Stretching.

FIRST COURSE

Class 4

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|---|
| 1. Running and Hopping. | Free Running (a different leader).
* Hopping (a different leader). |
| 2. Walking and Posture. | Quick Walking.
Inner Border Raising.
* Transverse Arch and Toe Lift.
Corrective Posture Exercise. |
| 3. Breathing. | Easy Breathing.
Basic Breathing (standing).
Stretch and Relax Breathing. |
| 4. Basic Held Positions. | First Basic Held Position. |
| 5. Balance. | * Balance Progression (all 5 parts teaching part 5). |
| 6. Mobility. | * Tension and Relaxation C.
Pelvic Turning.
Pelvic Tilting.
* Head Circling.
First Stretching.
First Scissors. |

7. Continuity. Free Running (leading off changing leaders).

Practice list to follow Class 4

Basic Breathing (standing).

- * Stretch and Relax Breathing.
- Corrective Posture Exercise.
- * Transverse Arch and Toe Lift.
- * Tension and Relaxation C.
- * Balance Progression (5 parts).

FIRST COURSE

Class 5

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|--|
| 1. Running and Hopping. | Quick Hopping (hands on hips, a different leader). |
| 2. Walking and Posture. | Quick Walking.
* Outer Border Walk.
Transverse Arch and Toe Lift.
* First Heel Raising.
Corrective Posture Exercise. |
| 3. Breathing. | Stretch and Relax Breathing.
* Expansion Breathing. |
| 4. Basic Held Positions. | First Basic Held Position. |
| 5. Balance. | Balance Progression. |
| 6. Mobility. | Tension and Relaxation C.
* Arm Circling.
Pelvic Turning.
Pelvic Tilting.
Head Circling.
First Stretching.
First Scissors. |
| 7. Continuity. | Hopping Quick (in two lines, two leaders) |

Practice list to follow Class 5

Stretch and Relax Breathing.

Corrective Posture Exercise.

* Outer Border Walk.

* Head Circling.

* Pelvic Turning.

Balance Progression.

FIRST COURSE

Class 6

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping (a different leader).
2. Walking and Posture.	Quick Walking. Outer Border Walk. Transverse Arch and Toe Lift. First Heel Raising.
3. Breathing.	Stretch and Relax Breathing. Expansion Breathing.
4. Basic Held Positions.	* Second Basic Held Position.
5. Balance.	Balance Progression (parts 4 and 5 only).
6. Mobility.	Tension and Relaxation C Arm Circling. Pelvic Turning. Pelvic Tilting. * Thoracic Twisting. First Stretching. * Second Stretching. First Scissors.
7. Continuity.	Quick Hopping (in three or four circles joining into one).

Practice list to follow Class 6

Stretch and Relax Breathing.

Expansion Breathing.

- * First Heel Raising.
- * Second Basic Held Position.
- * Thoracic Twisting.
- * Second Stretching (standing).

FIRST COURSE

Class 7

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping.
2. Walking and Posture.	* Slow Walking. First Heel Raising. Inner Border Raising. Transverse Arch and Toe Lift. Corrective Posture Exercise.
3. Breathing.	Stretch and Relax Breathing. Expansion Breathing.
4. Basic Held Positions.	Second Basic Held Position. * First Opposition Exercise.
5. Balance.	Balance Progression (parts 4 and 5). * Twisted Balance.
6. Mobility.	Tension and Relaxation A. Thoracic Twisting. Arm Circling. Second Stretching. First Scissors.
7. Continuity.	Quick Hopping (leading off changing leaders).

Practice list to follow Class 7

- Easy Breathing.
 Expansion Breathing.
 * First Opposition Exercise.
 Second Basic Held Position.
 * Arm Circling.
 * Twisted Balance.

FIRST COURSE

Class 8

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping. * Slow Hopping.
2. Walking and Posture.	Slow Walking. First Heel Raising. Corrective Posture Exercise.
3. Breathing.	Easy Breathing. Expansion Breathing.
4. Basic Held Positions.	First Basic Held Position. Second Basic Held Position. First Opposition Exercise.
5. Balance.	Easy Balance (Balance Progression part 5). Twisted Balance.
6. Mobility.	Tension and Relaxation A. Head Circling. Thoracic Twisting. Arm Circling. Second Stretching. First Scissors. * Trunk Twisting.
7. Continuity.	Running (two lines).

Practice list to follow Class 8

- Expansion Breathing.
- Second Basic Held Position.
- First Opposition Exercise.
- Twisted Balance.
- Thoracic Twisting.
- * Trunk Twisting.

FIRST COURSE

Class 9

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping. Slow Hopping.
2. Walking and Posture.	Basic Walking. Slow Walking. First Heel Raising.
3. Breathing.	Basic Breathing. Stretch and Relax Breathing with Heel Raising.
4. Basic Held Positions.	First Basic Held Position. Second Basic Held Position. First Opposition Exercise.
5. Balance.	Easy Balance. Twisted Balance.
6. Mobility.	Tension and Relaxation A. Thoracic Twisting. Arm Circling. Head Circling. Second Stretching. Trunk Twisting. * Second Scissors.
7. Continuity.	Running.

Practice list to follow Class 9

- Expansion Breathing (with Heel Raising).
- * Second Stretching.
- First Opposition Exercise.
- Twisted Balance.
- Thoracic Twisting.
- Trunk Twisting.

FIRST COURSE

Class 10

Omit all walking changes, running and hopping.

Go right through the whole of the exercises *in the first course* as list at beginning of course.

Do not give too much time to corrections, but make a note of the exercises that are done least well, and see that they receive special attention during the next course.

Practice list after Class 10

Choose the six exercises most needing to be practised, but if any are done so badly that they might be practised wrongly, these should be omitted.

SECOND COURSE

15 NEW EXERCISES IN SECOND COURSE

- Upstretch Breathing.
- First Knee Bending.
- Trunk Circling.
- Upper and Lower Thoracic Breathing.
- Fourth Basic Held Position.
- Head Nodding and Turning.
- Alternate Half Knee Bending.
- Second Opposition Exercise.
- Pelvic and Thoracic Mobility.

Swinging Relaxation.
 Advanced Stretching.
 Basic Knee Bend and Stretch.
 Advanced Balance.
 Side Stretching.
 Alternate Lung Breathing.

SECOND COURSE

Practices during Second and Third Courses

It is left to the teachers to make their own practice lists for the second and third courses.

The exercises that will be of the most benefit to the pupils, or that particularly require practice should be selected.

Note that if an exercise is very badly performed, it is unwise to put it on the practice list, as repetition of faults will accentuate them.

This applies particularly to children.

An adult may really understand what is wanted before being able to do it, and in that case may be able to improve the exercise with practice before the next class.

Note.—Each whole new exercise taught at each class is marked with a star.

SECOND COURSE

Class 1

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Running (one leader).
2. Walking and Posture.	Quick Walking. Basic Walking (if pupil's feet are inclined to be weak, give "Outer Border Walking" as well).
	* First Knee Bending. Teach correct standing position from feet up. Give pulling up into best position and relaxing in between.

- | | |
|--------------------------|---|
| 3. Breathing. | Easy Breathing.
Basic Breathing (in crook lying and standing).
* Upstretch Breathing. |
| 4. Basic Held Positions. | First Basic Held Position. |
| 5. Balance. | Balance Progression (all five parts). |
| 6. Mobility. | Tension and Relaxation A.
Pelvic Turning (lying).
* Head Nodding and Turning.
First Stretching (1st part only, sitting). |
| 7. Continuity. | Repeat Running (leading off changing leaders). |

SECOND COURSE

Class 2

- | <i>Sectional Order</i> | <i>Exercises</i> |
|-------------------------|--|
| 1. Running and Hopping. | Free Running (a different leader from last class). |
| 2. Walking and Posture. | Quick Walking.
First Knee Bending.
Inner Border Raising.
Correct Standing, with relaxation between. |
| 3. Breathing. | Easy Breathing.
Basic Breathing (crook lying and standing).
Upstretch Breathing. |

- | | |
|--------------------------|--|
| 4. Basic Held Positions. | First Basic Held Position. |
| 5. Balance. | Balance Progression (lying, all five parts).
Twisted Balance. |
| 6. Mobility. | Tension and Relaxation A.
Easy Relaxation.
Pelvic Turning.
* Alternate Half Knee Bending.
First Stretching (1st and 2nd parts).
First Scissors. |
| 7. Continuity. | Free Running. |

SECOND COURSE

Class 3

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|--|
| 1. Running and Hopping. | Free Running (a different leader from last class). |
| 2. Walking and Posture. | Quick Walking.
Basic Walking.
Inner Border Raising.
Corrective exercise (for "flat" or "hollow" back, as required). |
| 3. Breathing. | Upstretch Breathing.
Basic Breathing (standing).
Stretch and Relax Breathing.
* Upper and Lower Thoracic Breathing. |
| 4. Basic Held Positions. | First Basic Held Position. |
| 5. Balance. | Twisted Balance. |

- | | |
|----------------|--|
| 6. Mobility. | Tension and Relaxation A.
Easy Relaxation.
Pelvic Turning.
Pelvic Tilting.
* Trunk Circling.
First Stretching (1st and 2nd parts).
First Scissors. |
| 7. Continuity. | Free Running (in three or more small circles changing to big circle). |

SECOND COURSE

Class 4

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|--|
| 1. Running and Hopping. | Free Running (a different leader).
Hopping (a different leader). |
| 2. Walking and Posture. | Quick Walking.
Inner Border Raising.
Transverse Arch and Toe Lift.
Corrective Posture Exercise. |
| 3. Breathing. | Upstretch Breathing.
Basic Breathing (standing).
Upper and Lower Thoracic. |
| 4. Basic Held Positions. | First Basic Held Position.
* Fourth Basic Held Position. |
| 5. Balance. | Twisted Balance. |
| 6. Mobility. | Tension and Relaxation C.
Pelvic Turning.
* Pelvic and Thoracic Mobility.
Pelvic Tilting.
Head Circling.
First Stretching.
First Scissors. |

7. Continuity. Free Running (leading off changing leaders).

SECOND COURSE

Class 5

Sectional Order

Exercises

- | | |
|--------------------------|---|
| 1. Running and Hopping. | Quick Hopping (hands on hips, a different leader). |
| 2. Walking and Posture. | Quick Walking.
Inner Border Raising.
Transverse Arch and Toe Lift.
First Heel Raising.
Corrective Posture Exercise. |
| 3. Breathing. | Upper and Lower Thoracic Breathing.
Expansion Breathing.
* Alternate Lung Breathing. |
| 4. Basic Held Positions. | First Basic Held Position.
Fourth Basic Held Position. |
| 5. Balance. | Twisted Balance. |
| 6. Mobility. | Tension and Relaxation C.
Arm Circling.
Pelvic Turning.
Pelvic and Thoracic Mobility.
Pelvic Tilting.
Head Circling.
First Stretching.
* Side Stretching.
First Scissors. |
| 7. Continuity. | Quick Hopping (in two lines, two leaders). |

SECOND COURSE

Class 6

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping (a different leader).
2. Walking and Posture.	Quick Walking. Inner Border Raising. Transverse Arch and Toe Lift. First Heel Raising.
3. Breathing.	Expansion Breathing. Alternate Lung Breathing.
4. Basic Held Positions.	Second Basic Held Position. Fourth Basic Held Position.
5. Balance.	* Advanced Balance.
6. Mobility.	Tension and Relaxation C. Arm Circling. Pelvic Turning. Pelvic and Thoracic Mobility. Pelvic Tilting. Thoracic Twisting. Second Stretching. Side Stretching. Second Scissors.
7. Continuity.	Quick Hopping (in three or four circles joining into one).

SECOND COURSE

Class 7

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Quick Hopping.

- | | |
|--------------------------|--|
| 2. Walking and Posture. | Slow Walking.
First Heel Raising.
Inner Border Raising.
Transverse Arch and Toe Lift.
Corrective Posture Exercise. |
| 3. Breathing. | Alternate Lung Breathing.
Expansion Breathing. |
| 4. Basic Held Positions. | First Opposition Exercise.
* Second Opposition Exercise. |
| 5. Balance. | Advanced Balance (parts 4 and
5).
Twisted Balance. |
| 6. Mobility. | * Swinging Relaxation.
Thoracic Twisting.
Alternate Half Knee Bending.
Arm Circling.
Second Stretching.
First Scissors.
Second Scissors. |
| 7. Continuity. | Quick Hopping (leading off
changing leaders). |

SECOND COURSE

Class 8

- | <i>Sectional Order</i> | <i>Exercises</i> |
|-------------------------|---|
| 1. Running and Hopping. | Quick Hopping.
Slow Hopping. |
| 2. Walking and Posture. | Slow Walking.
Corrective Posture Exercise. |
| 3. Breathing. | Easy Breathing.
Alternate Lung Breathing. |

- | | |
|--------------------------|--|
| 4. Basic Held Positions. | * Basic Knee Bend and Stretch.
First Opposition Exercise.
Second Opposition Exercise. |
| 5. Balance. | Balance Progression (last part
"Easy Balance").
Twisted Balance.
Advanced Balance. |
| 6. Mobility. | Swinging Relaxation.
Head Circling.
Thoracic Twisting.
Pelvic and Thoracic Mobility.
Arm Circling.
Second Stretching.
First Scissors.
Second Scissors.
Trunk Twisting. |
| 7. Continuity. | Running (two lines). |

SECOND COURSE

Class 9

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|---|
| 1. Running and Hopping. | Quick Hopping.
Slow Hopping |
| 2. Walking and Posture. | Basic Walking. |
| 3. Breathing. | Basic Breathing.
* Stretch and Relax Breathing
with Heel Raising. |
| 4. Basic Held Positions. | Basic Knee Bend and Stretch.
First Opposition Exercise.
Second Opposition Exercise. |
| 5. Balance. | Twisted Balance.
Advanced Balance. |

6. Mobility. Tension and Relaxation A.
Swinging Relaxation.
Thoracic Twisting.
Arm Circling.
Head Circling.
Second Stretching.
* Advanced Stretching.
Trunk Twisting.
Second Scissors.
7. Continuity. Running.

SECOND COURSE

Class 10

Revision of all new Exercises in Second Course.

*Sectional Order**Exercises*

1. Omit all running, hopping or walking to give more time to revision of new exercises.
2. Walking and Posture. First Knee Bending.
3. Breathing. Upper and Lower Thoracic Breathing.
Upstretch Breathing.
Alternate Lung Breathing.
4. Basic Held Positions. Fourth Basic Held Position.
Second Opposition Exercise.
Basic Knee Bend and Stretch.
5. Balance. Advanced Balance.
6. Mobility. Alternate Half Knee Bending.
Pelvic and Thoracic Mobility.
Head Nodding and Turning.
Advanced Stretching.
Side Stretching.
Swinging Relaxation.
Trunk Circling.

7. Continuity. Running and Hopping if time allows.

THIRD COURSE

9 NEW EXERCISES IN THIRD COURSE

Lumbar Stretching.
 Pelvic Tilting and Twisting.
 Sustained Retraction.
 First Strong Opposition Step.
 Alternate Deep Knee Bending.
 Leg Swinging.
 Leg Circling.
 Head Lateral Bending.
 Third Scissors.

Practices during Third Course

Teachers to make their own practice lists. See p. 70.

THIRD COURSE

Class 1

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Running (one leader).
2. Walking and Posture.	Walking : 4 quick, 2 slow. First Knee Bending. Outer Border Walk.
3. Breathing.	Easy Breathing. Basic Breathing.
4. Basic Held Positions.	First Basic Held Position. Second Basic Held Position.
5. Balance.	Balance Progression.

6. Mobility. Tension and Relaxation A.
Swinging Relaxation.
* Lumbar Stretching.
* Leg Swinging.
Head Nodding and Turning.
Advanced Stretching.
First Scissors.
Second Scissors.
7. Continuity. Quick Hopping (hands on hips,
two leaders).

THIRD COURSE

Class 2

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|---|
| 1. Running and Hopping. | Free Running (different leader). |
| 2. Walking and Posture. | Walking : 4 quick, 2 slow.
First Knee Bend.
Inner Border Raising. |
| 3. Breathing. | Easy Breathing.
Upstretch Breathing. |
| 4. Basic Held Positions. | First Opposition Exercise.
Basic Knee Bend and Stretch. |
| 5. Balance. | Twisted Balance. |
| 6. Mobility. | Tension and Relaxation A.
Easy Relaxation.
Swinging Relaxation.
Alternate Half Knee Bending.
Lumbar Stretching.
Leg Swinging.
Head Nodding and Turning.
Advanced Stretching.
Second Scissors. |
| 7. Continuity. | Slow Hopping (hands on hips,
one leader). |

THIRD COURSE

Class 3

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Running (leading off, changing leaders).
2. Walking and Posture.	Walking : 2 quick, 1 slow. First Heel Raising. Corrective Exercise.
3. Breathing.	Expansion Breathing. Upstretch Breathing.
4. Basic Held Positions.	Fourth Basic Held Position. Second Opposition Exercise.
5. Balance.	Advanced Balance.
6. Mobility.	Swinging Relaxation. Alternate Half Knee Bending. Lumbar Stretching. * Pelvic Tilting and Twisting. Leg Swinging. * Head Lateral Bending. Advanced Stretching. Second Scissors.
7. Continuity.	Hopping : 4 quick, 2 slow (in circle).

THIRD COURSE

Class 4

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	* Free Quick Hopping (one leader).
2. Walking and Posture.	Walking : 2 quick, 1 slow. Transverse Arch and Toe Lift. First Knee Bending.

- | | |
|--------------------------|---|
| 3. Breathing. | Upper and Lower Thoracic Breathing.
Stretch and Relax Breathing. |
| 4. Basic Held Positions. | Fourth Basic Held Position.
* First Strong Opposition Step. |
| 5. Balance. | Balance Progression. |
| 6. Mobility. | Swinging Relaxation.
Alternate Half Knee Bending.
Lumbar Stretching.
Pelvic Tilting and Twisting.
Leg Swinging.
Head Nodding and Turning.
First Stretching.
Second Scissors. |
| 7. Continuity. | Hopping: 2 quick, 1 slow (in circle). |

THIRD COURSE

Class 5

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|---|
| 1. Running and Hopping. | Free Slow Hopping (one leader). |
| 2. Walking and Posture. | Walking: 2 quick, 1 slow.
Transverse Arch and Toe Lift. |
| 3. Breathing. | Expansion Breathing.
Upper and Lower Thoracic Breathing. |
| 4. Basic Held Positions. | Basic Knee Bend and Stretch.
First Strong Opposition Step. |
| 5. Balance. | Twisted Balance. |

6. Mobility. Corrective Posture Exercise.
 Tension and Relaxation C.
 Arm Circling.
 Pelvic Tilting and Twisting.
 Head Circling.
 Trunk Circling.
 Second Stretching.
 Side Stretching.
 Pelvic Turning.
 * Third Scissors.
7. Continuity. Free Running (two or three
 small circles changing to one
 big).

THIRD COURSE

Class 6

- | <i>Sectional Order</i> | <i>Exercises</i> |
|--------------------------|--|
| 1. Running and Hopping. | Free Hopping : 4 quick, 2 slow
(in circle). |
| 2. Walking and Posture. | Basic Walking.
Walking : 4 quick, 2 slow. |
| 3. Breathing. | * Sustained Retraction.
Alternate Lung Breathing. |
| 4. Basic Held Positions. | Second Basic Held Position.
First Strong Opposition Step. |
| 5. Balance. | Advanced Balance. |
| 6. Mobility. | Tension and Relaxation C.
Arm Circling.
Pelvic and Thoracic Mobility.
Pelvic Tilting.
Thoracic Twisting. |

Side Stretching.
 Advanced Stretching.
 Leg Swinging.
 Head Circling.
 Head Lateral Bending.
 Third Scissors.

7. Continuity. Free Running (two leaders, two lines).

THIRD COURSE

Class 7

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Hopping : 2 quick, 1 slow (in circle).
2. Walking and Posture.	Slow Walking. Inner Border Raising.
3. Breathing.	Sustained Retraction. Alternate Lung Breathing.
4. Basic Held Positions.	First Basic Held Position. Second Opposition Exercise.
5. Balance.	Balance Progression.
6. Mobility.	Easy Relaxation. Tension and Relaxation A. Thoracic Twisting. Pelvic and Thoracic Mobility. First Stretching. Leg Swinging. * Leg Circling. Trunk Twisting. Third Scissors.
7. Continuity.	Free Running (leading off changing leaders).

THIRD COURSE

Class 8

<i>Sectional Order</i>	<i>Exercises</i>
1. Running and Hopping.	Free Hopping (all the changes).
2. Walking and Posture.	Quick Walking. First Heel Raising. First Knee Bending. Corrective Posture.
3. Breathing.	Expansion Breathing. Upstretch Breathing.
4. Basic Held Positions.	Fourth Basic Held Position. First Opposition Exercise.
5. Balance.	Twisted Balance.
6. Mobility.	Swinging Relaxation. Head Nodding and Turning. Thoracic Twisting. Pelvic and Thoracic Mobility. Arm Circling. * Alternate Deep Knee Bending. Leg Swinging. Leg Circling.
7. Continuity.	Free Running (three leaders, at command form one big circle taking hands, at command lead off again).

THIRD COURSE

Note.—Classes 9 and 10 are revision of the whole year's course.

Class 9

<i>Sectional Order</i>	<i>Exercises</i>
1. Omit Running, Hopping and Walking.	

- | | |
|--------------------------|--|
| 2. Walking and Posture. | Basic Walking.
Transverse Arch and Toe Lift.
First Heel Raising. |
| 3. Breathing. | Easy Breathing.
Stretch and Relax Breathing.
Upstretch Breathing.
Alternate Lung Breathing. |
| 4. Basic Held Positions. | First Basic Held Position.
Second Basic Held Position.
Fourth Basic Held Position.
First Opposition Exercise.
Second Opposition Exercise. |
| 5. Balance. | Advanced Balance. |
| 6. Mobility. | Head Circling.
Head Lateral Bending.
Pelvic Tilting.
Pelvic and Thoracic Mobility.
Pelvic Tilting and Twisting.
Leg Circling.
Alternate Half Knee Bending.
Trunk Twisting.
Swinging Relaxation.
First Stretching.
Side Stretching.
First and Second Scissors. |
| 7. Continuity. | Hopping : 4 quick, 2 slow.
2 quick, 1 slow. |

THIRD COURSE

*Class 10**Sectional Order**Exercises*

1. Omit Running, Hopping and Walking.

- | | |
|--------------------------|---|
| 2. Walking and Posture. | Outer Border Walk.
Inner Border Raising.
First Knee Bending.
Corrective Exercises. |
| 3. Breathing. | Basic Breathing.
Expansion Breathing.
Upper and Lower Thoracic Breathing.
Sustained Retraction. |
| 4. Basic Held Positions. | Basic Knee Bend and Stretch.
Strong Opposition Step. |
| 5. Balance. | Balance Progression.
Twisted Balance. |
| 6. Mobility. | Easy Relaxation.
Head Nodding and Turning.
Arm Circling.
Pelvic Turning.
Thoracic Twisting.
Leg Swinging.
Alternate Deep Knee Bending.
Trunk Circling.
Tension and Relaxation.
Second Stretching.
Advanced Stretching.
Lumbar Stretching.
Third Scissors. |
| 7. Continuity. | Hopping : 4 quick, 2 slow.
2 quick, 1 slow. |

CLASS FORMATIONS

The formations in which the different sections of exercises are performed may be varied to almost any extent, as changing the formation gives variety to the class, without lessening the value of the exercises.

It will be found, however, that certain exercises do look better in some formations than in others.

In Section 6, Mobility, as all the exercises are done on the same spot, the pupils should be facing the teacher and arranged so that they can all be seen.

Sections 4, Basic Held Positions, and 5, Balances, are best done moving *across* the room, and on no account in a line at the back of the room coming forwards, as the arms are then foreshortened, and the positions cannot be seen from the front. Sections 4 and 5 can also be done in a circle.

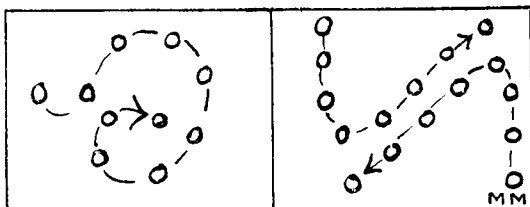
The suitability of class formations depends very much on the numbers taking part. For demonstration purposes teachers should arrange special formations in which the grouping of exercises already described is used. But it should be remembered that a large number of people all doing an exercise in unison is very effective.

The following are suggestions that have been found most generally useful for a small and a big class, the big class formations can also be used for a small class.

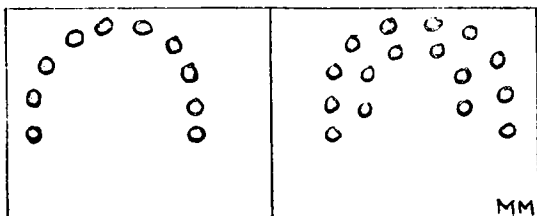
SUGGESTIONS FOR CLASS FORMATIONS

<i>Sectional Order of Class</i>	<i>Usual Formations</i> (Class of 10)	<i>Alternative Formations</i> (Class of 16)
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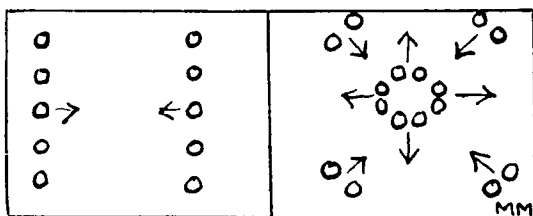
1. Running or Hopping.
2. Walking and Posture.



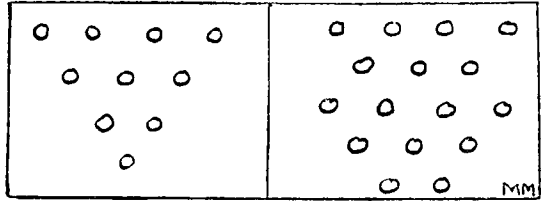
3. Breathing.



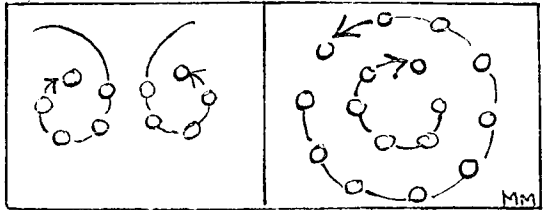
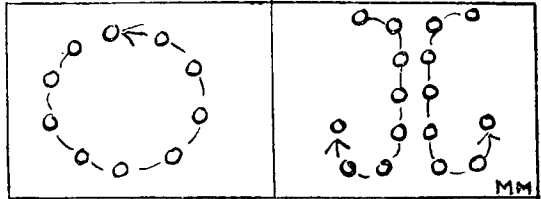
4. Basic Held Positions, in a circle or formations below.
5. Balances.



6. Mobility.



7. Continuity (Running or Hopping).



CHAPTER VII

MUSIC. ORGANISATION. M.M.M.

THE USE OF MUSIC AND RHYTHM, COSTUME AND SURROUNDINGS, COMBINING THE EXERCISES IN GROUP FORMATIONS, TRAINING IN LEADERSHIP AND CO-OPERATION, FURTHER DEVELOPMENTS IN M.M.M.

THE USE OF MUSIC AND RHYTHM

THE exercises may be done with or without music, but music will be found of great help in the performance of exercises, if it is well chosen, for besides adding to the interest of the exercises, it induces rhythm in movement, and indicates the way the exercise should be done, *e.g.*, strongly, sharply, lightly, or smoothly.

Schubert's marches and waltzes that we use are very suitable, and give plenty of variety. In addition, Hugh Bradford, who has worked in connection with M.M.M. for many years, has been commissioned to write special music structurally suited to each exercise and bringing out its particular character.

Percussion is good to practise to; different kinds of cymbals and drums make a stimulating accompaniment. Indeed a good deal of practice can with advantage be done to a drum. It emphasises the rhythm of the exercise and suggests clean strong movements.

*Records of Music and Drum Rhythm.**—The M.M.M. record numbers of Schubert's music and also of the drum rhythms are given with each exercise.

Alternatively some slow tango tunes are fairly suitable, but the phrasing does not always fit the exercise.

Most people find music adds interest to the performance of the exercises, but some get tired of the tunes and prefer a drum rhythm. In either case one great advantage of using a record is that it ensures the exercises being repeated at

* M.M.M. records obtainable at headquarters and all branch schools.

least till the end of the tune. This is not too long as there are two tunes or rhythms on each side of the records.

Timing of the Exercises.—When working alone or giving private lessons, the tempo of all deep-breathing exercises should be varied to suit each individual, gradually slowing the pace as the lung capacity increases. Broadly speaking, the more slowly the breathing is done, the more benefit will be derived from it.

The breathing is described in four time, as the movements being divided into four it is simpler to follow. But actually it is better done double slow time if possible, taking 2 bars to inspiration and 2 to expiration (8 beats to each) instead of 1 (4 beats each) or three time may be used (6 beats to each).

If no music is used, care should be taken in all deep-breathing exercises, to keep a slow and steady rhythm. The usual tendency is gradually to quicken it.

Objection is sometimes raised to breathing to music, particularly in class, as, of course, it is not possible to get the rhythm exactly right for each person. This is not really as important as it may appear, as the pupils are not practising “normal” breathing (which must be an entirely personal rhythm), but lung exercises with some definite aim. The control obtained by following a set rhythm and the value of the concerted effort in class work we have found to far outweigh the disadvantages. An average pace suitable for the majority of the class must be arrived at (*e.g.*, for small children the time must be quicker than for adults), and it is possible sometimes to let some of the class take 1 bar, and some 2, to a breath. Remedial cases, or old or delicate people, where the personal timing of the breathing is of the greatest importance, should not be treated in class.

When practising alone, or doing “Basic Breathing” while walking out of doors, the best average personal rhythm should be ascertained, though even then it is good to vary it, taking sometimes shorter breaths and sometimes longer.

SUITABLE COSTUME AND SURROUNDINGS

Ideally, exercises should be done in the fresh air and sunlight without any clothes at all, but unfortunately it is

not often possible to find the necessary privacy or suitable climatic conditions.

When conditions allow, men and boys should wear only bathing pants (which should be close fitting), alternatively, running shorts and vest may be worn.

It is important to avoid heavy cloth shorts, and belts that need constantly adjusting.

In cold weather a woollen sweater should be worn till the circulation has improved.

Women and girls can wear bathing costumes, or light short tunics, but these must fit closely round the body, in order that faults of posture may be seen and corrected.

The temperature in which the exercises are performed is very important. It is essential that the pupil should be warm on beginning the exercises, and should keep warm throughout their performance.

Beneficial as fresh air is, it is better to exercise indoors than to be cold out of doors. Inside, of course, the room must be well ventilated, but also sufficiently warmed.

The age and strength of the pupil must be taken into account.

Exercises can be done with great benefit out of doors even in cold weather, if the pupils are sufficiently strong to take *strenuous* exercise, so as to keep up the circulation.

In every case it is of the utmost importance to be really warm before beginning to exercise. Even for the strongest and most practised athletes it is dangerous to start exercising with cold stiff muscles, for they cannot respond quickly enough to the nerve messages, and strained ankles or torn muscle fibres may result.

The above, of course, only applies in the case of fairly strenuous or quick movements, but is given as a useful general warning, being a point that is often overlooked.

COMBINING EXERCISES IN GROUP FORMATIONS

When once the exercises have been thoroughly mastered they can be made more interesting, and the beginnings of composition in movement taught by changing the formations

in which they are performed, and combining two or three exercises in a group formation.

Examples of exercises that make a good design when done together are given on pp. 2 and 278. Many other combinations can be made using other exercises.

TRAINING IN LEADERSHIP AND CO-OPERATION

Training in leadership and co-operation should be one of the most important functions of physical education, for it offers one of the best ways of linking mental with bodily training.

The qualities of initiative, of quick thinking, and taking of decisions can be developed, together with the ability to co-operate for a given purpose to get the best results.

In the whole of M.M.M. this idea of leadership and co-operation has received the most serious consideration, and has for twenty years been put into practice. And, like everything else in this method, not merely in relation to physical, but also to æsthetic development, and the combination of the two, which up till now has received practically no consideration.

After the Basic Physical Training, further training should take two main directions, athletic on the one hand, and æsthetic on the other.

FURTHER DEVELOPMENTS IN M.M.M.

ATHLETIC SIDE.—As I have said before, the physical training of men and boys should be developed in relation to athletics, sports and games.

I believe that successful training in these depends in the main on getting the right preparatory exercises composed for each event. Captain Webster has already composed many exercises for this purpose,* but by combining æsthetic balance of movement with athletic positions they can be made at once more interesting to do, and relatively more effective.

I am working on this subject now as applied to golf and tennis, I have already done a book on ski-ing exercises,† and

* "Exercises for Athletes," by F. A. M. Webster and J. A. Heys (Shaw, 7/6).

† "Ski-ing Exercises," Margaret Morris and Hans Falkner (Methuen, 5s.).

I intend to do rugger, soccer, and boxing in the near future. In each case I collaborate with an expert, and I hope eventually to cover the whole field of athletics, sports and games.

A number of women will also be interested in this side, and preparatory exercises, composed for the different games that are played, should be taught in all girls' schools.

I must emphasise that the athletic and games training for women should always be in relation to their particular physique and to their appearance, and therefore should not be as strenuous or exacting as that for men.

ÆSTHETIC SIDE.—In the training of babies and children the æsthetic side is used for educational value from the beginning, the powers of concentration and initiative being developed by group composition and improvisation of movement to music. As the training progresses, the exercises for girls and women become more and more complex, emphasising the æsthetic or dancing side. Solo and group dances are taught, and the study of dance composition and improvised movement play an important part.

Whenever possible painting and design in relation to movement and the creating of costumes should also be studied. This forms an important part of the training of all M.M.M. teachers.

Composition in painting and movement in relation to everyday life should be a fundamental part of education. I intend to deal with the elementary æsthetic side from the point of view of teachers in another book.

“HEALTH PLAY EXERCISES FOR TODDLERS.”—These are a special set of exercises for children from two to five years old. They bring in the fundamentals of breathing and posture training in a form acceptable to small children, and are a preparation for the Basic Physical Training. Nursery rhymes are danced, and the beginnings of simple dance composition and movement improvisation are taught. A book on these exercises is in preparation.

Special music has been composed for all the above * by

* “Boys and Girls Come out to Dance,” J. B. Cramer; “Dickory’s Horse,” Novello.

Anne Harding Thompson, who for many years has played for our baby classes.

MEDICAL SIDE (UNDER MEDICAL DIRECTION)

NORMAL EXERCISES FOR THE PHYSICALLY DEFECTIVE

The exercises in this book are for normal people, but there are adaptations of all these exercises in sitting and lying positions that can be performed by physically defective and delicate people. These adaptations *are not remedial exercises*, they only aim at providing as far as possible “*normal*” *physical exercise* for those who are debarred by some physical defect or weakness, from ordinary gymnastics and games. They do not aim at curing any ailment or deformity, but only at improving general health and correcting postural defects.

(The lying adaptation of an exercise should also be used for children or adults whose posture is too bad for them to perform the standing exercises correctly.) The æsthetic side plays an important part in this work, particularly with children. They take a great delight in composing exercises themselves, in arranging groups, and improvising movements to music.

The psychological value of the feeling of normality this produces is obvious, and the health value of moving, to those who have so little incentive to move, speaks for itself.

The Heritage Craft Schools for Cripples, Chailey, was the first institution of the kind to adopt this method. This was in 1926 at the suggestion of the late Sir Robert Jones, who urged me to develop the medical and orthopædic side of the work.

REMEDIAL EXERCISES

There are now definitely remedial exercises as well, for use in any condition where treatment by exercise is indicated; also orthopædic exercises for the correction of deformities, and the treatment of various kinds of paralysis.

Special exercises for the treatment of surgical tuberculosis

have been worked out and applied under the direction of Dr. Rollier at his sanatoriums at Leysin.

EXERCISES FOR NERVOUS DISORDERS

This method, by reason of the rhythm and interest of the exercises, and the music used, is particularly useful to provide health exercise for those suffering from mental disorders, as interest can be maintained while developing the powers of concentration and the social sense.

For five years now Dr. Casson has used this method at Dorset House, her residential clinic in Bristol, and in the Dorset House School of Occupational Therapy (the first of its kind in England), and has included in her students' training the taking of the diploma for M.M.M. as applied to nervous disorders.

I believe the possibilities of specialised treatment by exercises and music, adapted to different cases, are very great indeed, but we are only at the beginning of this side of the work.

MATERNITY WORK *

This is one of the most important aspects of the method, and one that should produce the most far-reaching results.

There are a complete set of antenatal exercises (including special "Labour" and "Delivery" exercises) which prepare the patient for the act of delivery by training the muscles concerned, and teaching conscious relaxation. Also postnatal exercises which ensure the return of the figure to normal, and lessen the probability of weakness and disabilities resulting from childbirth.

I started to work at this during my training at St. Thomas's Hospital under Miss Randell; the movements in many of the exercises are based on her knowledge and experience. Stonefield Maternity Home, Blackheath, was the first to use these exercises; they have employed a resident teacher for six years.

* "Maternity and Post-operative Exercises," Margaret Morris and M. Randell (Heinemann, 7s. 6d.).

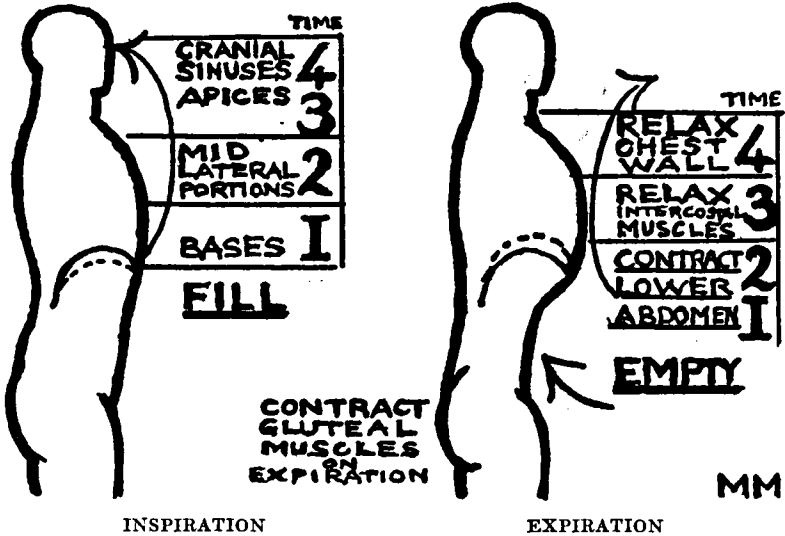
TRAINING OF TEACHERS

Teachers are trained in all the different sides of the work (which may be taken separately or combined) at the four training schools in London, Edinburgh, Glasgow and Paris.

Intensive Courses are held during Christmas and Easter vacations and at the Summer Schools, for teachers and gymnasts (men and women, separate courses).

Special courses are also held for masseuses and midwives, teachers of the physically defective, and occupational therapists.

CHAPTER I
 THE MECHANISM OF "BASIC BREATHING" *
 (the basis of all the exercises)



INSPIRATION
 No conscious muscular contraction. Expand the lungs fully, endeavouring to draw the air right up into the cranial sinuses.

EXPIRATION
 Contract and draw up the lower abdomen from 1st to 4th beats of bar (*whole of expiration*).

This method of breathing is based on one of the oldest forms sometimes called "the complete breath," and aims at ventilating every part of the lungs equally, and if possible the cranial sinuses as well.

It is called "Basic Breathing" to differentiate it from other ways of breathing; the movement is always from the bottom upwards.

The inspiration is begun at the base of the lungs, gradually filling up to the top, expanding the soft parts of the nasal passages and endeavouring to draw the air in to the cranial sinuses as well. The expiration is also begun from the

* This chapter and all breathing exercises from "Breathing Exercises," Margaret Morris. Published 1935.

bottom by contracting strongly the lower abdominal wall, making a circular wave-like movement if properly done.

HOW TO TEACH BASIC BREATHING *

It is advisable for teachers to touch their pupils to indicate to them where they should be conscious of the breathing taking place, and to feel if it is being correctly carried out.

METHODS TO BE USED

(a) *With pupil in crook lying.*—The teacher should kneel beside the pupil, facing towards his (or her) feet, as in this position the pupil will not breathe out into the teacher's face.

(b) *When pupil is sitting on a chair, or standing.*—The teacher should stand at the side or behind the pupil, feeling the expansion of the ribs, passing one arm behind.

During inspiration.—On the first beat the teacher should place his or her hands on the lateral portions of the pupil's ribs.

On the second beat, one hand lightly on the chest wall, on the third beat on one collar-bone, and on the fourth beat lightly on the forehead between the eyes.

During expiration.—The teacher should place one hand lightly on the pupil's lower abdomen, telling the pupil to draw the abdomen inwards away from the hand.

Sometimes a slight pressure on the abdomen in the upward direction may help the pupil to get the up drawing of the abdomen, under the diaphragm.

Note.—The teacher should touch the pupil as little as possible ; as soon as the mechanism of the breathing has been understood, the correction of faults should be made by word of mouth, and by demonstrating.

A careful watch should be kept to see that the right type of breathing is taken with each exercise, that is, "Deep," "Synchronised," or "Expiratory," and that the pupil really understands the difference.

The following are the corrections most commonly needed :—

(a) Relax the abdominal wall on beginning inspiration,

* Notes from "The Theory of Teaching M.M.M.," written and published by Betty Simpson, 1936.

but be sure not to push it out. (This is distending not relaxing it.)

(b) Insist that inspiration is carried right up to the back of the nose, expanding the nasal passages and trying to fill the cranial sinuses with air.

(c) Do not allow any "sniffing" in of air on inspiration, as this closes the nasal passages and impedes the inward breath.

(d) Be sure that the contraction of the abdomen during expiration takes place in the *lower* abdomen (between the iliac crests) and on no account at the waist line, as this impedes the action of the diaphragm.

(e) See that the thorax is kept expanded during the whole of the first two beats of expiration, so that the lower abdomen can be drawn inwards and upwards under the diaphragm; if the ribs are allowed to fall too soon this is not possible.

Note that the correct performance of the expiratory movement is particularly important when teaching good posture either in standing or walking.

THE CORRECT ORDER OF TEACHING BASIC BREATHING

1. Ask pupils to sit or stand in good positions so that they can watch the demonstration.

2. Give name and uses of exercise and demonstrate as usual—making sure that everyone in the class can see.

3. First explain inspiration, in the following manner:

"Breathe in through the nose for four beats, filling the lungs from the bases upwards. On the first beat, relax the abdominal wall and breathe in, expanding the ribs laterally.

"On the second beat, continue inspiration, flaring the ribs and expanding the upper thorax.

"On the third and fourth beats, continue inspiration, filling up to the apices of the lung (upper part of the lungs above the collar-bones) expanding the nasal passages and endeavouring to fill the cranial sinuses as well.

"Breathe out through the mouth for four beats, compressing the lips slightly, blowing out a thin stream of air (as if blowing out a candle)."

4. Tell the pupils to lie on their backs in crook lying with the whole spine resting on the floor, and practise inspiration.

Note.—The teacher should make sure the pupils have thoroughly understood and mastered the first part of the exercise, *i.e.*, inspiration, before teaching expiration in detail.

In order to impress the timing of inspiration, the teacher should tell the pupils to place their finger-tips lightly on their lower ribs (lateral portions) on the first beat, on the chest on the second beat, on the collar bones on the third beat, and on the forehead on the fourth beat. Having practised this three or four times, the pupils should be clear on the timing and correct manner of performing inspiration.

5. The teacher should then feel the pupils (as already described) and make the necessary corrections.

Teaching of Expiration.—Teach the contraction of the lower abdominal wall apart from breathing. Explain it as a muscular movement.

1. Tell the pupils to place their finger-tips on the lower abdomen between the iliac crests to feel how much they can contract and draw up the abdomen. Allow them to practise this movement three or four times.

2. Explain the exact timing of expiration by telling the pupils to place their finger-tips on the lower abdomen for first and second beats, on the ribs for third beat, and on the chest for the fourth beat.

3. Explain that although the contraction is maintained throughout the bar, the intercostal muscles (which flare the ribs) must not relax till the third beat, and the chest wall not till the fourth beat, so that the thorax is kept expanded for the first two beats.

4. The teacher should now feel the pupils, and give individual criticisms and encouragement. At a big class, a few should be taken each time.

Note.—The detailed explanation and the correct teaching of Basic breathing forms the first part of the examination for the Basic Physical Training Certificate.

POSITIONS OTHER THAN STANDING IN WHICH THE BREATHING EXERCISES CAN BE PERFORMED

Breathing exercises may be performed in any position in which the lungs can function fully. The position can be

varied to suit the age and strength of the pupil, but some are better than others for obtaining certain results.

All lying exercises, "Dorsal" or "Ventral" (and some sitting ones) may be done either in bed, on a couch, or on the floor. The floor being flat a better position of the back is obtained, but the exercises become more tiring, and therefore for elderly or delicate people it is always advisable to begin on a bed or on a couch.

Note.—The transition to standing after performing lying exercises should be *gradual*; sitting up, and then standing. Some people feel giddy after deep breathing, particularly if done while lying on their backs.

1. DORSAL POSITION. "Crook Lying" (knees up). (See p. 122.)
"Lying" (legs straight).

"Crook lying" is the best position in which to learn the breathing, as the contraction of the lower abdominal wall on expiration is much easier to do in this position than any other.

The knees being bent up, this is a good corrective position for "hollow back."

In cases of "flat back" a small firm pillow should be placed under the lumbar spine. Alternatively, the legs may be straightened, which tends to extend the spine, but the abdominal contraction is a little more difficult in this position than when the muscles are shortened by the drawing up of the knees. A soft small pillow may also be used for older people to fill up the hollow and give support in cases of rigid hollow back when the position is found uncomfortable.

2. SITTING UP. "Long Sitting" (legs straight). (See p. 112.)

Sitting up in bed, if well supported by pillows, is a good progression from the lying positions, only the minimum of effort being involved. But "long sitting" on the ground *without back support* is very tiring, particularly if the ham strings are at all tight.

It is, however, a very useful position when strong work for the back extensors is desired. But the effort required and the

extra muscle work involved to keep the back straight, tends to restrict the breathing, making exercises in this position better for strengthening the muscles of the back, but less good for breathing.

All the breathing exercises may be done in this position.

In "Alternate Lung Breathing" the legs are kept straight, but the weight is taken as far as possible on to one thigh while the other hip is drawn up. Done in bed supported by pillows this again is an easy progression from the lying position. It is a good general body exercise, as when sitting up, the back and neck muscles are worked in addition to the lateral trunk muscles.

3. SITTING ON A CHAIR. (See p. 125.)

Sitting well back on a chair with the back supported by a pillow is the next progression from sitting up in bed.

It is a very suitable position for older people, and all pupils benefit by doing "Basic Breathing" in this position several times a day. The retraction of the abdomen on expiration is, however, more difficult in this position than lying on the back with the knees up.

4. SITTING CROSS LEGGED. "Cross Sitting." (See p. 112.)

Owing to the tilt of the pelvis, this is the position in which the spinal column can be straightened out the most.

This position can be used sitting in bed, but actually it is more tiring than "sitting on a chair," so is placed after this in progression.

"Basic Breathing" can be done with a hand round each knee, drawing down the shoulders, which gives some support to the spine, and makes a bigger stretch possible.

It is a good position for children for strengthening the back muscles (as in "Long Sitting" without support, but less tiring) and correcting bad posture.

Note.—It is *essential* to see that the spine is kept straight, as if the exercises are done with a round back they will be worse than useless!

This position is the most corrective for "hollow back." For older people or delicate children, the back should be

supported. It should be avoided in cases of "flat back" and the next position used instead.

All the exercises may be done in this position, but alternate lung breathing becomes an ordinary breathing exercise, as it is not possible really to transfer the weight from one side to the other.

5. **KNEELING POSITION.** "Kneel Sitting" (sitting on heels). (See p. 112).

This is mainly a corrective position for "flat back," but is useful as a change from other positions to give variety, and when arranging the exercises in group formations.

It should be avoided in cases of "hollow back."

All the breathing exercises can be done in this position. In "Alternate lung breathing" the kneeling position is kept, but each hip can be drawn up alternately.

6. **VENTRAL POSITION.** "Prone Lying" (stretched out flat on abdomen). (See p. 127.)

Useful to give variety of position in bed. The turning on to the abdomen and back again in itself affords a certain amount of exercise.

"Basic Breathing" in this position is a fairly strong exercise if the abdomen is drawn up off the bed on expiration, but this can be omitted to begin with if it is found too much effort. "Stretch and Relax Breathing" becomes a *very* strenuous exercise in this position, and should only be used for strong pupils, and as a correction for "flat back," for which it is particularly good if it is not found too much effort to perform. It is called "Spinal Extension."

The other exercises are not suitable for this position.

7. "ROLLIER" POSITION. "Ventral." (See p. 128.)

The same as the previous, but resting on the elbows.

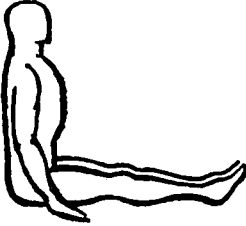
Dr. Rollier (of Leysin) has found this position invaluable for developing muscles of the back when no exercise is taken, the mere lifting and turning of the head using the back extensors strongly.

The extension of the spine flares the ribs and so aids the

expansion of the thorax. Dr. Rollier makes all bad posture and scoliosis cases spend several hours a day in this position.

This position is particularly useful for cases of "flat back." When the back is already too hollow a small hard pillow should be placed under the abdomen.

CORRECTIVE POSITIONS FOR "HOLLOW BACK" AND FOR "FLAT BACK"



LONG SITTING

A good corrective position for "hollow back," but very tiring as shown here, without support for the back.



CROSS SITTING

A still better corrective position for "hollow back"; may be modified by giving back support.



KNEEL SITTING

A good corrective position for "flat back."

An easy position in which to do the exercises; useful in groups, but should be avoided for people with hollow back.

MM

NAMING OF THE BREATHING FOR DIFFERENT KINDS OF EXERCISES

The method of breathing is the same for all exercises (as described in "Basic Breathing"), but the way it is performed is varied to suit different types and speeds of movement.

Before *any* exercise is taught, and before even the breathing has been explained, the pupil should be told *what kind of*

breathing it is going to be, and given the reason why that kind of breathing is most suitable for that particular exercise.

The three ways of breathing are named :

“ DEEP.” “ SYNCHRONISED.” “ EXPIRATORY.”

“ DEEP.” In all special breathing exercises, as those in this book, and other quiet exercises, the breathing is “ Deep ” as described in “ Basic Breathing.”

(*Note.*—“ Deep ” breathing should be done as slowly as possible, according to the capacity of each individual.)

“ SYNCHRONISED.” In many exercises (particularly quick or complicated ones that are not suitable for deep breathing) the breathing is called “ Synchronised,” the timing being arranged so that the inspiration comes at the easiest moment in relation to the movement, and so involves no effort, but prevents the breath being “ held.”

“ EXPIRATORY.” In strong exercises involving quick forward bending or trunk twisting, the breathing is called “ Expiratory,” which means that the *expiration only is insisted on*, the air being strongly expelled through the lips on the bending or twisting, so that the inspiration is almost involuntary on the upward movements.

SUSTAINED BREATHING EXERCISES

For singers, public speakers, swimmers, and others who need to develop the capacity for holding the breath far beyond what is required in ordinary circumstances, all the breathing exercises can be performed in the two following ways.

1. Inspiration during 1st bar—

hold the breath (and position of arms and head) during 2nd and 3rd bars.

Expiration during 4th bar (contracting strongly lower abdominal wall).

2. Inspiration during 1st bar—

hold the breath (and position) during 2nd, 3rd, 4th, 5th bars.

Expiration during 6th bar—

then for 7th and 8th bars an easy breath in and out to finish phrase of music, and give a short rest. (This last breath may be taken without any arm movement, or repeating the movement in usual time as desired.)

A progression on 1. The same, except that the breath is held for 6 bars instead of 2, the expiration coming on the 8th bar.

Special Remarks :

1. In practising sustained breathing exercises there must be *no forcing or straining*, and the breath must not be held longer than can be done with comfort. With daily practice the capacity will be found to develop, and the length of time the breath is held can then be increased without effort. *The exercises should always be practised in the normal way as well.*

2. These sustained breathing exercises when suitably adapted may be used with benefit in medical and orthopædic work, holding the breath with the lungs expanded in the best corrective position according to the particular case. But exercise treatment of this kind requires both knowledge and experience, and should on no account be attempted without medical advice. In some cases, to emphasise the expansion of the lungs may have very serious results.

CHAPTER II

DESCRIPTIONS OF EXERCISES

1. NAME.

The name is only meant to indicate the main object of the exercise, and distinguish it from the others.

2. RECORDS

All these exercises go well to the first M.M.M. record number given. Alternative numbers that are also suitable are given, also drum rhythm records.

Slow tango tunes can also be used, but the phrasing does not usually fit very well to the movements.

3. DIAGRAMS

The figures are depicted in the nude to show the muscle work as clearly as possible. In practice it is essential to be warm, but clothing should be as light as possible.

4. NUMBERS UNDER DIAGRAMS

These represent the beats in each bar, but the bigger number does not mean that that beat is accentuated, but indicates that it is on that beat *that the position depicted is reached.*

As it is always the most important position that is shown, sometimes this is reached by the 2nd beat (and held till end of bar), sometimes by the 3rd beat, and sometimes the transition from the preceding position is very gradual, the final position not being reached till the last beat.

6. THE WRITING OF WALKING, RUNNING AND HOPPING

The simple foot signs from the "Notation of Movement" * are used in describing the walking, running, and hopping changes, and the walking steps that occur in an exercise, the reasons being that the signs are much easier to follow, and take far less space than word descriptions.

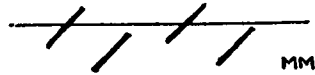
If the explanations of the signs used are studied carefully they will be found quite easy to follow.

A sloping sign indicates a step forward.

A straight up and down sign that the foot is straight under you.

NORMAL WALKING

The sign on the line is the *right* foot. The sign below the line is the *left*. When no other sign is added, it is taken as an ordinary step, the heel down first and the weight transferred forward.



NORMAL STANDING

Both feet together straight under you.

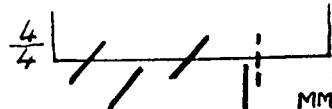
Bringing left foot up to right. The broken line indicates that the right foot has not moved.



Example

Walking three steps.

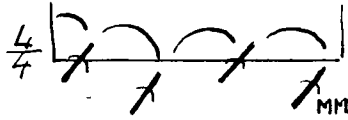
Closing up on fourth beat.



* "Notation of Movement," Margaret Morris (Kegan Paul), 2s. 6d.

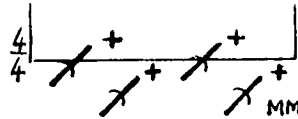
RUNNING WITH SPRINGING

Steps written thus—joining signs above indicate springing from one foot to the other. Curved lines across signs mean that there is a slight flexion of the knee on landing.



HOPPING

The cross after the forward sign means a hop. It is an abbreviation of H for Hop.



Note.—The movement known as hopping in M.M.M. is sometimes referred to in other methods as skipping.

GENERAL NOTES ON WALKING

In all walking exercises the normal walking step is used. As the foot is swung forward, the anterior tibial group of muscles are in slight tonic contraction, so that the heel touches the ground first, acting as a lever, the body weight being transferred along the outer border to the ball of the foot.

The main points to remember are :—

1. Heels down first.
2. Feet straight.
3. Correct transference of weight from the heel to the ball of the foot in order to avoid the heavy tread which occurs when the weight is kept back on the heels.
4. *Good posture must be maintained during all walking exercises.* Special attention should be paid to the carriage of the head, and the synchronising of the breathing, with the retraction of the abdomen on expiration.
5. The arms should swing freely and easily from the shoulder joint.

OUTDOOR WALKING EXERCISE

INSPIRATION. For 4 to 12 steps (according to lung capacity), expand whole thorax, *but do not strain*. Breathe in through the nose, lips closed.

EXPIRATION. For a corresponding number of steps, contract strongly the lower abdominal wall, and draw up the contents of the abdomen. Breathe out also through the nose, lips closed.

REMARKS

Note.—The arms should swing easily and loosely. See remarks on walking, Chapter II.

Uses.

1. General toning up of the system by the increased intake of oxygen.
2. Improves the circulation.
3. Assists digestion by stimulating the abdominal organs.

EASY BREATHING A
(Introductory Breathing Exercise)

SCHUBERT'S MARCHES 44.
 TIME : 4 beats in bar.

M.M.M. RECORD B3 or A2 (1st
 part) or D11.

BREATHING : Deep.

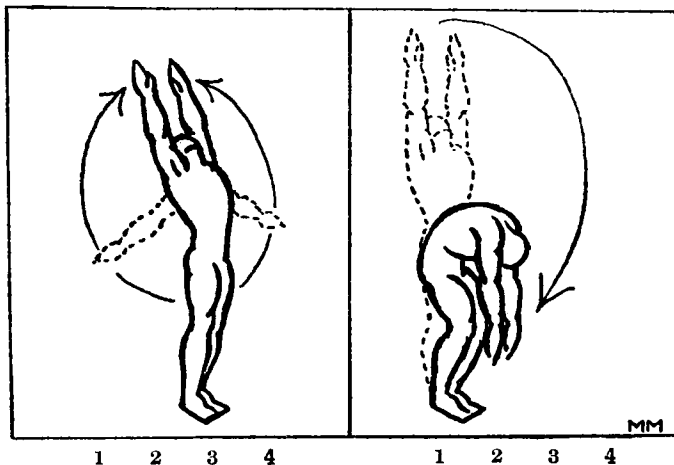
Starting position :

Standing toes and heels to-
 gether, but knees slightly flexed,
 whole spine flexed, arms hang-
 ing down loosely in front.



BAR 1

BAR 2



(Easy breathing, *continued*)**BAR 1.**

Inspiration 4 (or 8) beats.

On 1st beat begin to take the arms out sideways, rotating shoulders till thumbs are up, continuing for the rest of the bar to take them to shoulder level and upwards and a little back, to the upstretch position above the head. The spine is gradually straightened, and finally on the 4th beat slightly extended. The knees are gradually extended, the head is taken slowly up and back on 4th beat. Palms of hands forward.

BAR 2.

Expiration 4 (or 8) beats. No contraction of abdomen.

Concentrate on easy relaxation from the upstretch position. On the 1st beat let the stretch die out of the arms and the neck relax, for the rest of the bar gradually let the whole body relax, flexing the spine, letting the arms fall forward and the knees flex, till the starting position is reached on 4th beat.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

1. This exercise is an introduction to basic breathing because it is far easier to perform, the contraction of the lower abdomen being omitted as the fullest relaxation is aimed at on expiration.
2. It should always be taught before any other exercise, and should be used to start each morning practice, because it is both easy and pleasant to do.
3. For adults it is better taken slowly, 2 bars to inspiration and 2 bars to expiration.

EFFECTS AND USES :

1. To teach full inspiration, the movement of the arms expanding and lifting the thorax.
2. To get the feeling of alternate *stretching* and *relaxation* through the whole body.
3. To improve the circulation (particularly in Easy Breathing B, with deep knee bending).

EASY BREATHING B

(with deep knee bending) :

The same as A, except that the knees are flexed as far as possible on the 2nd bar (till the buttocks rest on the heels), and extended on repeat of 1st bar.

(Easy breathing, *continued*)

EFFECTS AND USES :

The same as for A, but to give more mobility for knees and ankles, and stronger work for the quadriceps muscles.

**EASY BREATHING (A or B,) AND POSTURE CORRECTION
WITH WALKING OR RUNNING :**

TIME : 4 beats in bar. BREATHING : Synchronised. In for 4
beats, out for 4 beats .

Walk or run 16 steps (4 bars).

Close up feet, Easy Breathing once (2 bars).

Pull up into best standing position (2 bars).

EASY BREATHING (A or B) WITH RUNNING :

Run 8 steps (2 bars).

Close up feet, Easy Breathing once (2 bars).

Run straight on.

B (rather difficult after deep knee bending).

Note.—The last version of exercise is not given with walking, as without pulling up into the best standing position, the posture will almost inevitably be bad during the walking steps.

BASIC BREATHING

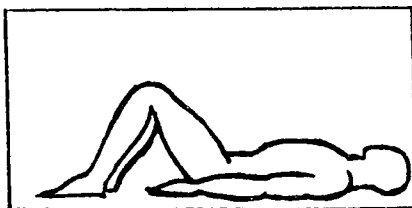
in crook lying

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or A2 (1st part) or D11.

TIME : 4 beats in bar.

BREATHING : Deep (as slowly as possible).

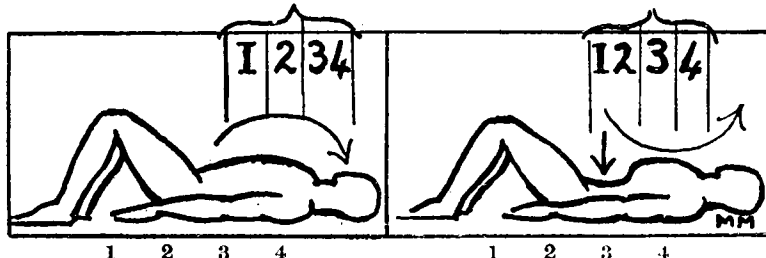


Starting position :

Crook lying (easiest—so best for learning exercise), *i.e.*, lying on back with knees flexed, whole spine resting on floor, heels and toes together, arms at sides with palms down.

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats (or if possible 8), through the nose (filling the lungs from the base upwards).

On the 1st beat, expand the lower ribs laterally, filling the bases of the lungs.

On the 2nd beat continue to expand the ribs filling the mid-lateral portions.

BAR 2.

Expiration 4 beats (or if possible 8), letting the air out gently through the lips, with slight sound.

On 1st and 2nd beats contract the lower abdominal wall (the portion between the iliac crests) below the diaphragm, pressing down the lumbar vertebræ, and endeavouring to draw

(Basic breathing, *continued*)

On 3rd and 4th beats continue inspiration to the very top, filling the lungs to the apices, expanding the nasal passages and endeavouring to draw the air into the cranial sinuses as well.

(All three parts to be smooth and continuous one into the other.)

up the abdomen beneath the diaphragm, while keeping the ribs still flared.

On 3rd beat relax the intercostal muscles. On 4th beat relax the chest muscles, making expiration as complete as possible.

Keep the chest expanded for 3 beats, trying to empty the lungs from the bottom.

Keep the abdominal muscles contracted during the *whole of expiration*, but let them *relax completely* as inspiration begins again.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks on "Basic Breathing" in all positions :

1. On inspiration relax, and concentrate on filling the lungs as fully as possible. *There should be no conscious tensing of the muscles during inspiration.*

2. On expiration *concentrate on the abdominal contraction*, but be sure that the contraction takes place in the lower abdomen and not at the waist level, as if the contraction is too high it interferes with the action of the diaphragm, and tends to press the contents of the abdomen down, instead of drawing them up.

3. The whole exercise should be smooth and continuous, producing a "wave-like" movement in the abdomen and thorax.

4. With patients who are weak and nervous, or who have rigid chests, care must be taken to see that the breathing is begun gently (as sometimes deep breathing produces giddiness), gradually progressing till deep breathing is possible. Sometimes better results are obtained by telling patients to breathe out before starting the exercise.

EFFECTS AND USES :

1. The patient is asked to concentrate during inspiration on the depth and breadth of the breathing, stretching the intercostal spaces and expanding the chest, and during expiration on getting the maximum contraction of the lower abdominal wall and drawing up of the contents of the abdomen. The effect therefore is that during inspiration the circulation in the thorax is very

(Basic breathing, *continued*)

much increased by suction effect, and during expiration the blood is forced into the inferior vena cava and so on to the heart. So a pumping of blood as it were takes place.

This facilitates the work of the heart by assisting the return of the blood, and influences also the portal circulation.

2. The retraction of the abdomen uses particularly the transverse abdominal muscles, and so makes it a particularly valuable exercise after abdominal operations, or in any condition of weak or sagging abdomen. For if the transversus muscles are strengthened *before* any movement involving the recti muscles is allowed, the transversus acts in the nature of a splint to the recti muscles, and the stronger abdominal movements can then be performed without strain, and without causing any bulging of the abdomen. The habit should be formed in the performance of every exercise always to begin the retraction of the abdomen on expiration, a *fraction before* any other movements, particularly those involving the recti muscles.

BASIC BREATHING

sitting on chair

TIME : 4 beats in bar.

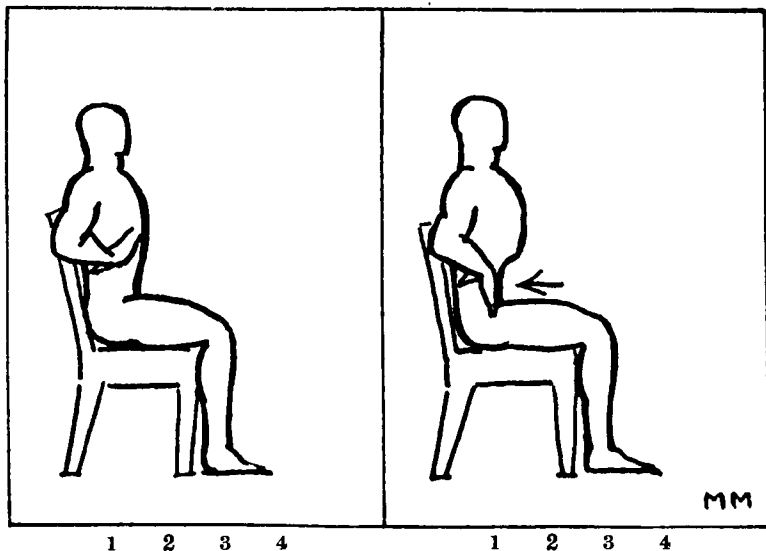
BREATHING : Deep.

Starting position :

Sitting upright on chair with knees bent to right angle, legs and feet together (with cushion at back). Hands on hips, rather forward and dorsi flexed, thumbs behind on waist line, fingers in front in upward direction on the margins of ribs.

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats, feel extent of thoracic expansion with fingers.

(See description of Basic breathing in crook lying, p. 122)

BAR 2.

Expiration 4 beats.

Using thumbs as pivot, lower fingers to point downwards just within and below iliac crests to help to localise abdominal contraction to the lower abdomen. Press lumbar spine back against cushions and back of chair.

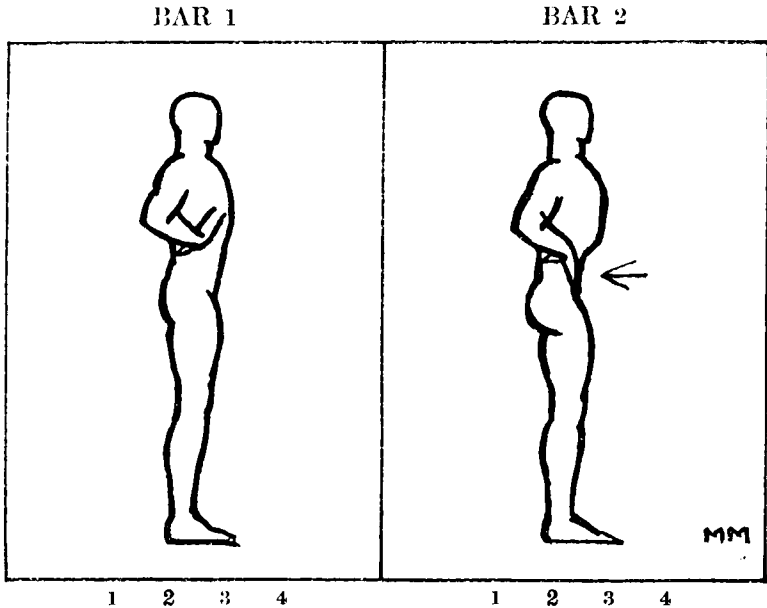
BASIC BREATHING

standing

Starting position :

Normal good standing position.

Heels and toes together, knees extended but not braced back, the ear, shoulder, hip bone and ankle joint in one perpendicular line. Shoulders down, head up, chin in, hand at waist as described in "Basic Breathing—Sitting."



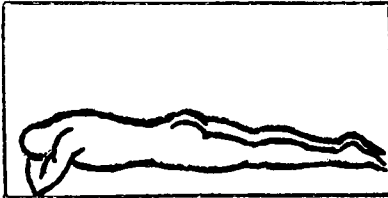
Repeat the exercise exactly as described in "Basic Breathing—Sitting" only in the upright standing position, maintaining good posture. In this position the gluteal muscles should be contracted together with the abdominal muscles on expiration.

BASIC BREATHING

in ventral position

TIME : 4 beats in bar.

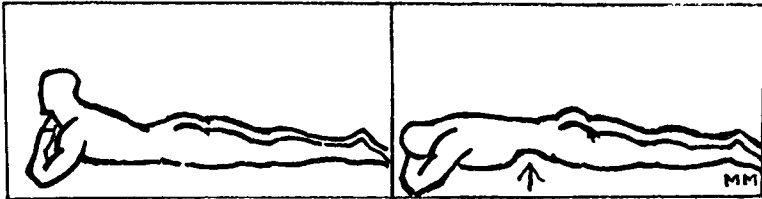
BREATHING : Deep.



Starting position :
Lying on abdomen elbows fully flexed and abducted, forearms and palms of hands resting on ground, tips of fingers meeting, forehead resting on backs of fingers.

BAR 1

BAR 2



BAR 1.
Inspiration 4 beats, raise head slowly.

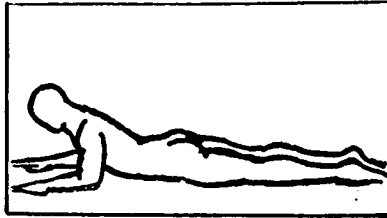
BAR 2.
Expiration 4 beats, lower head to starting position, contracting lower abdominal wall drawing it up off ground.

In this position the abdominal contraction is more difficult, the abdomen being drawn up just off the bed.

BASIC BREATHING in Rollier position

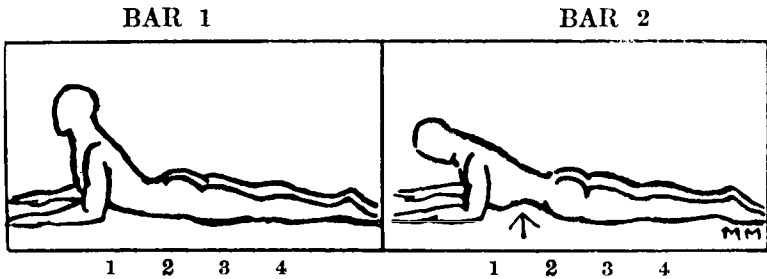
TIME : 4 beats in bar.

BREATHING : Deep.



Starting position :

Lying on abdomen, weight of body supported on elbows, and forearms, palms down, head normal. On inspiration the head is slightly raised. On expiration the head is slightly dropped. Abdominal movement as previous exercise.



A very good exercise for "flat back."

For patients with "hollow back" place a small firm pillow under abdomen to minimise extension in lumbar region.

STRETCH AND RELAX BREATHING

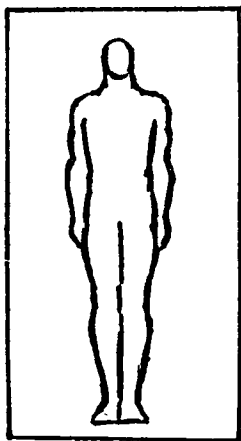
Similar to "Basic breathing," but with a simple head and arm movement added, stretching the arms to the finger tips on inspiration, and relaxing them on expiration.

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or A2 (1st part) or D11.

TIME : 4 beats in the bar, or
better slower 8 beats
(2 bars) to each movement.

BREATHING : Deep.



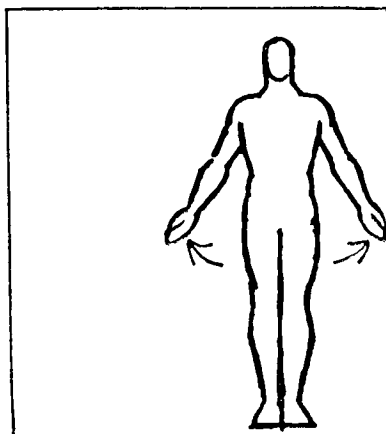
Starting position :

Normal good standing position, toes and heels together, knees extended, but not braced back, the ear, shoulder, hip bone and ankle joint in one perpendicular line, shoulders down, head up, chin in, hands by sides.

Any of the positions may be used. *But note* "ventral position" changes the exercise from a gentle breathing exercise to a strenuous *flat back exercise* not advisable for weak patients. It is then called "Spinal Extension" (see p. 266).

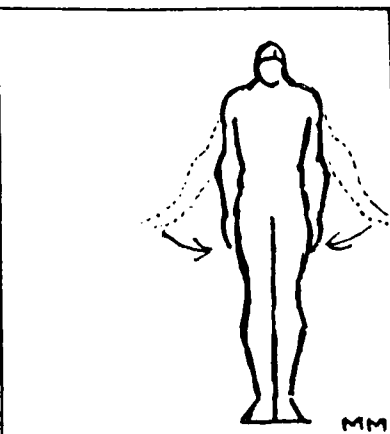
STRETCH AND RELAX BREATHING

BAR 1



1 2 3 4

BAR 2



1 2 3 4

BAR 1.

Inspiration 4 (or 8) beats.

For 4 beats abduct and stretch both arms sideways to hip level (moving on the frontal plane) with palms facing forwards, fingers stretched, and the neck extended, head straight.

BAR 2.

Expiration 4 (or 8) beats contracting lower abdominal wall.

On 1st beat pronate the hands, slightly flexing the elbows. For 3 beats relax the arms into starting position, the elbows reaching the body first just before the hands. Relax the neck, head slightly down.

Press back the lumbar region.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

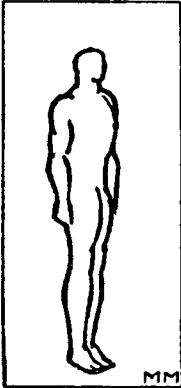
1. Emphasise the alternate stretching and relaxing of the arms and neck.

2. Maintain a good position throughout the exercise, and remember that the abdominal contraction should be from the lower abdominal wall and not at the waist, so that the contraction takes place *below the diaphragm*, the ribs being kept raised until the 3rd beat.

EXPANSION BREATHING

SCHUBERT'S MARCHES 44.
 TIME : 4 beats in a bar (or
 better slower, 8 beats).

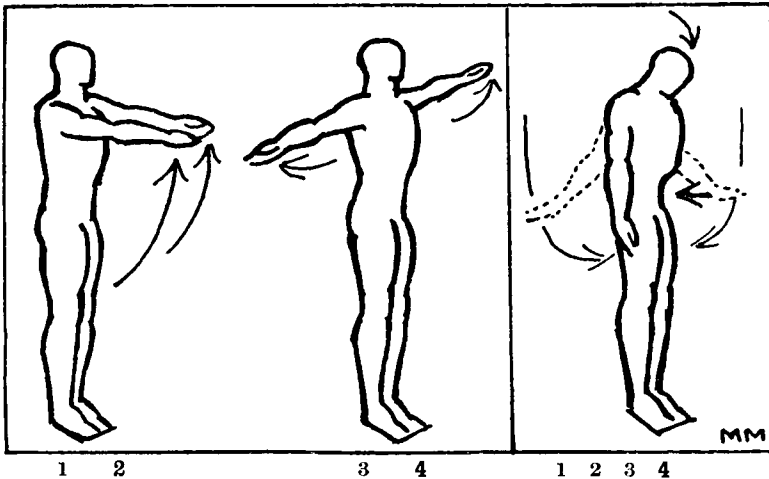
M.M.M. RECORD B3 or A2 (2nd
 part) or D11.
 BREATHING : Deep.



Starting position :
 Good standing as in Stretch
 and Relax Breathing.

BAR 1

BAR 2



BAR 1.
 Inspiration 4 (or 8) beats.
 During beats 1 and 2, raise
 both arms forward, shoulder

BAR 2.
 Expiration 4 (or 8) beats
 contracting lower abdominal
 wall.

(Expansion breathing, *continued*)

width apart, to shoulder level, palms facing, fingers stretched. During beats 3 and 4, part arms sideways at shoulder level, expanding chest.

On 1st beat pronate the hands, slightly flexing the elbows.

For 3 beats relax the arms into starting position, the elbows reaching the body first, just before the hands. Relax the neck, head slightly down.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

1. A bad position is apt to occur in this exercise unless the shoulders are drawn down whilst the arms are being raised. Special care should be taken to maintain correct posture throughout the exercise.

2. In cases when the pupil finds the exercise too difficult to perform with correct posture, the exercise should first be practised lying in the dorsal position. This strengthens the extensor and transverse muscles of the back with the spine held in a good position.

The crook lying position is the best for pupils with hollow back.

Other Remarks :

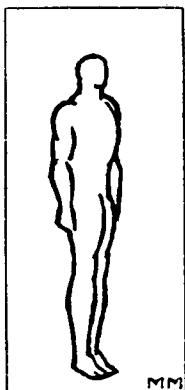
As in Stretch and Relax Breathing.

UPSTRETCH BREATHING

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or B5 or D11.

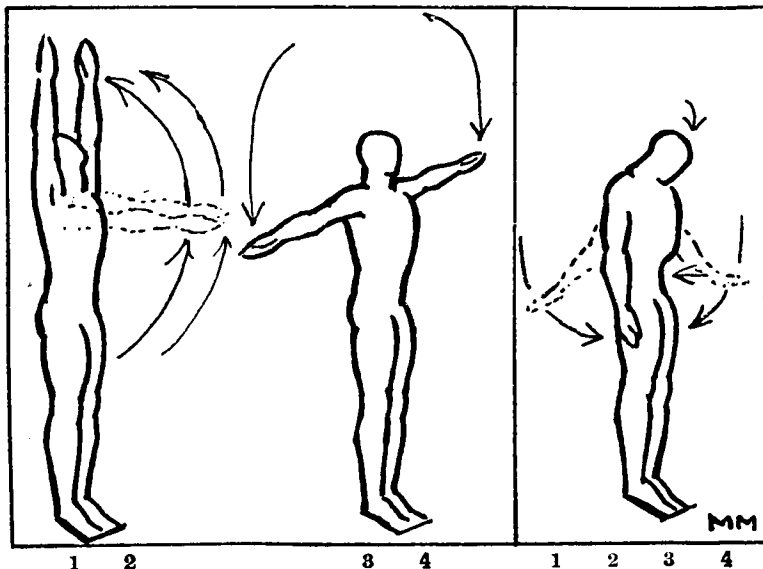
TIME : 4 beats (or 8) in a bar. BREATHING : Deep.



Starting position :
 Good standing as in Stretch
 and Relax breathing.

BAR 1

BAR 2



(Upstretch breathing, *continued*)**BAR 1.**

Inspiration 4 (or 8) beats.

For 2 beats raise both arms forwards and upwards above head, arms shoulder width apart, palms facing, fingers stretched and pointing to the ceiling, neck extended, head back.

On 3rd and 4th beats, lower arms sideways to shoulder level, maintaining the stretch with palms up, and chest expanded. Head returns to normal position with chin in.

BAR 2.

Expiration 4 (or 8) beats, contracting lower abdominal wall.

On 1st beat, pronate the hands, slightly flexing the elbows.

For 3 beats, relax the arms into starting position, the elbows reaching the body first, just before the hands. Relax the neck, head slightly down.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

As in previous exercise.

Other Remarks :

As in Stretch and Relax Breathing.

In this, as in previous exercise, the exercise is performed facing forward, the figures only being depicted as above to show arm positions more clearly.

UPPER AND LOWER THORACIC BREATHING

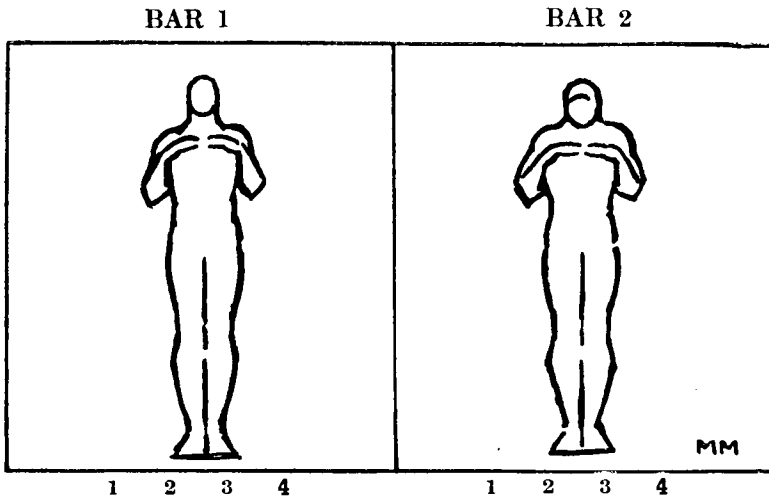
This exercise differs from the preceding ones in that the breathing is localised and limited as much as possible, first to the upper portions of the lungs and then to the lower.

SCHUBERT'S MARCHES 44.
TIME : 4 beats in a bar.

M.M.M. RECORD B3 or B5 or D11.
BREATHING : Deep.

Starting position :

Palms of hands resting on upper chest wall as in first diagram of exercise. May be performed in any position except the ventral ones.



BAR 1.

Inspiration 4 beats, trying to fill the upper portions of the lungs *only*.

Draw up the chest as far as possible *without* raising the

BAR 2.

Expiration 4 beats, contracting strongly lower abdominal wall.

At the same time relax the upper chest muscles, dropping

(Upper and lower thoracic breathing, *continued*)

shoulders, to facilitate the filling of the apices of the lungs.

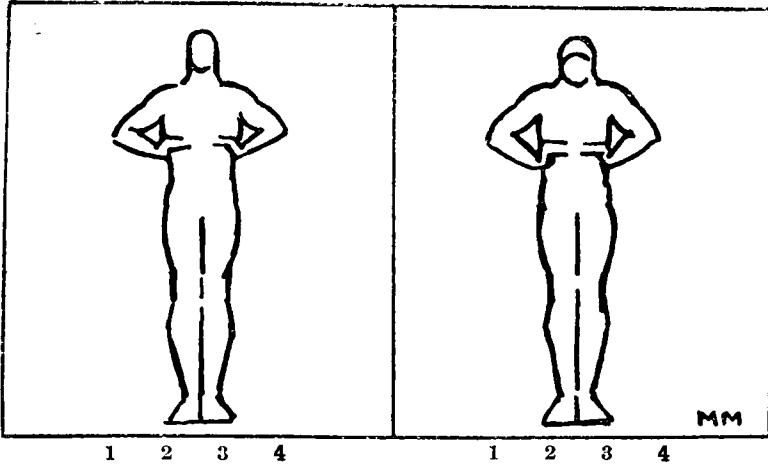
the chest to make the emptying of the upper portions of the lungs as complete as possible.

Relax neck, head slightly down.

Note.—It is important to avoid pressing down chest with hand on bars 1 and 2, therefore when first teaching the exercise, allow elbows to be raised slightly from side during these two bars.

BAR 3

BAR 4



BAR 3.

Inspiration 4 beats, trying to fill the lower lateral portions of the lungs only.

Expand the ribs sideways, pressing out the hands, *without* raising the chest, in order to limit the expansion as much as possible to the lower portion of the lungs.

BAR 4.

Expiration 4 beats, contracting strongly lower abdominal wall, at the same time drawing down the ribs and squeezing them in with the hands to make the emptying of the lower portion of the lungs as complete as possible.

Relax neck, head slightly down.

Special Remarks :

1. Note particularly that this exercise is the only one where the chest wall is allowed to drop at the *beginning* of expiration, in order to emphasise the emptying of the upper portions of the lungs.

(Upper and lower thoracic breathing, *continued*)

2. Try to localise each movement, in the 1st and 2nd bars to the *upper thorax* by lifting the chest, in the 3rd and 4th bars to the *lower thorax* by expanding the ribs laterally.

3. Be sure that the abdomen is relaxed during inspiration as in all other breathing exercises.

EFFECTS AND USES :

1. To develop more elasticity in the lungs, by localising the breathing as much as possible, first in the upper portions of the lungs and then in the lower.

2. To give muscular control by limiting the movement voluntarily to the one portion of the thorax at a time.

3. One part only may be used in cases where there is marked deficiency in breathing capacity either in the upper or lower portions of the lungs.

ALTERNATE LUNG BREATHING

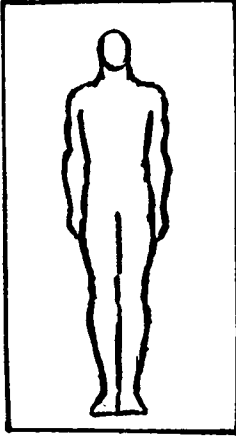
In this exercise the breathing is again localised, but instead of the upper or the lower parts of *both* lungs working, the breathing is limited as far as possible to *one* lung at a time.

SCHUBERT'S MARCHES 44.

TIME : 4 beats in the bar (or better done slower, 2 bars to each movement).

M.M.M. RECORD B3 or A2 (1st part) or D11.

BREATHING : Deep.



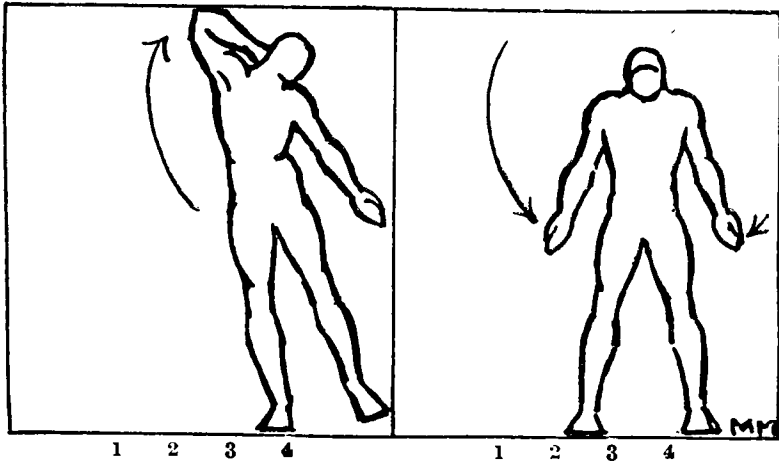
Starting position :

Normal good standing position, toes and heels together, knees extended, but not braced back, the ear, shoulder, hip bone and ankle joint in one perpendicular line, shoulders down, head up, chin in, hands by sides.

Any of the positions may be used except "Ventral."

BAR 1

BAR 2



(Alternate lung breathing, *continued*)

BAR 1.

Inspiration 4 (or 8) beats.

During 1st, 2nd and 3rd beats, raise the right arm to neck rest, with the elbow as high as possible, abduct the left arm to hip level. Hold this position for 4th beat. At the same time step to the right, and transfer the weight of the body on to the right leg, carrying the thorax as far as possible to the right so that the right side of the thorax is expanded more than the left. The left hip is drawn up, so that the left heel is raised, and the trunk slightly flexed to the left, so as to tighten the muscles on that side of the body, thus limiting the working of the left lung.

The head turns to the left, looking down at the left hand, reaching this position by 3rd beat. Hold for 4th beat.

BAR 2.

Expiration 4 (or 8) beats, contracting lower abdominal wall.

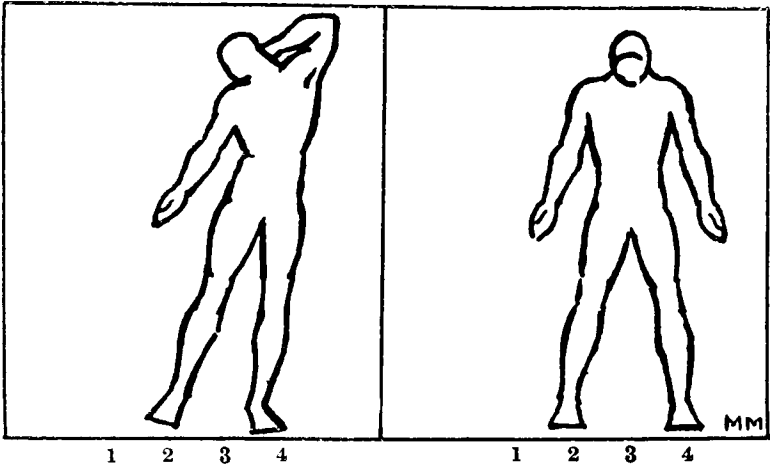
For 3 beats slowly relax the right arm to the same position as the left. By the 3rd beat the body weight has been transferred back, so that it is evenly distributed between both feet, the left heel sinks to the ground, and the head moves forwards and downwards. Hold position for 4th beat.

BREATHING EXERCISES

(Alternate lung breathing, *continued*)

BAR 3

BAR 4

**BAR 3.**

Inspiration 4 (or 8) beats.
Repeat bar 1, but to left.

BAR 4.

Expiration 4 (or 8) beats.
Repeat bar 2, but sinking
right heel.

Special Remarks :

Keep the point of the elbow well up and back, in order to get as much stretching of the intercostal muscles as possible, and to assist the flaring of the ribs on that side during inspiration.

EFFECTS AND USES :

1. As a breathing exercise for getting more elasticity in the lungs. The change of weight flares the ribs each side alternately, facilitating the breathing first in one lung and then in the other.

2. To improve general health, by toning up the muscles of the chest and thorax, and strengthening the muscles of the back and neck. The lateral movement also has the effect of increasing the circulation in the splanchnic area, owing to the alternate stretching and compressing particularly of the liver.

3. May be done to one side only in the treatment of scoliosis or paralysis, where the stretching of one side, and the expansion of one lung is desired.

SUSTAINED RETRACTION BREATHING

SCHUBERT'S MARCHES 46.

M.M.M. RECORD C9 or B3 or D11.

TIME : 4 or 8 beats.

BREATHING : Deep and sustained.

Starting position :

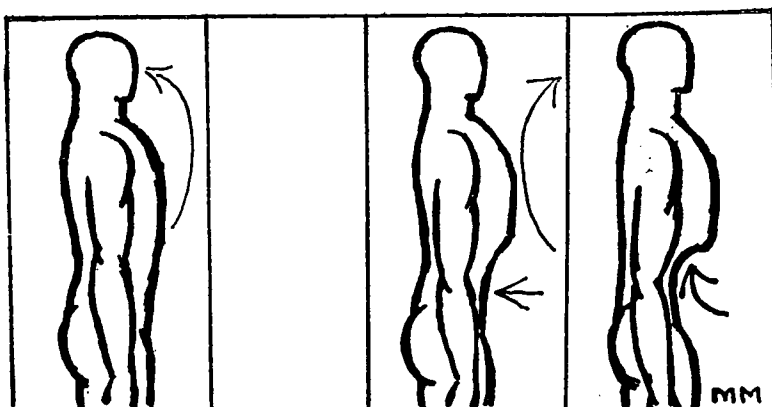
Normal good standing position as described on p. 138.

BAR 1

BAR 2

BAR 3

BAR 4



1 2 3 4

1 2 3 4

1 2 3 4

1 2 3 4

Inspiration.

Hold the
breath.

Expiration (con-
tracting lower
abdominal wall).

Maintaining
expiration
continue con-
traction and
add updrawing
of abdomen
under the
diaphragm.

The more complete the expiration has been on the 3rd bar, the more the abdomen can be drawn upwards by a kind of suction effect.

This exercise can be performed in any position except "Ventral." "Long sitting" is not very suitable.

The special object of this exercise is to emphasise the retraction of the abdomen on expiration.

It is very useful in cases of visceroptosis.

BASIC WALKING

Slow motion

SCHUBERT'S MARCHES 17.

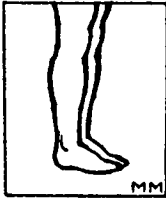
M.M.M. RECORD A1 or D15.

TIME : 4 beats in bar.

BREATHING : Deep.

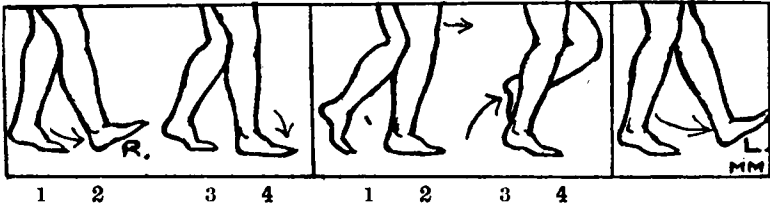
Starting position :

Normal good standing position, toes and heels together, knees extended but not braced back, the ear, shoulder, hip bone and ankle joint in one perpendicular line, shoulders down, head up, chin in, hands by sides.



BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

On 1st beat, place right foot forward on the heel. On 2nd beat begin the transference of weight from the left to the right foot (left heel only just leaving the ground). On 3rd beat, lower the whole of the right foot, continuing the transference of weight, and still continue this on 4th beat.

BAR 2.

Continue inspiration.

On 1st and 2nd beats the body weight should be completely taken on to the right foot, only the toes of the back foot still remaining on the ground. On 3rd and 4th beats lift the left foot and bring it past the right foot with the toes passing practically touching the right ankle bone.

(Basic walking, *continued*)

BAR 3.

Expiration 4 beats, contracting lower abdominal wall.

Having brought the left foot past the right at the end of previous bar, extend the left knee and lower the heel to the ground on the 1st beat and repeat the exercise exactly, but with the weight of the body on the left foot, right foot at the back.

BAR 4.

Continue expiration and abdominal contraction.

Repeat bar 2 exactly with left foot in front, right passing through.

Note.—If at first pupils find it impossible to inhale for 8 beats, it may be adapted to inspiration 4 beats, expiration 4 beats.

Special Remarks :

1. Although the time must be clearly marked, each movement in this exercise should be continuous, so that the body weight is gradually being carried steadily forward throughout the exercise without a break.

2. The feet must move in parallel lines.

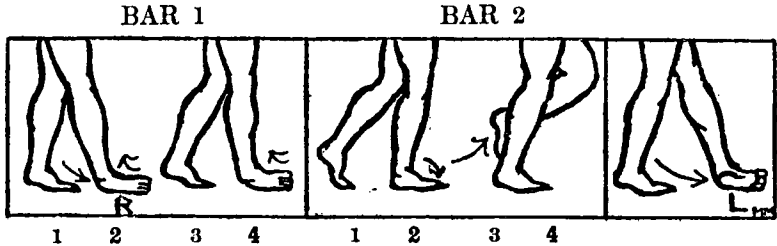
3. The posture of the body as a whole, and the carriage of the head should be as perfect as possible.

4. The deep breathing will assist not only the posture, but also the continuity that should be aimed at when performing the exercise.

EFFECTS AND USES :

1. To improve normal walking and posture.
2. To develop a fundamental sense of poise.
3. For concentration and timing of movement.
4. A basic exercise for re-education of walking, either in remedial work or where there is temporary weakness to overcome.

OUTER BORDER WALK



The movements of the feet and the transference of weight are similar to the previous exercise, "Basic walking," except that as the step forward is made, the body weight is taken on the outer border of the foot, from the heel to the little toe, the inner border being drawn up, the ball of the foot only reaching the ground on the 3rd beat of bar 2.

Special Remarks :

When the ball of the foot touches the ground, care should be taken to keep as much of the inner border as possible off the ground.

EFFECTS AND USES :

1. To correct any tendency to flat foot by strengthening the anterior tibial group of muscles which support the longitudinal arch.
2. To increase mobility in the ankle joint.

TRANSVERSE ARCH AND TOE LIFT
(Corrective)

SCHUBERT'S MARCHES 17.

M.M.M. RECORD A1 or D15.

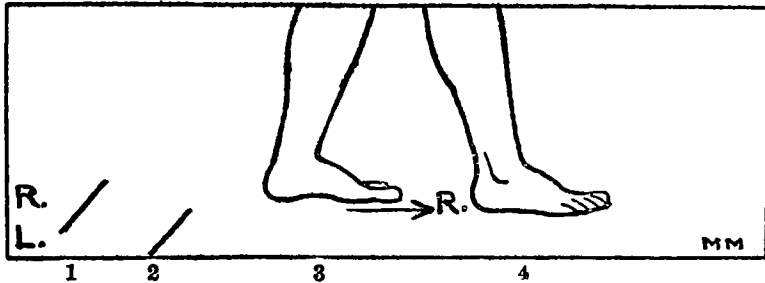
TIME : 4 beats in bar.

BREATHING : Synchronised.

Starting position :

Normal good standing position, as described for "Basic walking." Breathe in before beginning exercise.

BAR 1



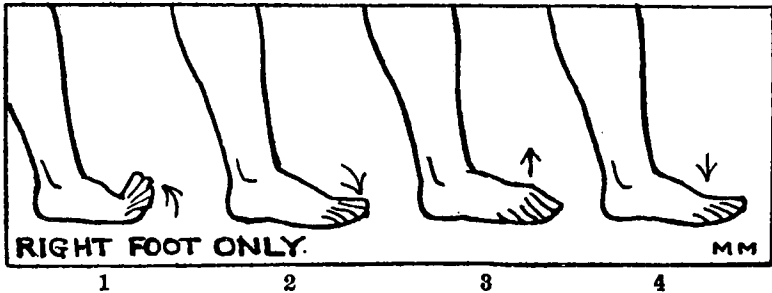
BAR 1.

Expiration 4 beats, contracting lower abdominal wall.

Beginning with the right foot, for 3 beats take 2 normal walking steps (heels down first, feet straight), 1 step to each beat. On 3rd beat bring the right foot forward into walk-standing position, both feet flat on the ground, and the weight of the body evenly distributed between both feet. Hold this position for 4th beat.

(Transverse arch and toe lift, *continued*)

BAR 2



BAR 2.

Inspiration 4 beats.

On 1st beat, lift and abduct the toes of the front foot, keeping the ball of the foot on the ground. On 2nd beat, lower toes to the ground. On 3rd beat, draw up the transverse arch, so that pressure is taken off the ball of the foot; stretch the toes, keeping them as much as possible on the ground. On 4th beat, relax the transverse arch, so that the foot is in the normal position.

Repeat the exercise, starting with the left foot.

Special Remarks :

1. For arm movements, see description of normal walking, but note that it is important for the arms and hands to be kept relaxed during the special foot movements.
2. When lifting the toes, try and separate them so that each toe is abducted.
3. When raising the transverse arch, great care should be taken to avoid curling the toes under, the raising of the transverse arch should use only the small intrinsic muscles, without bringing the flexors into action at all.

EFFECTS AND USES :

1. To strengthen the small intrinsic muscles of the foot which support the transverse or anterior arch.
2. In a lesser degree, to strengthen also the longitudinal arch.
3. To increase mobility in the metatarso-phalangeal joints.

INNER BORDER RAISING

SCHUBERT'S MARCHES 17.

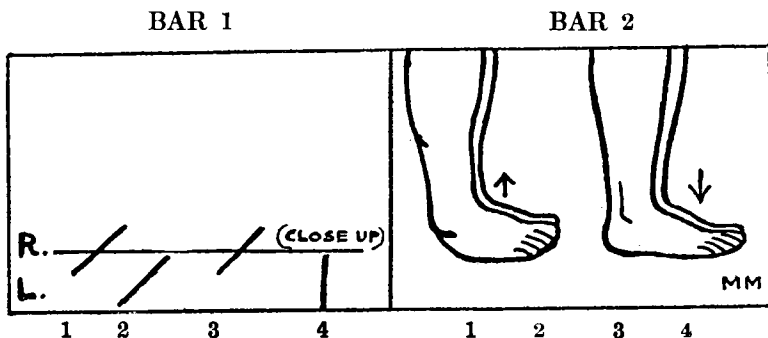
M.M.M. RECORD A1 or D15.

TIME : 4 beats in bar.

BREATHING : Deep.

Starting position :

Normal good standing position, as described for "Basic walking." Breathe in before beginning exercise.



BAR 1.

Expiration 4 beats, contracting lower abdominal wall.

Beginning with the right foot, for 1st 3 beats take 3 normal walking steps (heels down first, feet straight), 1 step to each beat. On 4th beat close up the left foot to the right to normal standing, toes and heels together.

BAR 2.

Inspiration 4 beats.

For 1st 2 beats invert both feet by drawing up the inner borders, keeping the knees extended and contracting the gluteal muscles. The weight of the body should rest on the outer borders of the feet, and partly on the toes. The transverse arches should also be working, as the toes should be stretched downwards towards the floor. On the 3rd beat return to normal standing

(Inner border raising, *continued*)

position. Hold this position for the 4th beat. (If the arches are weak it is necessary to make an effort to maintain the corrected position of the longitudinal arch.)

BARS 3 AND 4.

Repeat bars 1 and 2, but beginning with the left foot.

Special Remarks :

1. For arm movements, see description of normal walking, but note that it is important for the arms and hands to be kept relaxed during the special foot movements.

2. Draw up the inner borders as much as possible on the inverted position. Keep the knees extended, and the toes stretched.

EFFECTS AND USES :

1. A good corrective exercise for flat feet, or any weakness of the longitudinal arch.

2. The inverted position strengthens the anterior tibial group of muscles.

Note.—When there is a tendency to “flat foot,” this exercise should always be taught before any heelraising is allowed.

The pulling up of the inner borders (bar 2) may be practised alone without the walking steps, and should be done several times a day.

The pupil should also be told, when standing for any length of time, to rest the feet by turning the toes slightly inwards and taking the weight on the *outer* borders of the feet, and great benefit will be derived if the habit is formed of always standing in this position while performing some everyday act such as brushing the teeth.

FIRST HEEL RAISING

SCHUBERT'S MARCHES 17.

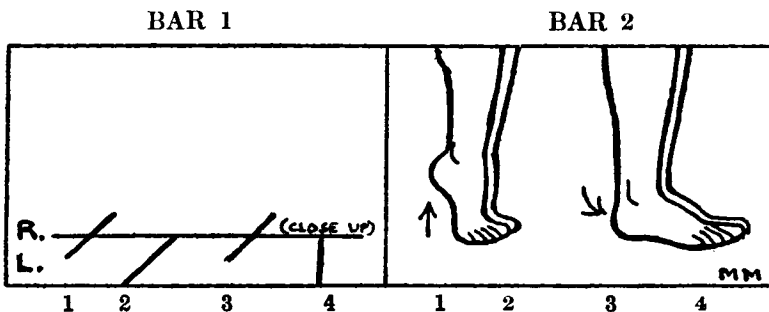
M.M.M. RECORD A1 or D15.

TIME : 4 beats in bar.

BREATHING : Deep.

Starting position :

Normal good standing position, as described for "Basic walking." Breathe in before beginning exercise.



BAR 1.

Expiration 4 beats, contracting lower abdominal wall.

Beginning with the right foot, for 3 beats take three normal walking steps (heels down first, feet straight), 1 beat to each step. On 4th beat bring the left foot up to the right, finishing in normal standing position, toes and heels together.

BAR 2.

Inspiration 4 beats.

On 1st beat, raise both heels off the ground as far as possible, carrying the body weight right forward on to the balls of the feet and the toes. Hold this position for 2nd beat. On 3rd beat, sink heels gently to normal standing. Hold for 4th beat.

(Continue inspiration to end of 4th beat.)

BARS 3 AND 4.

Repeat the exercise, starting with the left foot.

(First heel raising, *continued*)

Special Remarks :

1. For arm movements, see description of normal walking, but note that it is important for the arms and hands to be kept relaxed during the special foot movements.

2. During the heel raising, care should be taken to see that correct posture is maintained, the inspiration, as it were drawing the body upward and forward as the chest is expanded.

3. In the heel sinking, the weight must be transferred gently, to avoid any jarring of the spine, the expansion of the thorax should be maintained, continuing inspiration till the end of the bar.

EFFECTS AND USES :

1. To strengthen the ankles, and the arches of the feet.

2. To develop the muscles of the calf.

3. A simple exercise for poise, and for accuracy of foot movements.

Note.—When there is a tendency to “flat foot,” always teach the two *preceding* exercises before this one.

FIRST KNEE BENDING A
(Normal position)

SCHUBERT'S MARCHES 17.

M.M.M. RECORD A1 or D15.

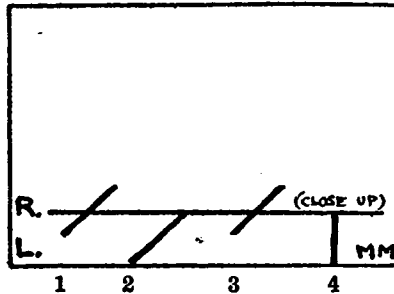
TIME : 4 beats in bar.

BREATHING : Synchronised.

Starting position :

Normal good standing position, as described for "Basic walking." Breathe in before beginning exercise.

BAR 1



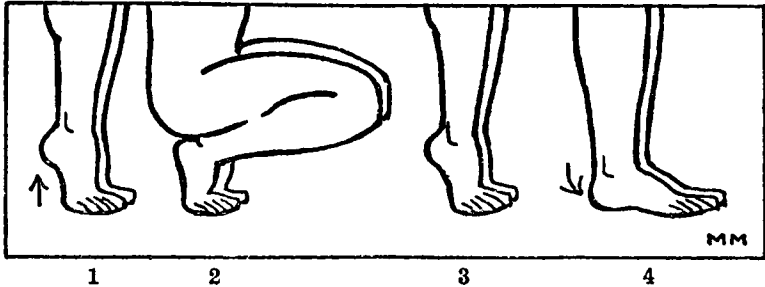
BAR 1.

Expiration 4 beats, contracting lower abdominal wall.

Beginning with the right foot, for 3 beats take 3 normal walking steps (heels down first, feet straight), 1 step to each beat. On 4th beat, bring the left foot up to the right, finishing in normal standing position, toes and heels together.

(First knee bending, *continued*)

BAR 2



BAR 2.

Inspiration 4 beats.

On 1st beat, raise both heels, with the knees extended. On 2nd beat, bend both knees to the limit of flexion (squatting position sitting on heels), keeping the knees pressed together and the spine quite straight. On 3rd beat extend both knees with heels still raised. On 4th beat, sink both heels, finishing in normal standing position.

BARS 3 AND 4. Repeat the exercise starting with the left foot.

FIRST KNEE BENDING B

The same as A, but outward rotation of legs on the knee bending.

Special Remarks :

1. Good posture must be maintained throughout the exercise.
2. For arm movements, see description of normal walking, but note that it is important for the arms and hands to be kept relaxed during the special foot movements.
3. On the 2nd beat of the 2nd bar, during the knee bending position, be careful to keep the body straight and push back the lumbar spine so that the whole back is straight, keep the head up and the chin in.
4. When sinking the heels on the last beat, do so gently, so as to avoid jarring the spine.
5. Accuracy of movement should be insisted upon during knee bending in the normal position, the toes heels and knees being pressed together. In the outward rotation, the knees are abducted as the toes are turned out, the heels being kept together.

EFFECTS AND USES :

1. To strengthen the quadriceps and other muscles of the legs, and also the feet.
2. To improve balance.

WALKING IN RHYTHMS

SCHUBERT'S MARCHES 17.

M.M.M. RECORD A1 or D15.

TIME : 4 beats in bar.

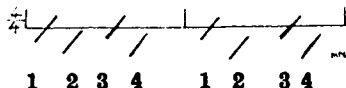
BREATHING : Deep.

All walking exercises are done as *good normal walking*, the heel touching the ground first and the weight being carried forward all the time.

See remarks on walking, Chapter II.

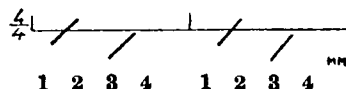
Quick Walking.

4 quick steps to the bar.

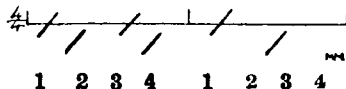


Slow Walking.

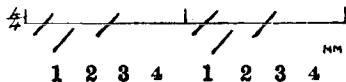
2 slow steps to the bar, accentuating the opposition swing of the shoulders, *i.e.*, right shoulder and left foot forward, and left shoulder and right foot forward.



4 *Quick Steps*, 2 *Slow Steps*.



2 *Quick Steps*, 1 *Slow Step*.



USES :

1. To develop poise.
2. To improve posture by accentuation of the opposition twist of the body.
3. To strengthen the trunk rotators and improve the walk in everyday life.

FREE RUNNING :

SCHUBERT'S WALTZES 20.

M.M.M. RECORD A1 (second half)

TIME : 4 beats in bar.

BREATHING : Synchronised.

Big springing steps with free easy swing of the arms (keep arms relaxed, the elbows not flexed as in track running). Time usually 4 steps to the bar.

HOPPING IN RHYTHMS

SCHUBERT'S MARCHES 26.

TIME : 4 beats in bar.

M.M.M. RECORD C10 or D15.

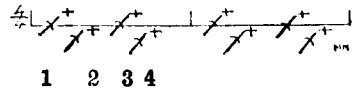
BREATHING : Synchronised.

A. Hopping (hands on hips, thumbs behind).

B. Free hopping (swinging arms in opposition to leg movement).

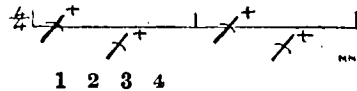
Quick Hopping.

4 hops to the bar.



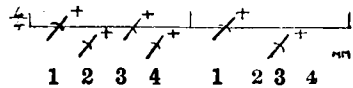
Slow Hopping.

2 hops to the bar.

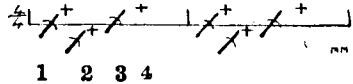


Make leg movement smooth and continuous, circling the foot as in bicycling.

4 *Quick*, 2 *Slow*.



2 *Quick*, 1 *Slow*.



USES :

All running and hopping exercises are specially for :

1. Continuity and freedom of movement.
2. Developing a sense of rhythm.
3. Improving the circulation.

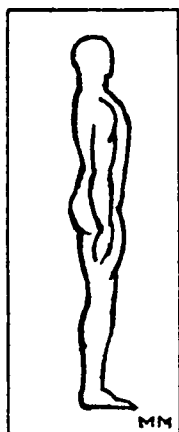
FIRST BASIC HELD POSITION

DRUM BEATS.

M.M.M. RECORD D14.

TIME : 6 beats in bar.

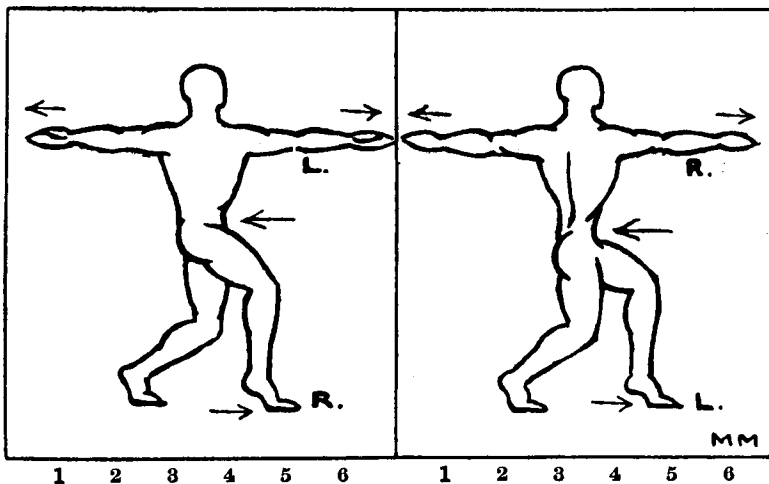
BREATHING : Deep.



Starting position :
Normal good standing position,
as described for "Basic walking."

BAR 1

BAR 2



(First basic held position, *continued*)

BAR 1.

Inspiration 3 beats.

Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, step forward with the right foot, both heels raised, and bend both knees almost to a right angle. (A long step should be taken so as to enable the knee cap of the back knee to be almost parallel to the ground, and the thigh of this leg to be in a direct line with the body.) The weight of the body should be evenly distributed between both feet. The pelvis should face forward, *i.e.*, in the direction of the step, and the thorax to the right, to the limit of rotation, twisting at the waist.

Also on the 1st beat, the arms and hands stretch outwards at shoulder level, the left arm pointing forward and the right arm backward, palms forward in the normal position. Previous to the 1st beat, the hands are drawn up to the shoulders, arms and hands relaxed ready to stretch out on the 1st beat. The head remains upright, but owing to the rotation of the thorax, the chin should be over the left shoulder. Hold this position for the remainder of the bar, remembering to contract the lower abdominal wall on expiration, *i.e.*, 4th, 5th, 6th beats.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Note.—The transition between each position is a quick movement which takes place between the 6th beat of bar 1, and the 1st beat of bar 2. The knees extend slightly while the step is

BAR 2.

Inspiration 3 beats.

Expiration 3 beats, contracting lower abdominal wall.

Repeat bar 1, but stepping forward on the 1st beat with the left foot, and reversing all movements of the arms and thorax. The right shoulder will now be forward and the thorax rotated to the left. The arms relax and stretch at shoulder level, so that the right arm points forward and the left backward, chin over the right shoulder. Hold this position for the remainder of the bar.

(First basic held position, *continued*)

being made, but as soon as the back foot passes the mid line and reaches the ground (1st beat of bar), the knees are bent at right angles as already described.

The rotation of the thorax, and the quick relaxing and stretching of the arms are synchronised with the transition between the steps, so that by the 1st beat of the bar, the position is complete.

Special Remarks :

1. Be careful to take a large enough step to enable the knees to be bent almost to a right angle, and to have the correct distribution of weight as described in bar 1.

2. Remember that both heels should be off the ground during the held position as well as on the transition movement.

3. Twist the thorax as much as possible whilst keeping the pelvis facing the line of direction as in starting position.

4. The shoulders, elbows, wrists and fingers should be completely relaxed on the rapid transition movement, but the arms should not drop below shoulder level. When extending the arms to the held position, the movement should be strongly and accurately performed, finishing with the maximum of extension in the elbow, wrist and finger joints.

5. On the held position, the shoulders should be well drawn down and the head upright with the neck well stretched.

6. Accuracy of movement should be aimed at, and the arms should make a straight line when pointing forwards and backwards at shoulder level, forming a T shape.

7. Note carefully the opposition work of the arms and legs, *e.g.*, right foot forward when the left arm is forward, left foot forward when the right arm is forward.

EFFECTS AND USES :

1. To teach muscle control (*i.e.*, the conscious alternation of muscular tension and relaxation), particularly the quick relaxation on transition movements.

2. To develop general co-ordination and balance.

3. To strengthen the trunk rotators, the transverse and extensor muscles of the back, the extensor muscles of the forearms, the quadriceps, and all calf and foot muscles.

4. To teach control of equal distribution of weight between the two feet.

5. By reason of the above, all the Basic Held Positions are a particularly useful preparation for athletics, sports, and games.

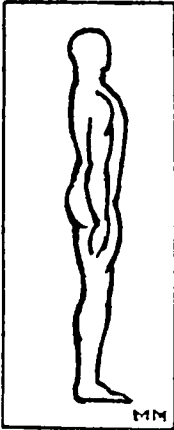
SECOND BASIC HELD POSITION

DRUM BEATS.

M.M.M. RECORD D14.

TIME : 6 beats in bar.

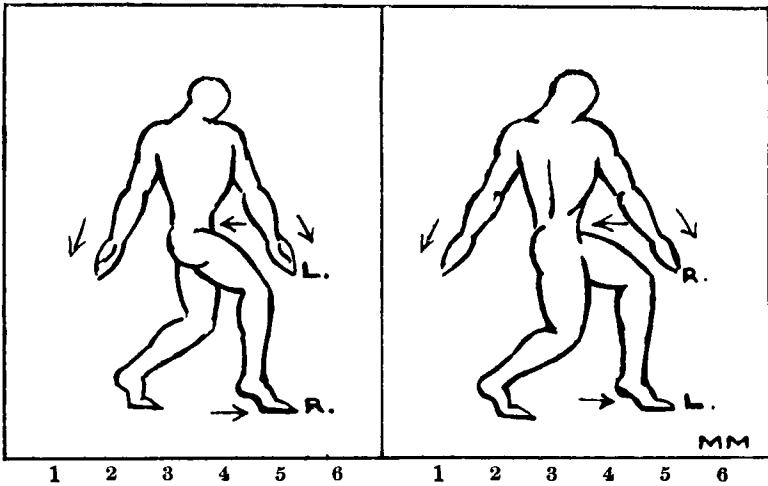
BREATHING : Deep.



Starting position :
Normal good standing position, as described for "Basic walking."

BAR 1

BAR 2



(Second basic held position, *continued*)

BREATHING :

Inspiration 3 beats, expiration 3 beats, contracting lower abdominal wall.

The feet, legs and trunk movements are exactly the same as those described in First Basic Held Position, but the arms relax and stretch downwards in an A position, hands away from the body, on a level with the hips. The chin is almost touching the front shoulder, the neck slightly flexed. On the transition movement, the arms are relaxed almost to the sides and the hands are drawn up a little, while the head is raised to normal, before repeating the above with the other hand and foot forward.

Special Remarks :

As in First Basic Held Position.

Additional Remarks :

1. The palms of the hands should be in the normal position, as in previous exercise, but it is necessary to take special care to ensure that the palm of the back hand is in the correct position, *facing forward*. Any tendency to pronate the forearm or to inwardly rotate the shoulder joint should be corrected.

2. Accuracy of movement and an awareness of design and pattern should specially be aimed at in this position. The angle of the arms should form an A shape, the distance between each wrist and the body being equal, and the hands at hip level.

EFFECTS AND USES :

As in First Basic Held Position.

ADDITIONAL USE :

1. If the full twist of the thorax is correctly maintained, this position gives stronger work for the trunk rotators than the one with the arms at shoulder level, as much more effort is required to keep the body twist.

FOURTH BASIC HELD POSITION

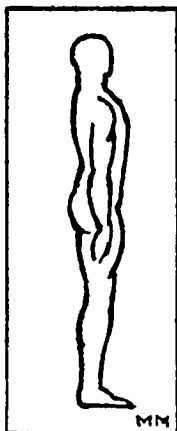
(The Third Basic Held Position, being more difficult to teach, is put into the second standard of exercises.)

DRUM BEATS.

M.M.M. RECORD D14.

TIME : 6 beats in bar.

BREATHING : Deep.

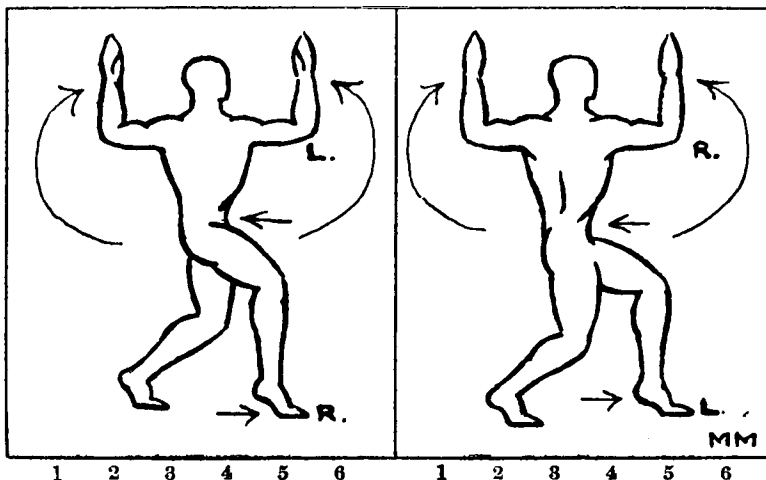


Starting position :

Normal good standing position, as described for "Basic walking."

BAR 1

BAR 2



(Fourth basic held position, *continued*)

BREATHING :

Inspiration 3 beats, expiration 3 beats, contracting lower abdominal wall.

The feet, legs, trunk, and head movements are exactly the same as those described in First Basic Held Position. The arms relax and swing downwards and sidwards on the transition (into a square position) instead of relaxing and stretching as in the First and Second Held Positions. The left arm swings forwards (in opposition to the right foot), and the right arm backwards, till the elbows are at shoulder level. The forearms are then bent up to right angles, the arms forming a perfect square, palms of hands in the normal position, hands and fingers straight and pointing upwards. The head is upright with the chin above the front shoulder.

Special Remarks :

1. On the transition, swing the arms with as much relaxation as possible, passing through the levels of the Second and First Held Positions.

2. The forearms should be bent upwards at right angles, both elbows being at shoulder level, with the hands in direct alignment. Any tendency to radial or ulna flexion, *i.e.*, turning the hands inwards towards the thumbs, or outwards towards the little fingers, should be corrected.

EFFECTS AND USES :

As in First and Second Opposition Held Position.

ADDITIONAL EFFECTS AND USES :

1. The position of the arms is particularly useful for working the transverse back muscles, and is therefore a corrective movement for kyphosis (round back) or protruding scapulæ.

2. The difficulty in controlling the hands and keeping them straight makes the exercise useful for achieving accuracy and control of movement.

BASIC KNEE BEND AND STRETCH

(Three levels)

using First, Second, or Fourth, Basic Held Positions

DRUM BEATS.

TIME : 6 beats in bar.

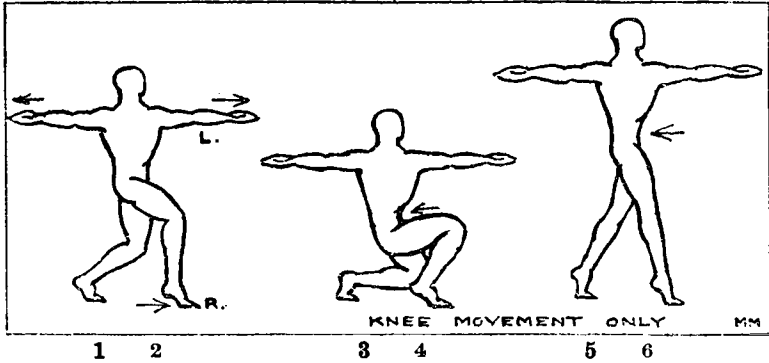
M.M.M. RECORD D14.

BREATHING : Synchronised.

Starting position :

Normal good standing position, as described for "Basic walking."

BAR 1



BREATHING :

Inspiration 2 beats, expiration 4 beats, contracting lower abdominal wall.

Beginning with the right foot, on 1st beat, step into First Basic Held Position as already described, with right-angle knee bends. Hold the position for 2nd beat. On 3rd beat, bend the knees as far as possible without actually kneeling on the back knee, still keeping both heels raised. (The spine must be straight and the body upright.) Hold for 4th beat. On 5th beat, extend both knees, raising the heels as high as possible, keeping the weight quite equal between the feet. Hold for 6th beat. Repeat the exercise beginning with the left foot.

Note.—This deep knee bending and stretching may be practised with any of the Basic Held Positions, but this variation should only be attempted when the right-angle bend has been practised, and can be performed easily and accurately.

ADDITIONAL EFFECTS AND USES :

The deep knee bending followed by full extension of the knees gives much stronger work for the quadriceps, and is therefore a useful exercise for strengthening the legs for athletics and games.

FIRST OPPOSITION EXERCISE

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or D11.

TIME : 4 beats in bar.

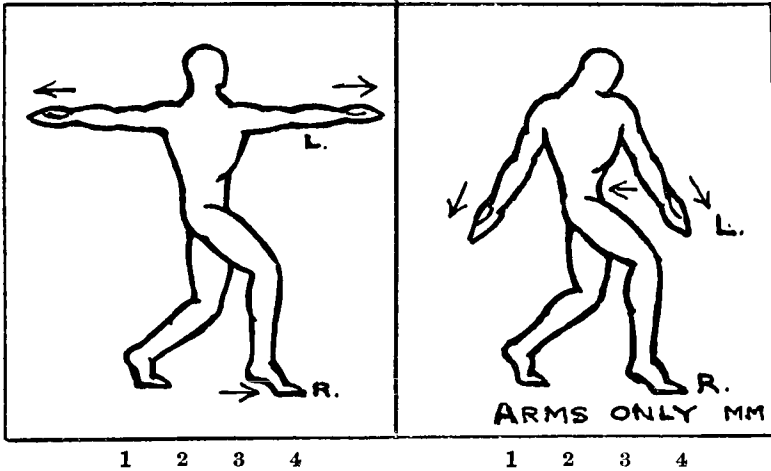
BREATHING : Deep.

Starting position :

Normal good standing position, as described for "Basic walking."

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

On 1st beat, step forward with the right foot into the First Basic Held Position (as already described). Hold for the remainder of the bar.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

Without moving the legs or feet, on 1st beat, relax arms and stretch downwards into Second Basic Held Position. Flex the neck, chin almost touching the front shoulder. *Keep the body, legs and feet as in bar 1.* Hold this position for the remainder of the bar.

BARS 3 AND 4.

Repeat the exercise, beginning with the left foot, the right arm forward.

(First opposition exercise, *continued*)

Special Remarks :

As in Basic Held Positions.

Additional Remarks :

The First Opposition Exercises should be very smoothly performed, with not such a vigorous extension of the arms as in the Basic Held Positions. This calls for a higher degree of muscular control.

EFFECTS AND USES :

As already described for Basic Held Positions, but developing more muscle control and continuity of movement.

SECOND OPPOSITION EXERCISE

SCHUBERT'S MARCHES 46.

M.M.M. RECORD C9 or D11.

TIME : 4 beats in bar.

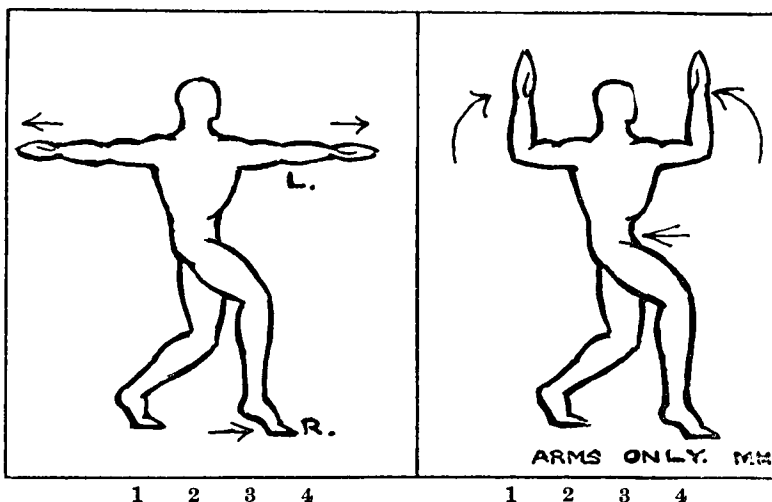
BREATHING : Deep.

Starting position :

Normal good standing position, as described for "Basic walking."

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

On 1st beat, step forward with the right foot into the First Basic Held Position (as already described). Hold for the remainder of the bar.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

Without moving the legs or feet, on 1st beat, bend both elbows to right angles, forming a square (the Fourth Basic Held Position). *Keep the body, legs and feet as in bar 1.* Hold this position for the remainder of the bar.

BARS 3 AND 4.

Repeat the exercise, beginning with the left foot, relaxing and

(Second opposition exercise, *continued*)

stretching the right arm forward and the left arm backward at shoulder level.

Special Remarks :

As described in previous exercise and Basic Held Positions.

Additional Remarks :

This exercise should be *vigorously* performed, in contrast to the First Opposition Exercise.

EFFECTS AND USES :

As described in Basic Held Positions, but to develop more strength and quickness of movement.

FIRST STRONG OPPOSITION STEP

(White standard)

SCHUBERT'S MARCHES 46.

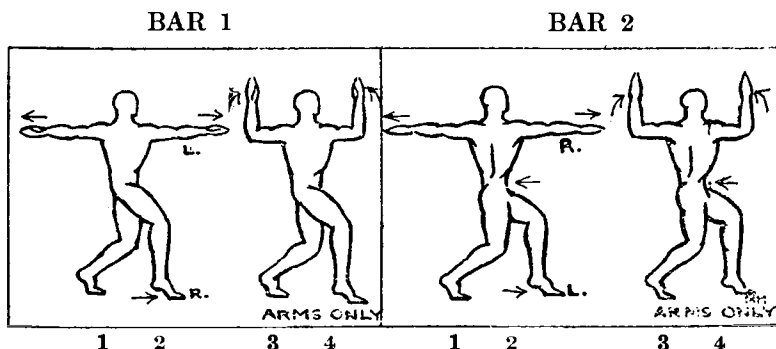
M.M.M. RECORD C9 or D11.

TIME : 4 beats in the bar.

BREATHING : Synchronised.

Starting position :

Normal good standing position, as described for "Basic walking."



BAR 1.

Inspiration 4 beats.

On 1st beat, step forward with the right foot into First Basic Held Position (as already described). Hold for 2nd beat. On 3rd beat, change the position of the arms only (by bending the elbows) to the Fourth Basic Held Position. Hold for 4th beat.

BAR 2.

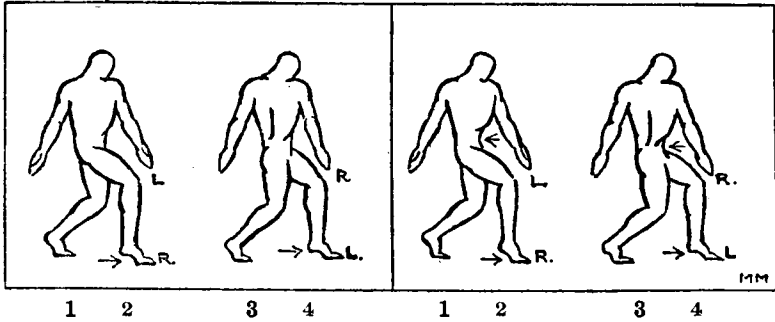
Expiration 4 beats, contracting lower abdominal wall.

Repeat bar 1 exactly, but stepping forward with the left foot (right arm forward).

(First strong opposition step, *continued*)

BAR 3

BAR 4

**BAR 3.**

Inspiration 4 beats.

On 1st beat, step forward with the right foot into Second Basic Held Position. Hold for 2nd beat. On 3rd beat, repeat with left foot and right arm forward. Hold for 4th beat.

BAR 4.

Expiration 4 beats, contracting lower abdominal wall.

Repeat bar 3 exactly.

As a variation, this exercise may be done with clenched fists.

Special Remarks :

As in previous Opposition Exercises and Basic Held Positions.

Additional Remarks :

1. This exercise should be performed in a very strong and vigorous manner.

2. Great attention should be paid to accuracy of movement. All the instructions for correct distribution of weight, as described in the Basic Held Positions, should be very carefully followed.

EFFECTS AND USES :

As described in previous opposition exercises.

ADDITIONAL USE :

The quick rotation of the thorax involved in bars 3 and 4 makes the exercise a useful preparation for more advanced agility, and quick trunk turning.

BALANCE PROGRESSION

(Five parts)

(including EASY BALANCE, Part V.)

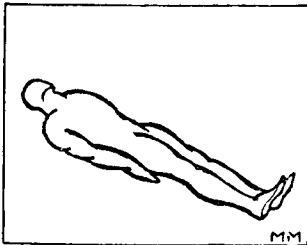
SCHUBERT'S MARCHES 3.

M.M.M. RECORD A2 (2nd Part).

TIME : 4 beats in bar.

BREATHING : Synchronised.

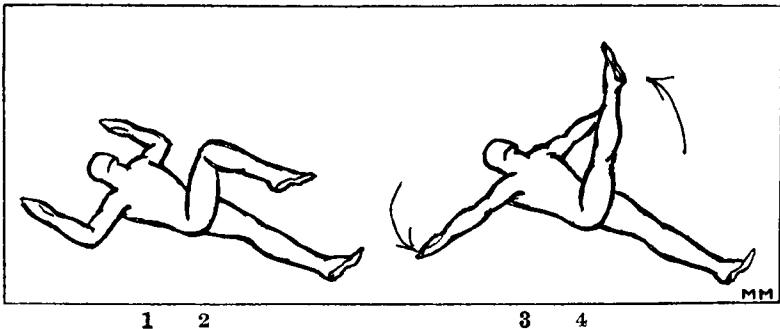
PART I. Lying



Starting position :

Lying, in dorsal position (on back), knees straight, heels and toes together, hands at sides, palms down.

BARS 1 AND 3



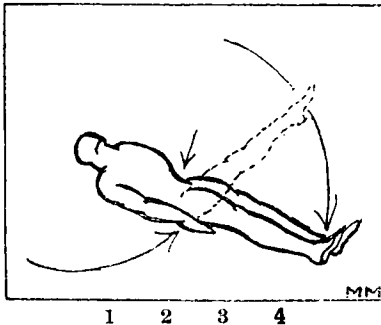
BAR 1.

Inspiration 4 beats.

On 1st beat, bring arms up sideways (on floor) to shoulder level, with the forearms flexed (forming a right angle with upper arms, forearm above shoulder level). The backs of the hands, wrists and forearms should be in contact with floor throughout the whole exercise. Hold this for 1 beat. On 3rd beat, extend elbows,

(Balance progression, *continued*)

bringing hands to shoulder level, and hold for 4th beat. On 1st beat of bar, flex right hip and knee to a right angle and hold for 2nd beat. On 3rd beat extend right knee and stretch leg upwards to ceiling with slight plantar flexion of foot, and hold for 4th beat.

BARS 2 AND 4**BAR 2.**

Expiration 4 beats, contracting lower abdominal wall.

Lower arms to sides, moving continuously for 4 beats, keeping the backs of the hands in contact with the floor until last beat, when arms pronate, palms down. Lower right leg slowly to ground (moving continuously for 4 beats), keeping knee extended and foot still plantar flexed.

BARS 3 AND 4.

Repeat bars 1 and 2, but with left leg working.

Special Remarks :

1. Keep the backs of the wrists on floor, and the hands straight in relation to the forearms throughout exercise (paying special attention to this on 1st 2 beats of first bar). On same 2 beats, keep elbows at shoulder level and make a perfect square by keeping the forearms in a right angle to the upper arms above shoulder level.
2. Keep the shoulders drawn down throughout exercise.
3. During bar 1 the foot of working leg should be plantar flexed, keeping toes extended and the non-working leg quite straight during flexion and extension of the other.
4. The lowering of the leg and arms should be accurately timed, only reaching the finishing position on the 4th beat of bar 4.

EFFECTS AND USES—in recumbent position :

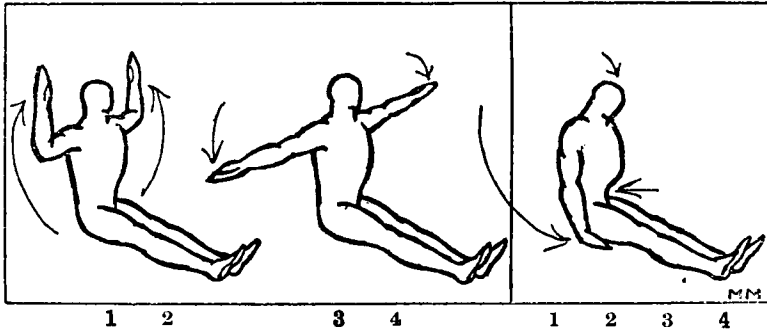
1. To strengthen the abdominal wall, particularly the recti (long going abdominal muscles), by the slow lowering of each leg, and the transverse shoulder girdle muscles by the movements of the arms.
2. A good corrective exercise for kyphosis (round back).
3. To stretch the ham strings.
4. To give general exercise in a recumbent position.
5. To strengthen the quadriceps (knee extension).

(Balance progression, *continued*)

PART II. Sitting

BARS 5 AND 7

BARS 6 AND 8



BARS 5 TO 8.

The breathing and arm movements are exactly the same as in "lying," all leg movements being omitted.

Note.—If Parts I and II are done consecutively, the sitting position must be reached by the 1st beat of bar 5. The heels must be kept down on the ground while sitting up.

Special Remarks :

1. Keep the arms moving on the frontal plane.
 2. Keep back straight and neck stretched upwards, chin down.
- In cases of flat back, perform in kneel sitting instead (*i.e.*, sitting back on heels), endeavouring to hollow the back as much as possible.

EFFECTS AND USES :

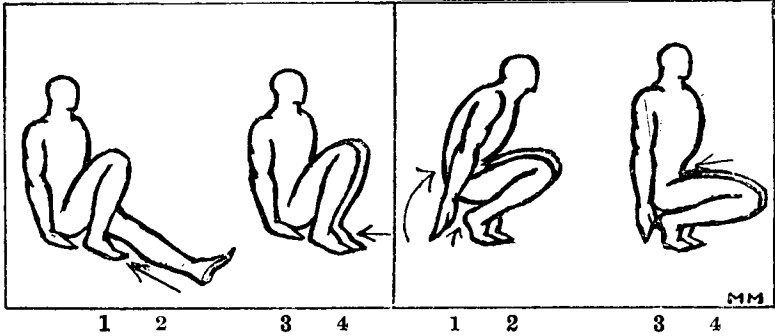
1. For working all the extensors of the back strongly.
2. For stronger work for transverse shoulder girdle muscles.
3. Good for kyphosis when patient is strong enough to maintain a good position.

(Balance progression, *continued*)

PART III. Transition to standing

BAR 9

BAR 10

**BAR 9.**

Inspiration 4 beats.

On 1st beat, flex the right knee, drawing up the foot as close to the thigh as possible, keeping the whole foot on the ground. The left leg must remain quite straight. Hold this position for 2nd beat. On 3rd and 4th beats, repeat with the left foot. Both knees should now be together. The arms are close to the body, palms of the hands in contact with the ground, fingers pointing forward.

BAR 10.

Expiration 4 beats, contracting lower abdominal wall.

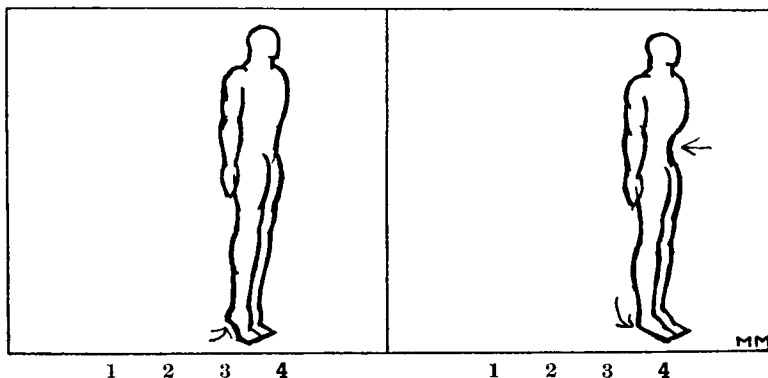
On 1st beat, transfer the weight forwards on to the balls of both feet by raising the heels and lifting the body, squatting on the heels. The arms and hands are used to facilitate the movement by pressing the palms and fingers firmly on the ground, thus eliminating the difficulty in balance and assisting the forward transference of weight. As soon as the squatting position has been reached, the arms hang loosely at the sides, hands relaxed, body upright. Hold this position for the remainder of the bar.

To ensure correct posture on the squatting position, the pelvis should be slightly tilted forward, and the lumbar spines pressed back, the spine being fully stretched.

(Balance progression, *continued*)

BAR 11

BAR 12



BAR 11.

Inspiration 4 beats.

During the whole bar, the knees slowly extend, heels still raised. By the 4th beat, the upright standing position is reached with the weight of the body still over the balls of the feet, toes gripping the ground.

BAR 12.

Expiration 4 beats, contracting lower abdominal wall.

During the whole bar, slowly sink the heels, finishing on the 3rd beat. Hold good normal standing position for 4th beat.

PART IV Standing (arms only)

BARS 13 TO 16.

Repeat Part II in normal good standing position, so no diagrams are given. It is very important that the pupil should maintain good posture throughout the exercise.

Uses as for long sitting, with the addition of balance in keeping the upright position.

PART V

EASY BALANCE

BARS 17 TO 20.

Standing (arms and legs) called as above when done separately.

Starting position :

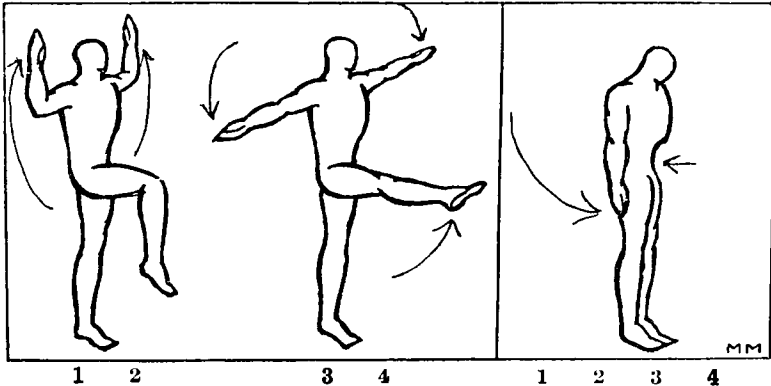
Normal good standing position.

(Balance progression, *continued*)

EASY BALANCE

BAR 17

BAR 18

**BARS 17 AND 18.**

Same movements as in Part I (lying), but performed standing.
Right leg working.

BARS 19 AND 20.

Repeat with left leg working.

Note :

It is essential to keep the knee of the standing leg braced back throughout exercise.

ADDITIONAL USES (to previous positions) :

1. In this position the exercise becomes a balance one.
2. Also an exercise to correct defective posture.
3. Useful for strengthening the hip muscles by changing the centre of gravity from one leg to another.

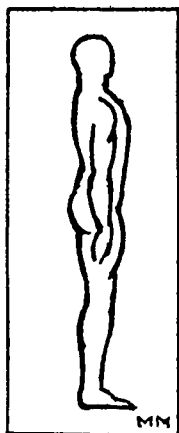
TWISTED BALANCE

SCHUBERT'S MARCHES 3.

M.M.M. RECORD A2 or D11.

TIME : 4 beats in bar.

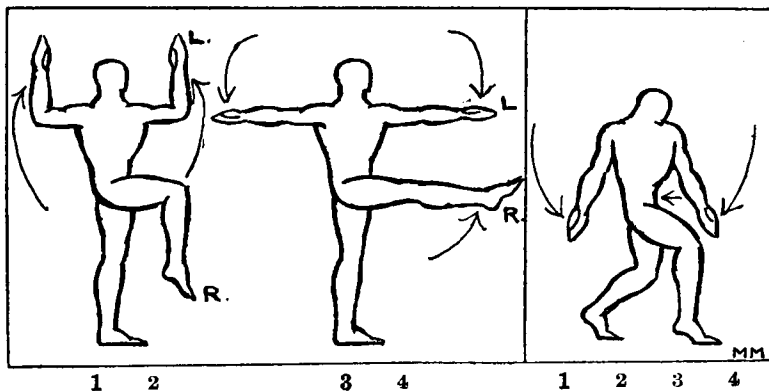
BREATHING : Synchronised.



Starting position :
Normal good standing position,
as described for "Basic
walking."

BAR 1

BAR 2



(Twisted balance, *continued*)**BAR 1.**

Inspiration 4 beats.

On 1st beat, lift the right foot and flex the right knee to a forward right angle bend. Twist the thorax to the right, swing the left arm forwards and right arm backwards with elbows at shoulder level, and the forearms bent up to right angles. The arms should then form a perfect square, hands and fingers straight, palms facing the same way as the thorax. The head is turned to the left over the left shoulder. Hold the position for the 2nd beat. On 3rd beat, extend the right knee so that the leg and foot stretch forward at hip level. Maintain the rotation of the thorax and stretch both arms out at shoulder level (First Basic Held Position). Hold this position for the 4th beat. During bar 1, the knee of the standing leg is braced back.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, step on to the right foot, bending both knees at right angles, feet straight and heels raised. The weight of the body should fall between both feet, hips facing forward, but the trunk still rotating at the waist to the right. The body is upright and the chin is still above the left shoulder, but the neck is flexed so that the chin is almost touching the shoulder. The arms are lowered so that the wrists reach hip level. The elbows, hands and fingers should still be stretched with the palms facing the same way as the thorax (as in Second Basic Held Position). Hold this position for the remainder of the bar.

To continue the exercise, transfer the weight of the body on to the front foot (right foot), extend the right knee, lifting the left foot up to knee level (right-angle bend). Swing both arms to the Fourth Basic Held Position, but with the right arm in front, thorax rotated to the left, and the chin over the right shoulder. Repeat all movements as before.

Note.—When the exercise has been mastered, it is best performed in double quick time.

Special Remarks :

1. Twist the thorax as much as possible, whilst keeping the pelvis facing the line of direction as in starting position.

2. Make the arm and hand movements accurate, keeping the hands straight in relation to the forearms, with the fingers pointing directly upwards on the square position (1st 2 beats) and keeping the elbows at shoulder level for the 1st 4 beats.

(Twisted balance *continued*)

3. Keep the standing leg straight with the knee well extended during the 1st bar.

4. Keep the chin over the front shoulder.

5. Care should be taken to distribute the weight of the body evenly between both feet during bar 2. In order to do this, take a large enough step to ensure the correct right-angle bend of the knees. The knee-cap of the back leg should point downward to the floor, and the thigh of the leg should be in a direct line with the body.

6. The whole exercise should be strongly performed, but with continuity, the transition from one position to another being very smooth.

EFFECTS AND USES :

1. To give muscular control and to develop good balance, co-ordination and continuity of movement.

2. To strengthen particularly the transverse back muscles, the extensors of the spine and the trunk rotators.

3. To correct round shoulders and to expand the chest.

4. To strengthen the abdominal muscles (especially the obliques).

5. To strengthen the muscles of the legs and feet, giving strong work to the quadriceps.

ADVANCED BALANCE

(Hurdling Variation)

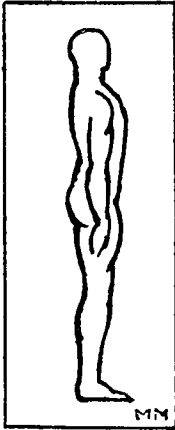
SCHUBERT'S MARCHES 22.

M.M.M. RECORD A2 or D11.

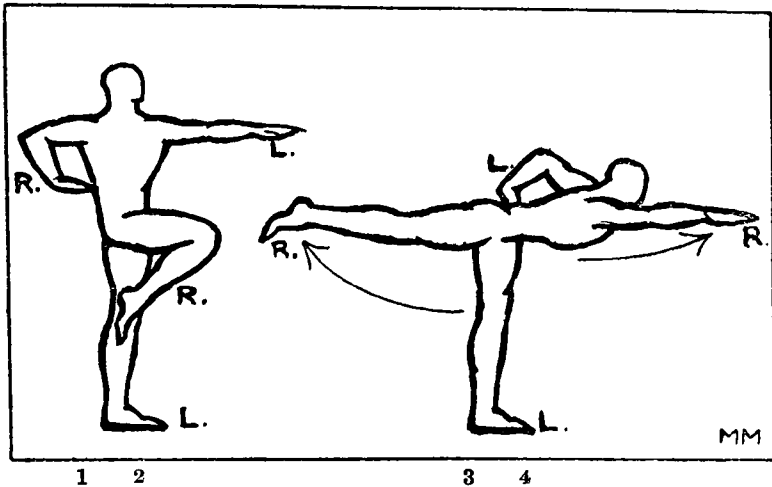
TIME : 4 beats in bar.

BREATHING : Synchronised.

Starting position :
Normal good standing position.



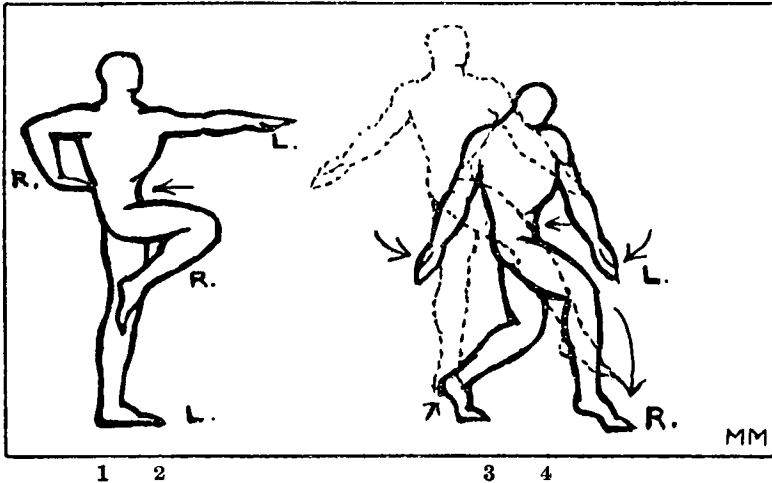
BAR 1



(Advanced balance, *continued*)**BAR 1.**

Inspiration 4 beats.

On 1st beat, lift the right foot and flex the right knee to an acute angle bend (foot by left knee, toes stretched down). Rotate the thorax to the right and raise the left arm forward at shoulder level with the forearm pronated (palms down). Flex the right elbow and lift to shoulder level, hand pronated just above waist level. The head is turned in relation to the trunk to the left, the chin being above the left shoulder. Hold the position for 2nd beat. On 3rd beat, straighten the thorax, chest facing forward as in starting position, and flex the trunk from the hips, bending forwards with a flat back. Extend the right hip, stretching the right leg backwards at hip level. (The leg should be parallel to the ground and in alignment with the body.) The foot should be straight out and the toes stretched. On 3rd beat, reverse arms so that the right arm stretches forward in alignment with the body and the right leg. The left arm is bent, the hand at waist level. The neck is very slightly extended. The left (supporting) leg remains immobile. Hold this position for 4th beat.

BAR 2**BAR 2.**

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, raise the body, flex the right knee, rotate the thorax to the right, and reverse the position of the arms, repeating exactly the position taken for the 1st beat in bar 1. Hold the

(Advanced balance, *continued*)

above position for 2nd beat. Just before 3rd beat raise the left heel and on 3rd beat step forward with the right foot into the Second Basic Held Position. Hold this position for 4th beat.

BARS 3 AND 4.

Repeat the exercise but standing on the right leg and lifting the left.

Note.—When the exercise has been mastered, it is best performed in double quick time.

Special Remarks :

1. Keep the supporting leg straight with the knee extended till 3rd and 4th beats of bar 2.
2. Twist the thorax, but keep the hips facing forward on the 1st 2 beats of bars 1 and 2.
3. There is no trunk rotation on the 3rd and 4th beats of bar 1.
4. Stretch the knee, foot and toes of the leg which is lifted upwards and backwards at hip level.

EFFECTS AND USES :

1. An advanced exercise to improve balance and co-ordination.
2. It gives strong work for the muscles of the trunk, back, hips and legs.
3. It is a useful preparation for hurdling.

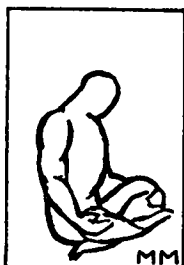
HEAD CIRCLING

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or D11.

TIME : 4 beats in bar.

BREATHING : Deep.

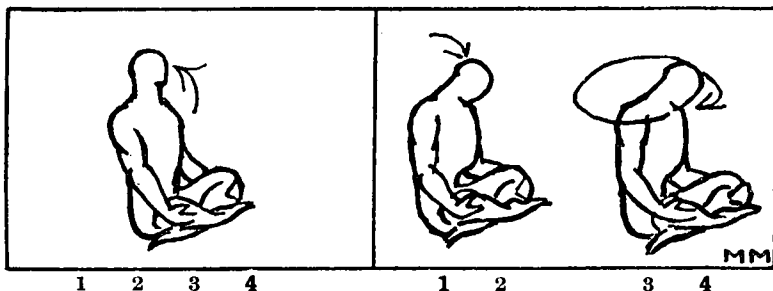


Starting position :

Cross sitting, hands clasping knees (under grasp as in diagram), back straight, neck flexed, chin touching chest.

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

For 4 beats, slowly extend the neck, lifting the head to the upright position with the chin in.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, relax the head and neck to the starting position. On 2nd beat, begin the circling by lateral neck flexion to the right. (The right ear should be as near the right shoulder as possible.) On 3rd

(Head circling, *continued*)

beat, the head should be back with the neck fully extended. On 4th beat, the head circling movement is completed by lateral flexion to the left, finishing with the head down, neck flexed and chin on the chest as in starting position.

BAR 3.

Repeat bar 1 exactly.

BAR 4.

Repeat bar 2, but circling head to left.

Special Remarks :

1. On 4th beat of bar 1, the head and neck should be straight and the chin drawn in.
2. The movement in this exercise should be continuous. During the head circling, the neck should be completely relaxed to get the full range of movement in the sub-occipital joint, and between the cervical vertebræ.
3. Throughout the whole exercise the movements should be of the head and neck only. Care should be taken to maintain a good sitting position with the shoulders pulled down and the scapulæ (shoulder blades) flattened.

EFFECTS AND USES :

1. To mobilise the cervical region and the sub-occipital joint.
2. To strengthen all the muscles of the neck.
3. To stretch the neck muscles on bar 1 and obtain full relaxation during rolling of the head on bar 2.

HEAD NODDING AND TURNING

SCHUBERT'S MARCHES 24.

M.M.M. RECORD C9 or D15.

TIME : 4 beats in bar.

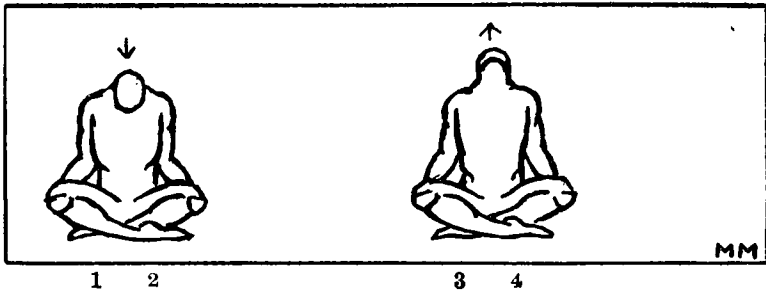
BREATHING : Synchronised.



Starting position :

Cross sitting, hands clasping knees (under grasp as in diagram), back straight, head up, chin in.

BAR 1



BAR 1.

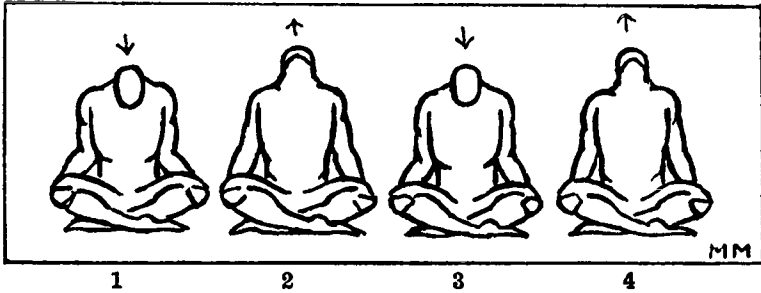
Inspiration 4 beats.

On 1st beat, keeping back straight, flex neck as much as possible with the head down, chin resting on chest. Hold the position for 2nd beat. On 3rd beat, extend the neck, allowing the head to tilt backwards as much as possible. Hold the position for 4th beat.

MOBILITY EXERCISES

(Head nodding and turning, *continued*)

BAR 2



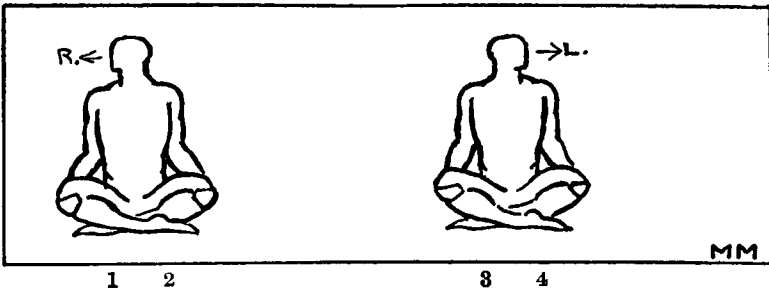
BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, repeat the movements as in bar 1, but take 1 beat to each, *i.e.*,

- 1st beat, head down.
- 2nd beat, head back.
- 3rd beat, head down.
- 4th beat, head back.

BAR 3



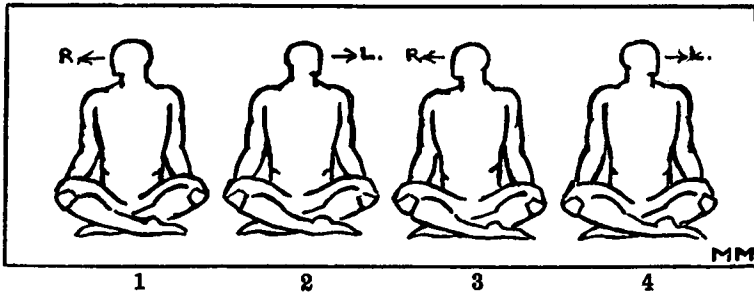
BAR 3.

Inspiration 4 beats.

On 1st beat, straighten the neck to normal upright position and rotate head to the right. Hold this for 2nd beat. On 3rd beat, rotate head to the left. Hold for 4th beat.

(Head nodding and turning, *continued*)

BAR 4



BAR 4.

Expiration 4 beats, contracting lower abdominal wall.

During this bar repeat the head turning as in bar 3, but take 1 beat to each rotation, *i.e.*,

- 1st beat, turn right.
- 2nd beat, turn left.
- 3rd beat, turn right.
- 4th beat, turn left.

Special Remarks :

1. Throughout the exercise, the movement should be confined to the head and neck only. Care should be taken to keep the shoulders well drawn down, especially when the head is thrown back. During the head turning in bars 3 and 4, any tendency to move the body or rotate the thorax should be corrected.

2. During the 3rd and 4th bars, it should be clearly understood that the movement is head rotation only. There should be no backward tilting of the head.

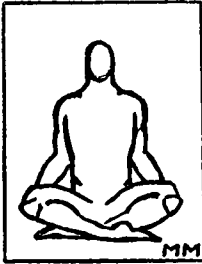
EFFECTS AND USES :

- 1. As in the previous exercise.
- 2. To increase the range of movement on head turning, and to develop speed and accuracy of head movement.

HEAD LATERAL BENDING

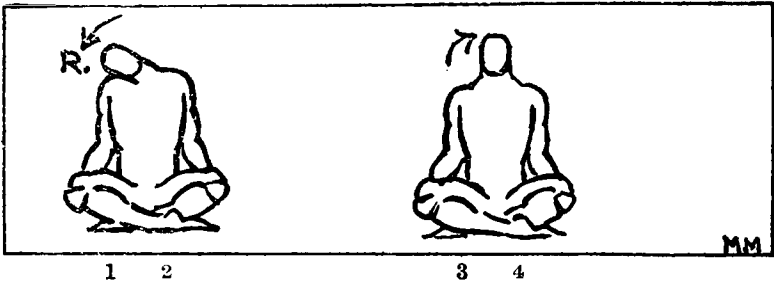
SCHUBERT'S MARCHES 24.
 TIME : 4 beats in bar.

M.M.M. RECORD C9 or D15.
 BREATHING : Synchronised.



Starting position :
 Cross sitting, hands clasping
 knees (under grasp), back
 straight, head up, chin in.

BAR 1



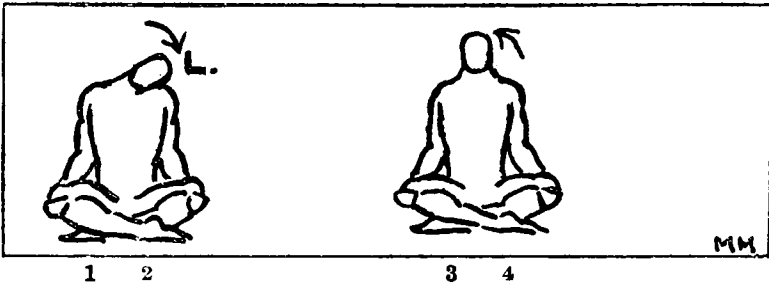
BAR 1.

Inspiration 4 beats.

On 1st beat flex neck laterally to the right, if possible till ear rests on shoulder (face looking forward). Hold position for 2nd beat ; on 3rd beat bring head back to starting position, straight. Hold position for 4th beat.

(Head lateral bending, *continued*)

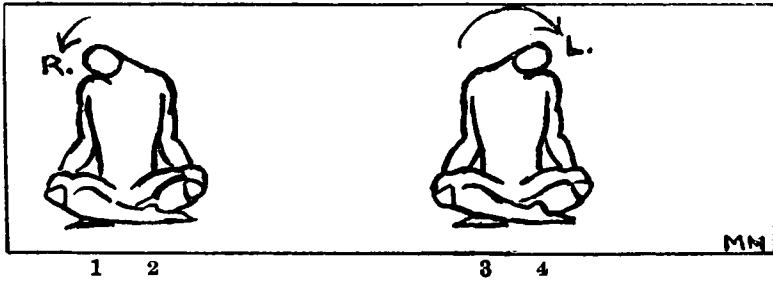
BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.
Repeat bar 1, but to the left.

BAR 3

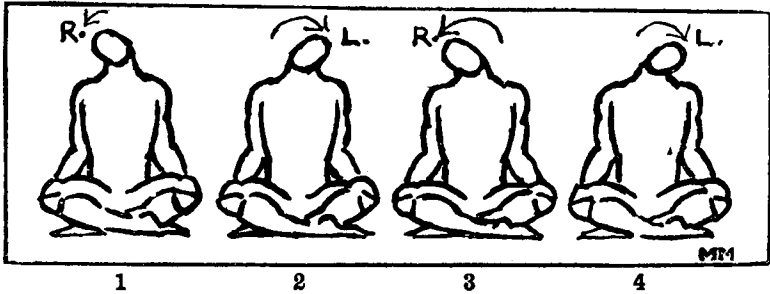


BAR 3.

Inspiration 4 beats.
On 1st beat flex neck to right. Swing head over to left, getting there by 3rd beat. Take head back to starting position, straight on 4th beat.

(Head lateral bending, *continued*)

BAR 4



BAR 4.

Expiration 4 beats, contracting lower abdominal wall.

On each beat flex neck (at the sub-occipital joint, base of skull) four times. Right, left, right, left.

Repeat exercise, beginning to the left.

Special Remarks :

1. Be sure to keep the face looking forward throughout the exercise, the chin in. See that the movement is absolutely localised to the *neck*, the back being kept straight and immobile all the time.

2. Try and get the difference in movement between first 3 bars, side bend in neck, and the 4th bar *side tilting of head only* ; neck should be kept straight.

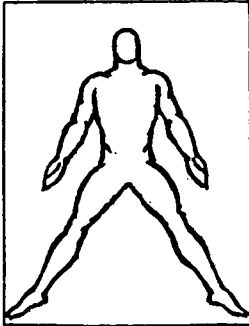
EFFECTS AND USES :

1. As in previous head exercises.
2. Additional use to mobilise the cervical joints laterally.
3. To develop a wider range of movement than is usually found in the neck, by localising the movement to the definite parts, the first 3 bars in *lower cervical* joints, the last bar in the *sub-occipital joint*.

ARM CIRCLING

SCHUBERT'S MARCHES 26.
 TIME : 4 beats in bar.

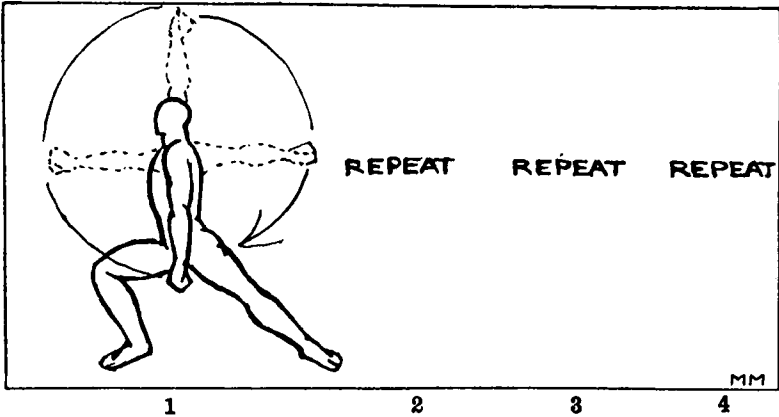
M.M.M. RECORD C10 or D15.
 BREATHING : Synchronised.



Starting position :

Take stride standing with hips, knees and feet outwardly rotated. It is most important that a *wide stride* is taken on the starting position, so that, on the 1st beat, the right-angle knee bend may be made without moving the feet or flexing the trunk. The arms are abducted sideways at hip level, palms facing forward. Breathe in before beginning exercise.

BAR 1



BAR 1.

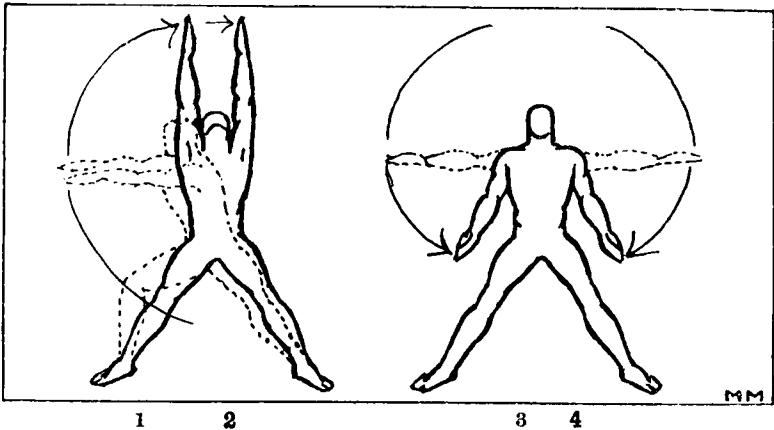
Expiration 4 beats, contracting lower abdominal wall.
 On 1st beat and for remainder of the bar, keeping both feet flat

(Arm circling, *continued*)

on the ground, bend the right knee to a right-angle, the knee cap being in a line with the middle of the foot.

Rotate the trunk a quarter turn to the right, chest facing in the same direction as the right knee, keep the body upright, dropping the arms to the sides with the left fist clenched, and the elbow straight, describe a complete circle of the whole arm from the shoulder joint, forwards, upwards, backwards and downwards. The first circle takes place on the 1st beat, and three more circles are made on the remaining 3 beats. The head is upright and straight in relation to the body. The right (non-working) arm hangs down at the side of the body, and should be out of sight.

BAR 2



BAR 2.

Inspiration 4 beats.

On 1st beat, stretch both arms forwards and upwards, shoulder width apart, palms facing, fingers stretched. The right knee is still bent with body facing to the right. On 2nd beat, straighten the right knee, turn the body to face forward. Continue stretching both arms upwards, so that on the 2nd beat the fingers are pointing to the ceiling, palms facing, with as much stretch as possible of the whole body, arms, and hands. The neck is extended, with the head slightly back.

During the 3rd and 4th beats, the arms are circling sideways, moving on the frontal plane to hip level. On the 3rd beat, they are at shoulder level, palms up, and on 4th beat they are at starting position, palms facing forward.

(Arm circling, *continued*)

BARS 3 AND 4.

Repeat the exercise to the left, bending the left knee and circling the right arm.

Special Remarks :

1. Note particularly that this exercise is one for emphasising the alternation of muscular tension and relaxation. The arm circling during the 1st bar should be a free relaxed movement, and the stretching in the 2nd bar should be felt, not only in the arms, hands and fingers, but throughout the whole body.

2. A really wide stride must be taken on the starting position, to ensure a good knee bend with the feet turned out sufficiently to avoid moving them during the exercise, and to enable the trunk to be kept upright during the arm circling.

EFFECTS AND USES :

1. To mobilise the shoulder joints, to stretch the intercostal muscles, and to extend the spine.

2. To strengthen the quadriceps and, through keeping the heels on the ground, to stretch the tendon achilles.

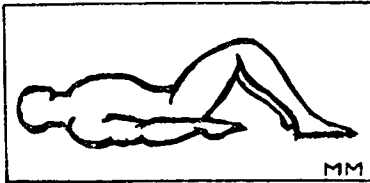
3. To improve the circulation.

PELVIC TILTING

crook lying

SCHUBERT'S WALTZES 16 (2).
TIME : 3 beats in bar.

M.M.M. RECORD C7 or B4 or D14.
BREATHING : Deep.

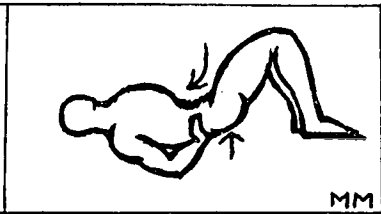
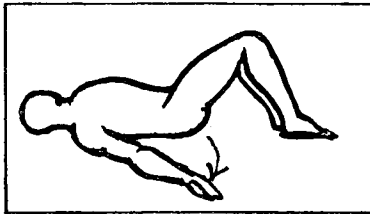


Starting position :

Crook lying on back with knees flexed, whole spine resting on floor, heels and toes together, arms at sides, palms down.

BARS 1 AND 2

BARS 3 AND 4



1 2 3 1 2 3

1 2 3 1 2 3

BARS 1 AND 2.

Inspiration 6 beats.

For 3 beats, abduct arms sideways on floor, hands in a line with hips (Second Basic Held Position), with backs on floor, holding this position for the 3 beats of 2nd bar.

BARS 3 AND 4.

Expiration 6 beats, contracting lower abdominal wall.

On 1st beat, contract the abdominal wall and grasp the hip bones with the hands, thumbs behind. Continue the contraction while adding the tilting of the pelvis, for 5 beats lifting the sacrum about 2 inches off the floor, pressing down the lumbar spine so that the sacrum only is lifted.

BARS 5 TO 8.

Repeat bars 1 to 4 exactly.

(Pelvic tilting, crook lying, *continued*)

Special Remarks :

1. When tilting pelvis and sacrum, be sure to keep the lumbar spine pressed against the floor.
2. Remember to contract the abdominal muscles on expiration (bar 3, 1st beat) before tilting the pelvis, and maintain this contraction for the whole of the expiration.
3. Keep whole of exercise smooth and continuous, and the movements easy.
4. In cases of flat back, a small pillow should be placed in the lumbar region.

EFFECTS AND USES :

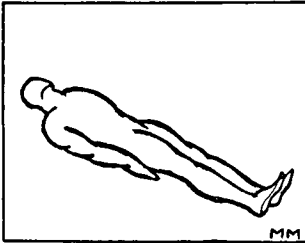
1. To assist the upward drawing of the abdominal viscera.
2. To increase the peristaltic action of the intestines.

PELVIC TURNING

SCHUBERT'S MARCHES 38 (Trio) M.M.M. RECORD C8 or D15.

TIME : 4 beats in bar.

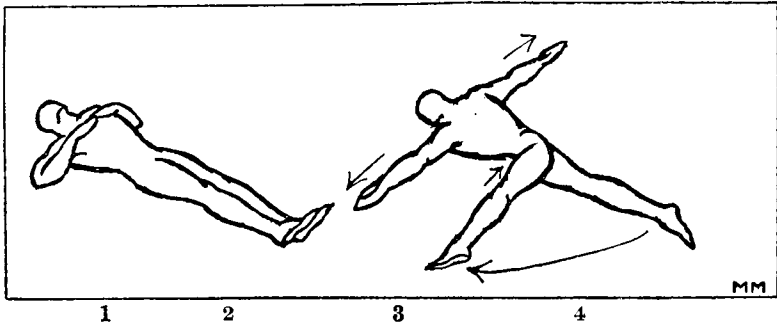
BREATHING : Expiratory.



Starting position :

Normal lying in the dorsal position (on back), knees straight, heels and toes together, hands at sides, palms down.

BAR 1



BAR 1.

Inspiration 2 beats, expiration 2 beats.

On 1st beat, place hands, palms down, on chest, elbows on ground at shoulder level. Keep legs and body as in starting position, head straight. Hold this position for 2nd beat. 3rd and 4th beats (expiration) contracting lower abdominal wall. On 3rd beat, stretch both arms sideways at shoulder level, palms upwards. Turn the head to the right (right ear resting on the ground). Keeping the shoulder blades flat on the ground, twist at the waist, and with both knees extended, bring the left leg across the *right* (passing close to the right leg) and place it on the ground at hip level or higher if possible. The right or non-working leg is kept in line with the body, and must be kept straight, but to facilitate the movement of the working leg and the pelvic rotation, the right leg and foot are allowed to turn so that the

(Pelvic turning, *continued*)

side of the right leg and foot is resting on the ground when the left leg moves across. Hold this position for the 4th beat.

BAR 2.

On 1st beat regaining the first position of the exercise, repeat bar one, but on 3rd and 4th beats bring *right leg* across *left* (passing close to left leg), rotate to *left*, turn head to *left*.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Note.—When the exercise has been mastered, it is best performed in double quick time, taking 2 pelvic turns to each bar.

PELVIC TURNING AND UPSTRETCH BREATHING COMBINED

This exercise can be combined with Upstretch Breathing in the dorsal position, taking 1 bar for inspiration and 1 bar for expiration, to be performed after bar 2, before repeating exercise. The pelvic part of the exercise can be performed in double quick time (4 pelvic turning movements), but the Upstretch Breathing is always kept slow time.

Special Remarks :

1. Aim at keeping shoulder blades flat on the ground.
2. Make the neck as long as possible on the trunk twisting, and pull the shoulders down.
3. See that the backs of the hands are on the ground during the 2nd bar, in order to get the maximum stretch of the pectorals.
4. Keep the knees extended and the whole body well stretched throughout the whole exercise.
5. The leg taken across must pass *close* to the other leg.
6. As it is an exercise which emphasises expiration, make a strong contraction when breathing out.

EFFECTS AND USES :

1. To mobilise the lumbar spine.
2. To strengthen the abdominal muscles, especially the obliques and the transverse muscles, which should be working strongly during expiration.
3. To correct kyphosis (round shoulders), by using the transverse back muscles.
4. To mobilise the sacro-iliac and the hip joints.
5. To reduce the waist, abdomen and hips.
6. To increase the circulation, tone up the liver and aid digestion.

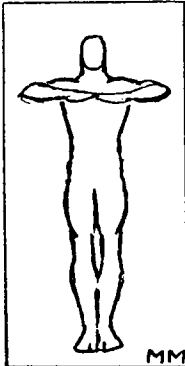
PELVIC AND THORACIC MOBILITY

SCHUBERT'S MARCHES 12.

M.M.M. RECORD B5 or D15.

TIME : 4 beats in bar.

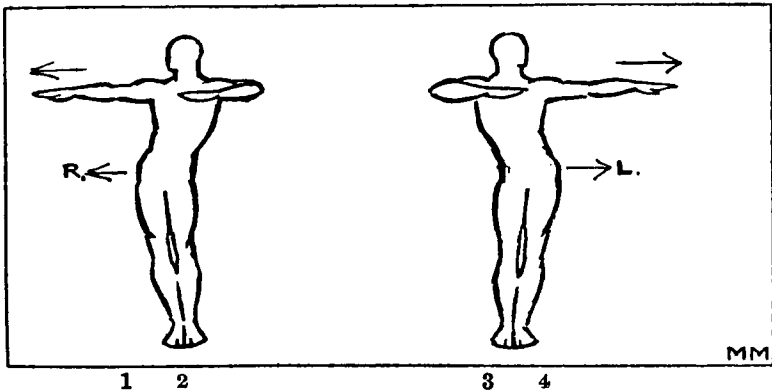
BREATHING : Synchronised.



Starting position :

Normal good standing position with the arms bent, elbows at shoulder level, hands pronated, *i.e.*, palms down, and finger tips a few inches apart in front of chest.

BAR 1



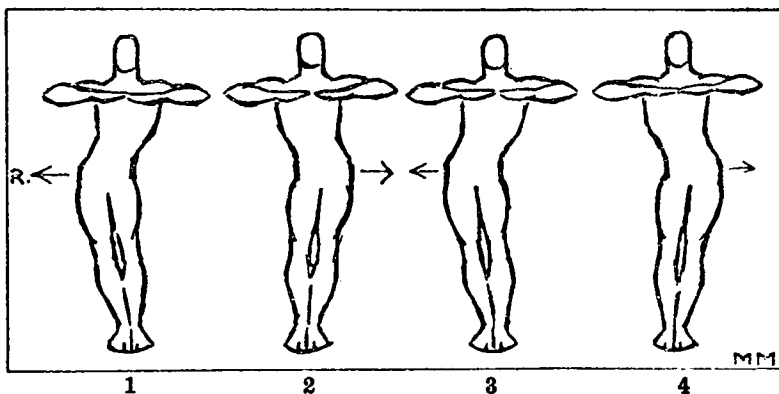
BAR 1.

Inspiration 4 beats.

On 1st beat, swing right arm sideways at shoulder level, palm down, turn head to the right, and push out the hips to the right, avoiding any rotation or lateral flexion of the trunk, and keeping the shoulders level. Hold this position for 2nd beat. On 3rd and 4th beats, repeat this movement, but to the left, bringing the right arm back across the chest, the left arm swinging out to the left, the hips being pushed out to the left.

(Pelvic and thoracic mobility, *continued*)

BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

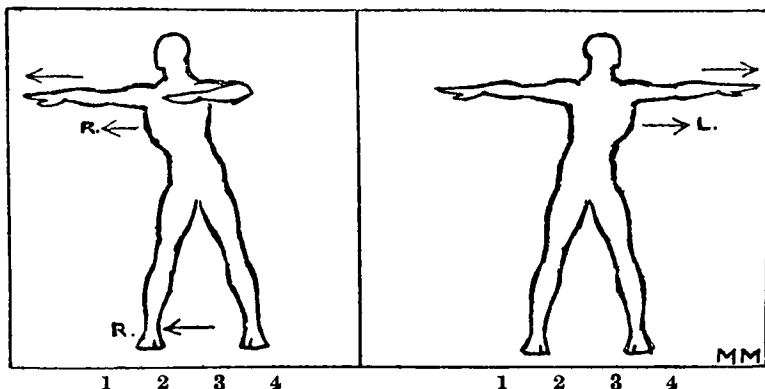
On 1st beat, bring left arm back across chest, finger tips apart, head as in normal starting position. The head, arms and shoulders are kept still for the remainder of the bar. The hips perform the same movements as described in bar 1, but double quick time, going right, left, right, left, a movement to each beat in the bar.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

BAR 5

BAR 6



(Pelvic and thoracic mobility, *continued*)**BAR 5.**

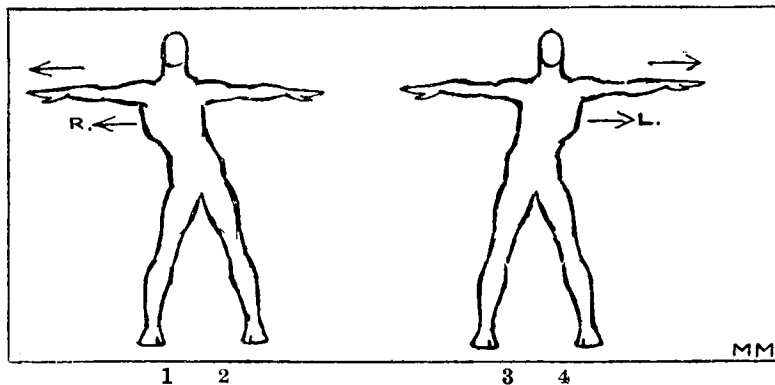
Inspiration 4 beats.

On the 1st 3 beats, reach out as far as possible with the right arm, and step sideways with the right foot, fixing the pelvis by keeping both feet straight and the weight equally between them. Move the thorax as far as possible to the right. Keep the body upright and the shoulders level, turn the head to the right. Hold this position for the last beat.

BAR 6.

Continue inspiration for next 4 beats.

On 1st beat, reach out to the left with the left arm, turning the head to the left, repeating bar 5, but to the left. Both arms are kept extended at shoulder level, the thorax is carried from the extreme right to the extreme left, giving the full range of movement laterally in both directions.

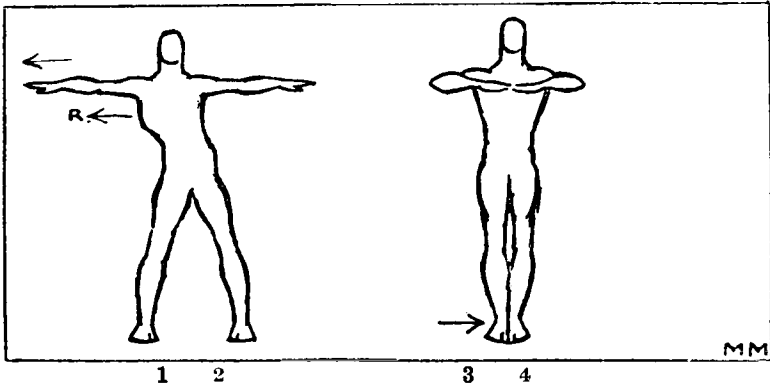
BAR 7**BAR 7.**

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, turn head forward. Repeat bar 6 to the right for 2 beats, then to the left for 2 beats, but keeping the head facing forward.

(Pelvic and thoracic mobility, *continued*)

BAR 8



BAR 8.

Continue expiration for next 4 beats, contracting lower abdominal wall.

For 2 beats repeat the thoracic movement once more to the right, and on the 3rd beat close up the right foot to the left, bringing the arms back to the starting position. Hold for the 4th beat.

To continue the exercise, repeat from bar 1, but beginning to the left.

Special Remarks :

1. Aim at localising the movement to the hips and pelvis for the first 4 bars, keeping the body erect, the *shoulders level, and as still as possible*. During the second part of the exercise, the firm stride of the legs should *fix the hips and pelvis* so that the thorax only is moved.

2. Aim at expanding each lung alternately during the thoracic mobility by flaring and expanding the ribs on the right side of the thorax if moving to the right, and on the left side if moving to the left.

EFFECTS AND USES :

1. To mobilise laterally the lumbar and dorsal regions of the spine.

2. To expand the thorax.

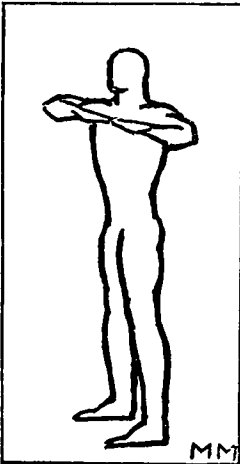
3. To aid digestion.

4. It is a useful exercise for constipation, particularly when this is due to sluggish liver.

THORACIC TWISTING A

SCHUBERT'S MARCHES 46.
TIME : 4 beats in bar.

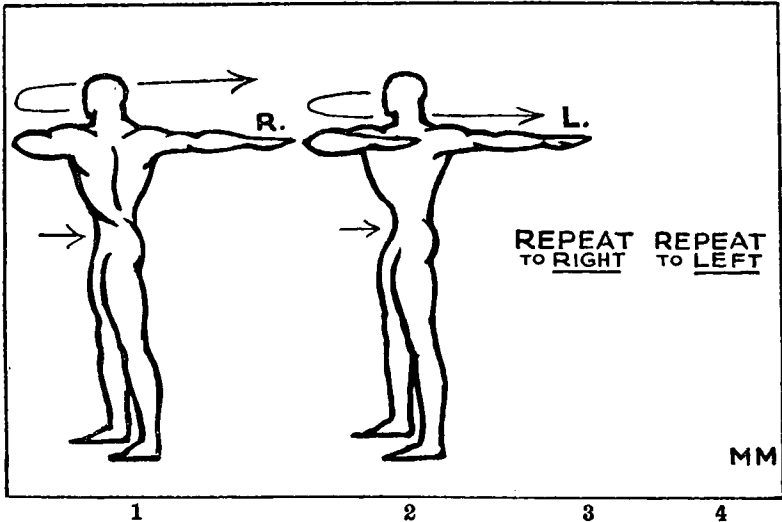
M.M.M. RECORD C9 or D11.
BREATHING : Expiratory.



Starting position (sideways to teacher):

Stride standing with feet straight, arms bent, elbows at shoulder level, hands pronated, *i.e.*, palms down and finger tips a few inches apart in front of chest. Breathe in before beginning exercise.

BAR 1



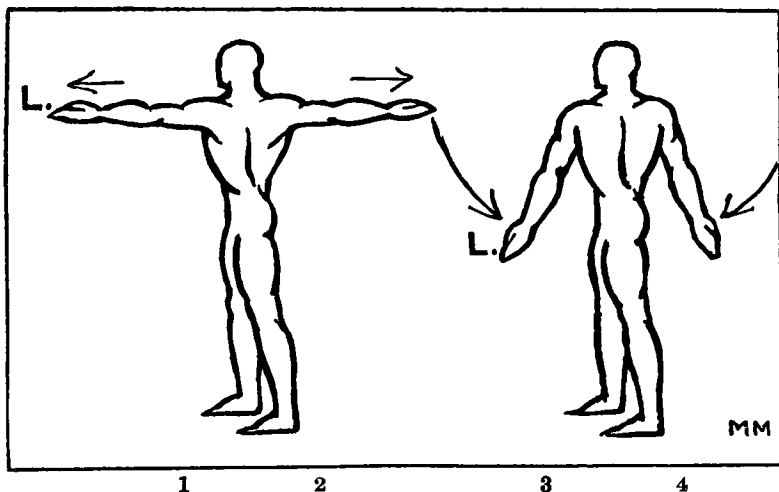
(Thoracic twisting, *continued*)**BAR 1.**

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, turn the trunk to the right, hips still facing forward, and fling the right arm backwards at shoulder level. Both forearms and hands are pronated (palms facing downwards). The head remains straight, so that through the rotation of the trunk the chin is over the front (left) shoulder.

On 2nd beat, repeat to left, letting the arms swing out to carry the thorax round from extreme right to extreme left, and reversing the position of the arms, so that the right elbow is forward, fully flexed, and the left arm straight back.

Repeat this last movement on 3rd and 4th beats to right and then to left, making four twisting movements in all.

BAR 2**BAR 2.**

Inspiration 4 beats.

On 1st beat, rotate the trunk to the right, and relax and stretch the left arm forward, and the right arm backward at shoulder level with normal rotation of hands (thumbs uppermost). The arms are now in the First Basic Held Position (see p. 155). Hold for 2nd beat. On 3rd beat, still keep the trunk rotated to the right and lower both arms to the Second Basic Held Position. The head is still straight, the chin now being over the left front shoulder. Hold this position for the 4th beat.

BARS 3 AND 4.

Repeat the exercise, but beginning to the left.

(Thoracic twisting, *continued*)

THORACIC TWISTING B

As a variation, Thoracic Twisting B, the exercise is performed in cross sitting. This is harder work, as the hips are fixed, and the rotation can only come from the waist.

Special Remarks :

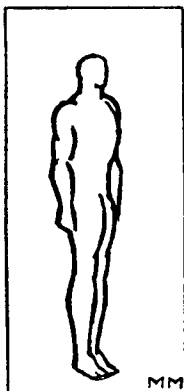
1. Keep the knees straight, with the weight of the body equally distributed, and both feet planted firmly on the ground in A.
2. Be sure that the trunk rotation is from the waist and not from the hips. The latter should face forwards throughout the whole exercise.
3. When practising the variation, be sure to keep the body upright.
4. Keep the head still with the chin in throughout the whole exercise. Keep the arms at shoulder level during the 1st bar, and for the 1st 2 beats of the 2nd bar.
5. This exercise should be performed with strong free movements and with as much twist of the thorax as possible.

EFFECTS AND USES.

1. To mobilise the shoulder joints, and to correct kyphosis (round shoulders), by stretching the pectorals and expanding the chest.
2. To strengthen and work strongly the trunk rotators, especially the abdominal oblique muscles.
3. To reduce the waist and abdomen.
4. To mobilise the lumbar and lower dorsal regions of the spine.

PELVIC TILTING AND TWISTING

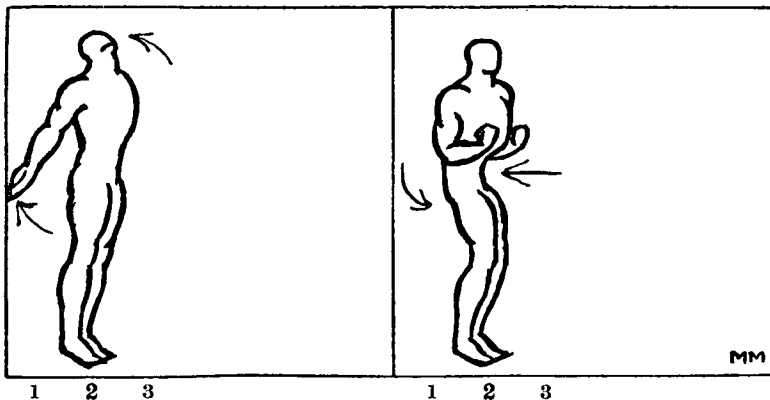
SCHUBERT'S WALTZES 66 (4). M.M.M. RECORD B4 or D12.
 TIME : 3 beats in bar. BREATHING : Synchronised.



Starting position :
 Normal good standing position.

BAR 1

BAR 2



BAR 1.
 Inspiration 3 beats.
 During 1st and 2nd beats,
 stretch both arms sideways and

BAR 2.
 Expiration 3 beats, contract-
 ing lower abdominal wall and
 the gluteal muscles.

(Pelvic tilting and twisting, *continued*)

backwards at hip level, normal rotation (thumbs uppermost), spine extended, head back. Hold this position for 3rd beat.

During 1st and 2nd beats, clench the fists and bring the forearms forward in supination so that the elbows rest on the hip bones by the 2nd beat. At the same time, tilt the pelvis forwards and upwards whilst retracting the abdomen and pressing back the lumbar region. The knees are slightly flexed in order to facilitate the pelvic movement. The head returns to the normal position, but with the chin drawn down to straighten the dorsal and cervical regions of the spine. Hold this position for 3rd beat.

BAR 3.

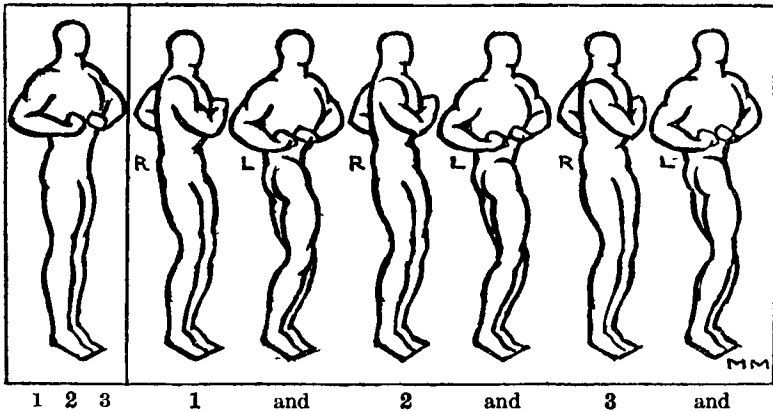
Repeat bar 1 exactly.

BAR 4.

Repeat bar 2 exactly.

BAR 5

BAR 6



BAR 5.

Inspiration 3 beats.

On 1st and 2nd beats, lift the elbows sideways, pronate the forearms, and keeping the fists still clenched, bring them closer

BAR 6.

Expiration 3 beats, contracting lower abdominal wall.

The arms remain in the final position of the previous bar. On 1st beat, twist the pelvis as

(Pelvic tilting and twisting, *continued*)

together at waist level. At the same time, straighten the body, extend the knees, and bring head to normal.

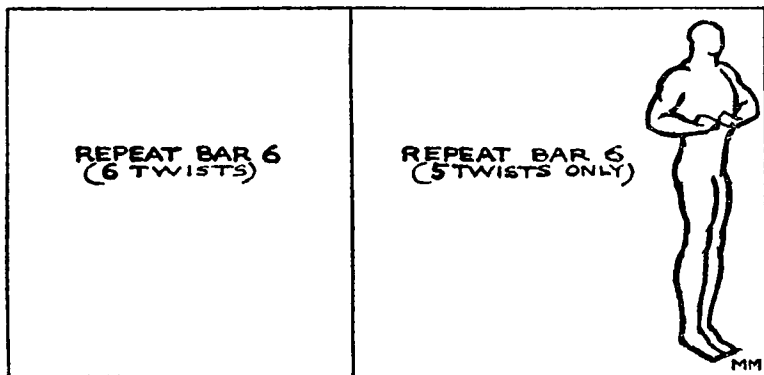
Hold this position for 3rd beat.

far as possible to the right (left hip forward). On the second half of the 1st beat, repeat the twist to the left (right hip forward). On the 2nd beat repeat the above two movements exactly. On the 3rd beat, repeat the same two movements exactly.

The above 6 twisting movements produce a continuous shaking of the pelvis, the thorax moving slightly in opposition to limit the twisting to the pelvic region. (The arms do not move except in so far as they assist the opposition movement of the thorax in checking the twisting of the pelvis.)

BAR 7

BAR 8



1 and 2 and 3 and

1 and 2 and 3 and

BAR 7.

Inspiration 3 beats, or, if possible, continue expiration.

Repeat bar 6 exactly.

BAR 8.

Expiration 3 beats, contracting lower abdominal wall.

For 1st 2½ beats, continue the pelvic twisting as in bar 6. On the last half beat, face forward as in beginning of bar 5.

Note.—If possible the long expiration is better during the whole of the twisting movements.

(Pelvic tilting and twisting, *continued*)

Special Remarks :

1. The main object of this exercise is to get the maximum tilting and twisting of the pelvis, and continued mobilisation of the lumbar region.

2. Accuracy of movement of the arms, thorax and legs is not essential, as these are only to assist the pelvic movements and may be varied slightly to suit each individual.

The timing of the exercise should, however, be exact.

EFFECTS AND USES :

1. To mobilise the lumbar region of the spine by tilting and twisting movements of the pelvis, the first part by extension and flexion, and the second part by rotation, in the lumbar region.

2. It mobilises also the internal viscera, stimulates the liver and other organs, and the process of assimilation and elimination of food substances, so is particularly useful for constipation.

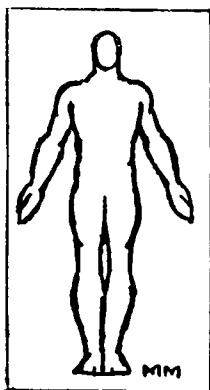
3. The emphasising of the pelvic tilt with the pressing back of the lumbar spines makes it a good exercise for correcting lordosis (hollow back).

LEG SWINGING

SCHUBERT'S MARCHES 32 (line 5) M.M.M. RECORD C10 or D15.

TIME : 4 beats in bar.

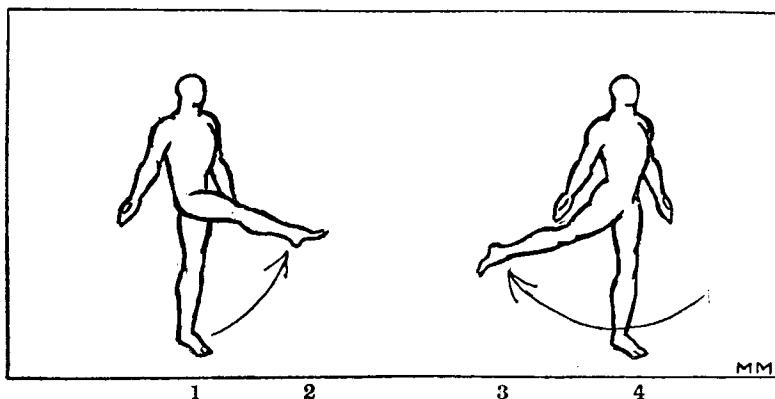
BREATHING : Synchronised.



Starting position :

Normal standing with arms abducted at hip level, palms forward. If in class, holding hands in a circle at first to assist balance, afterwards in free standing.

BAR 1



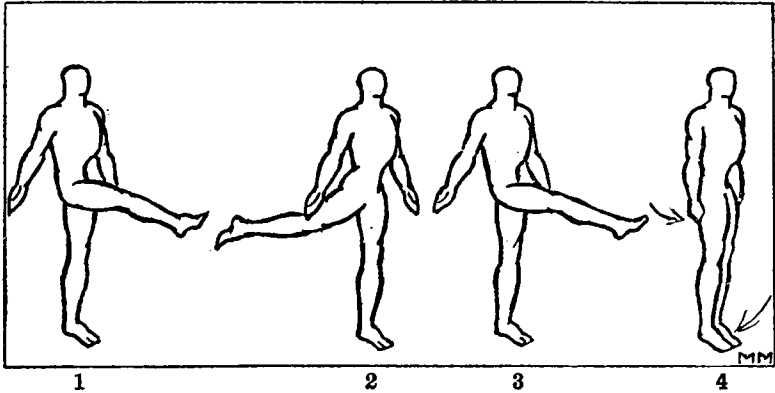
BAR 1.

Inspiration 4 beats.

For the 1st and 2nd beats, swing the right leg forward loosely and easily, as high as possible. Keep the left leg straight with the knee well extended. For the 3rd and 4th beats, swing the right leg backwards as far as possible while keeping normal rotation of hip and without moving the body.

(Leg swinging, *continued*)

BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, swing the right leg forward. On 2nd beat, swing the leg backward. On 3rd beat, swing forward again, and on 4th beat lower leg to starting position.

BARS 3 AND 4.

Repeat bars 1 and 2, but with the *left* leg working.

To continue the exercise, repeat from bar 1 with the right leg, but swinging the leg backwards first, reversing each movement.

When teaching children, the exercise should always be taught holding hands first, as it gives some support, and adds interest to the class.

Special Remarks :

1. The supporting leg must be kept straight with the knee well extended, and the foot planted firmly on the ground.

2. The body and head must be upright and good posture maintained throughout the whole exercise. The arms should also be kept still and the shoulders well drawn down.

3. The leg swinging should be relaxed and easy. The knee should not be flexed.

4. The hip should be slightly drawn up, so that when the foot swings past the mid-line it does not scrape the floor.

EFFECTS AND USES :

1. Mobilises the hip joint in flexion and extension.

2. Gives strong work to the flexors and extensors of the hip of the working leg, and strong static work for all the muscles of the hip and leg that are taking the weight.

3. Improves the circulation of the lower extremities particularly.

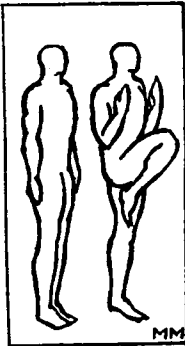
LEG CIRCLING

SCHUBERT'S WALTZES 7 (14).

M.M.M. RECORD B4 or D12.

TIME : 3 beats in bar.

BREATHING : Synchronised.



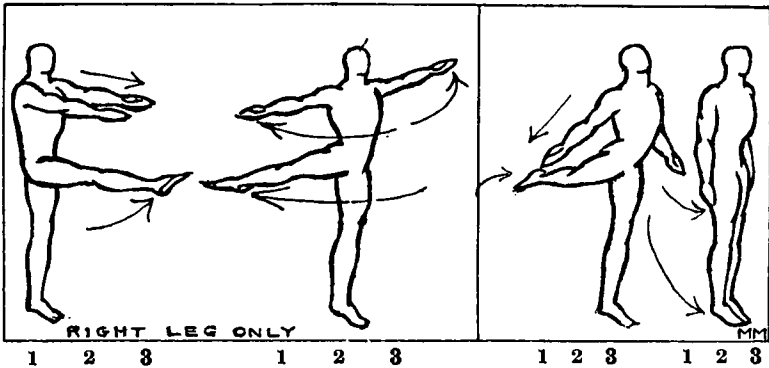
Starting position :

Normal good standing position. Just before 1st beat, flex the right hip and knee and both elbows, drawing foot up to knee level, hands by shoulders, elbows at sides.

Note.—The whole exercise is a continuous circling movement of leg and arms, the position described being reached on the last beat of each bar.

BARS 1 AND 2

BARS 3 AND 4



BAR 1.

Inspiration 3 beats.

During bar 1, stretch the right leg forward at hip level and both arms forward at shoulder level, shoulder width

B.P.T.

BAR 3.

Expiration 3 beats, contracting lower abdominal wall.

During the whole bar, continue the circling movement of the leg to the back (normal

P

(Leg circling, *continued*)

apart, fingers extended, palms facing. rotation of hip), arms circling backwards, hands at hip level, drawing the shoulder blades together.

BAR 2.

Continue inspiration 3 beats. Maintaining the extension and the previous levels, carry the leg and arms to the side.

BAR 4.

Continue expiration 3 beats, contracting lower abdominal wall.

During the whole bar, lower right foot to starting position. Relax arms to sides.

To continue the exercise, repeat with the left leg working.

Special Remarks :

1. The thorax must be kept upright throughout the exercise, the leg being circumducted as high as possible without leaning forward at the waist.

2. Both knees must be extended and the foot of the working leg plantar-flexed.

3. When the leg is stretched backwards during the 3rd bar, care should be taken that the knee of the working leg is well braced back and the foot plantar-flexed. The leg should be brought backwards as near as possible to the mid-line ; any tendency to let the hip rotate outwardly should be corrected.

Note.—The leg cannot be lifted very high behind in normal position. To get a high leg lift behind the pelvis must be turned and the hip outwardly rotated, which is not desired in this exercise.

EFFECTS AND USES :

1. It is a progression on the leg swinging, as it gives a wider range of movement with the maximum of mobility in the hip joint.

2. It gives strong work for the quadriceps, the glutei, and all hip muscles of moving and standing leg.

3. It is a fairly advanced balance exercise.

4. It is a good preparation for hurdling.

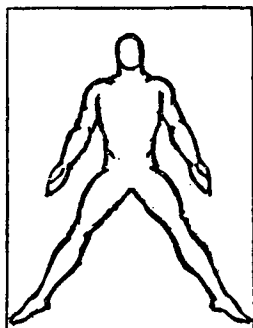
ALTERNATE HALF KNEE BENDING

SCHUBERT'S MARCHES 44.

M.M.M. RECORD B3 or C9 or D11.

TIME : 4 beats in bar.

BREATHING : Deep.

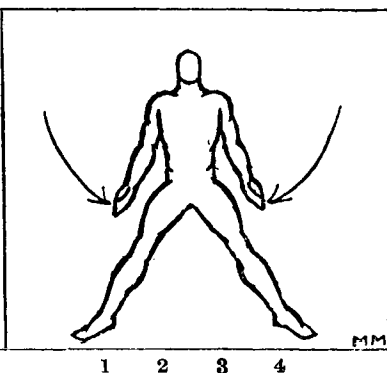
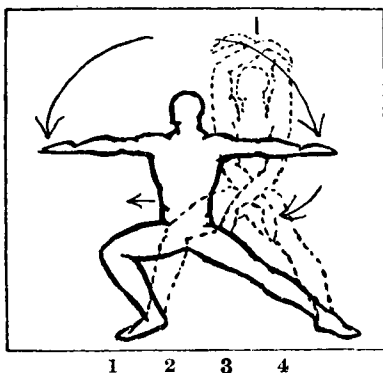


Starting position :

Wide stride standing with outward rotation of the hips, feet turned out. The arms are abducted to hip level with normal rotation of the hands, palms facing forward. Head straight, chin in.

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

For 3 beats, keeping both heels on the ground, flex the right knee. Hold position for 4th beat. On 1st beat, relaxing wrists and elbows, cross the right arm over the left,

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

For 3 beats, straighten the right leg, returning to the starting position by 3rd beat. On 1st beat, the hands and arms are turned to normal position,

(Alternate half knee bending, *continued*)

close to the body. On 2nd beat, flex the elbows and lift the arms upwards, gradually stretching them above the head. On 3rd beat, lower the arms slowly sideways to shoulder level, arms supinated, palms up, the elbows, wrists and fingers being well stretched. Hold this position for 4th beat. The arm movement should be continuous. The head follows the arms, looking upwards for the 1st 2 beats, and turning to the right (chin above right shoulder) for 3rd and 4th beats.

palms facing forward. For 3 beats, the arms are slowly lowered sideways on the frontal plane to the starting position. Hold this position for 4th beat. The head faces forward on the 1st beat.

BARS 3 AND 4.

Repeat the exercise to the left.

Special Remarks :

1. The body should be kept upright throughout the whole exercise, and there should be no rotation of the trunk.
2. The feet should be kept firmly planted on the ground with the toes pointed outwards, so that the knee and ankle joints are working in alignment on the knee bending.
3. The knee of the non-working leg should be kept extended.
4. The exercise should be smoothly performed, the movements being continuous.

EFFECTS AND USES :

1. To strengthen the muscles of the legs and hips.
2. To expand the chest and work the transverse back muscles.
3. To stretch slightly the tendo Achillis.

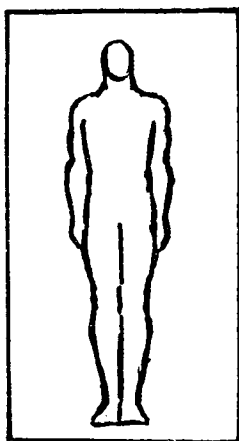
ALTERNATE DEEP KNEE BENDING

SCHUBERT'S WALTZES 22 (2).

M.M.M. RECORD B6 or D14.

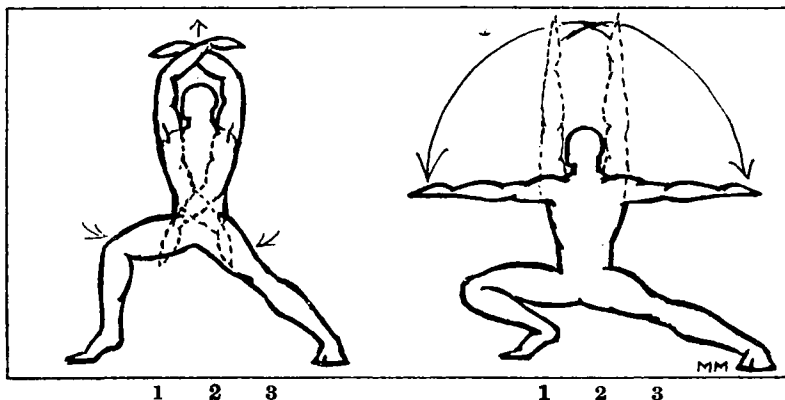
TIME : 3 beats in bar.

BREATHING : Deep.



Starting position :
Normal good standing position.

BARS 1 AND 2



(Alternate deep knee bending, *continued*)

BAR 1. (Legs only.)

Inspiration 3 beats.

On 1st beat, outwardly rotate the hip, knee and foot, take a big step sideways to the right with the right foot, and raise the right heel (plantar flexion). For 2 beats slowly flex the right knee to a deep knee bend, keeping the left leg straight.

BAR 2. (Legs only.)

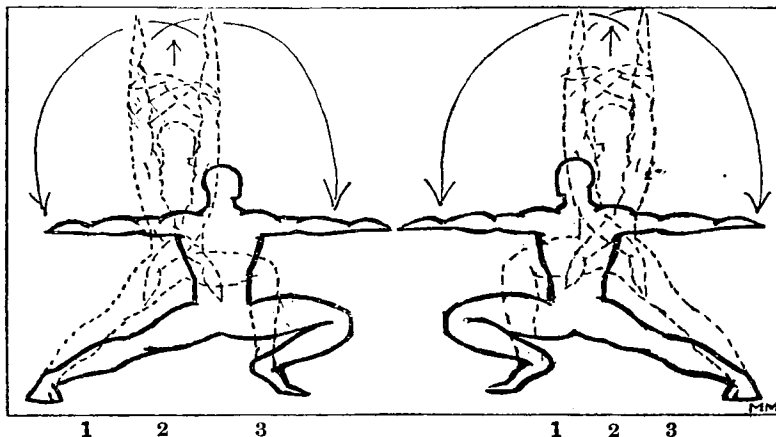
Continuing inspiration for 3 beats.

Complete the flexion on 1st beat and hold the position for 2 beats. As the right knee bends, the sole of the left foot should be kept on the ground if possible. The body is kept upright throughout the exercise, and there should be no trunk rotation.

Arms and Head of second bar :

On 1st beat, the forearms and hands are crossed at the mid-line of the body with the hands facing the thighs. On 2nd beat, the elbows are flexed and the arms are lifted upwards to head level. By the 3rd beat, they are both stretched above the head and are no longer crossed, but shoulder width apart, palms facing each other. On 1st beat of 2nd bar, both arms stretched and supinated part and sink to shoulder level, palms up, with the fingers well stretched. The head follows the arms, looking upward, and then to the right, with the chin over the right shoulder on 1st beat of bar 2. Maintain this position for the remainder of the bar.

BARS 3 AND 4



(Alternate deep knee bending, *continued*)

Between the last beat of the 2nd bar and the 1st beat of the 3rd bar the right leg straightens. The body remains upright, and having passed through stride-standing with both knees extended, the left knee now bends.

The arms repeat the same circling and stretching movements as already described for the 1st 2 bars. The head turns to the left.

BAR 3.

Expiration 3 beats, contracting lower abdominal wall.

On the 1st beat, the side lunge is completed to the left again to the limit of flexion, and is held for the remaining 2 beats of the 3rd bar.

Between the last beat of the 3rd and the 1st beat of the 4th bar the stretching of the legs and arms is repeated.

BAR 4.

Continue expiration for 3 beats.

On the 1st beat of the 4th bar, the side lunge is repeated once more to the right, with the head turning to the right. This position is held for the last 2 beats of the bar.

Repeat the whole exercise, but lunging to the left first.

Special Remarks :

1. The whole exercise should be performed smoothly and with continuity.

2. The trunk should be kept upright throughout the whole exercise.

3. It is important to take a sufficiently big step sideways on the side lunge to ensure a knee bend giving the limit of flexion for the working leg, and a complete extension of the other knee.

4. Note that the outward rotation is more marked than in the previous exercise, the foot being abducted and pointing completely sideways.

5. The arms should be stretched as much as possible when over the head, and the stretch maintained as they sink to shoulder level.

EFFECTS AND USES :

1. To strengthen the muscles of the hips and legs, especially the abductors, the adductors, and the quadriceps.

2. To expand the chest and develop the transverse back muscles.

TRUNK TWISTING

SCHUBERT'S WALTZES 23 (6).

M.M.M. RECORD B6 or D12.

TIME : 3 beats in bar.

BREATHING : Expiratory.

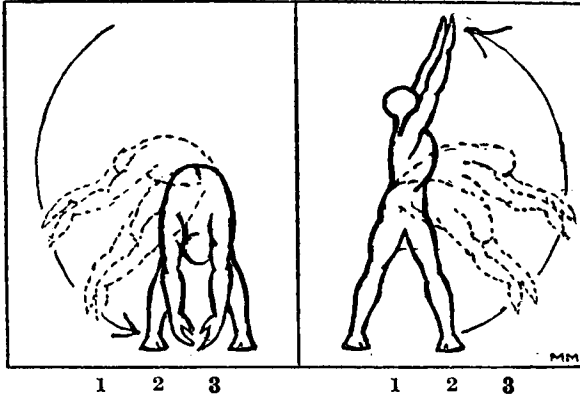


Starting position :

Stride standing with feet straight, body turned to the right, arms stretched upwards shoulder width apart, normal position of hands, palms facing forward, fingers stretched, head back. Breathe in before beginning exercise.

BAR 1

BAR 2



BAR 1.

Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, with trunk still rotated to the right, begin bending the body forwards, stretching the arms as far as possible to the right. On 2nd

BAR 2.

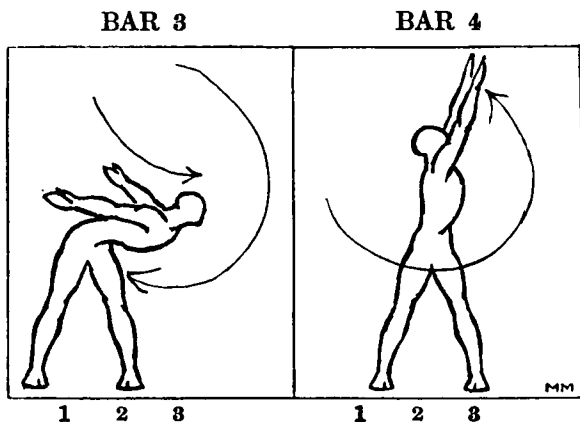
Inspiration 3 beats.

On 1st beat, still maintain full flexing of trunk and head, and continue the trunk circling to the left, fingers still touching the ground. On 2nd beat, the spine begins to extend and the

(Trunk twisting, *continued*)

beat, completely relax and flex the spine, relax the arms, head, and neck, but still maintain the trunk rotation so that the head falls forward near the side of the right knee; the fingers touching the floor (keep knees straight). On 3rd beat, with arms fully relaxed, begin to circle the trunk from right to left, keeping the fingers on the floor if possible.

arms are raised. By the 3rd beat, the arms are once more stretched upwards with the body upright as in starting position, but facing to the left.



BAR 3.

Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, bend the body forward from the hips with a flat back. The trunk should still be rotated to the left, the body parallel to the floor. The head is tilted back, the arms swing downwards and backwards, the shoulders are outwardly rotated so that the palms of the hands face outwards, with the thumbs uppermost, and the backs of the hands facing each other. The

BAR 4.

Inspiration 3 beats.

On 1st beat, straighten the body and swing the arms forwards and upwards (forearms pronated on the upward movement), and take the starting position, but facing to the left.

(Trunk twisting, *continued*)

hands and arms are just a little higher than the body when it has bent forwards. (See diagram.) The shoulder blades should be pulled together. Hold this position for the remainder of the bar.

Repeat the exercise, but twisting to the left.

Special Remarks :

1. As the exercise is one which emphasises expiration, be sure to breathe out strongly, contracting the abdominal muscles vigorously during expiration. Especially when bending forward on the 3rd bar, the contraction must be an extra strong one, because the abdominal muscles are working against gravity.

2. Be careful to outwardly rotate the shoulder joints when bending forward with a flat back during the 3rd bar. See that the hands also face outwards, thumbs uppermost, to facilitate the pulling back of the shoulders, the stretching of the pectorals, and the expansion of the chest.

3. Be sure to keep the knees extended and the feet straight and firmly planted on the floor throughout the exercise.

EFFECTS AND USES :

1. For general mobilisation of the spine, especially flexion.
2. To correct round shoulders and expand the chest.
3. To strengthen particularly the transverse and extensor muscles of the spine.
4. To stretch the ham strings.
5. To reduce the waist and abdomen.
6. To aid digestion.
7. To teach the alternation of muscular tension and relaxation.

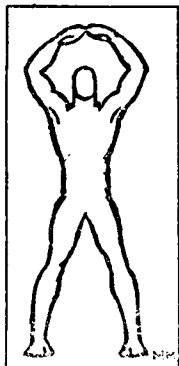
TRUNK CIRCLING

SCHUBERT'S WALTZES 23 (6).

M.M.M. RECORD B6 or D12.

TIME : 3 beats in bar.

BREATHING : Expiratory.



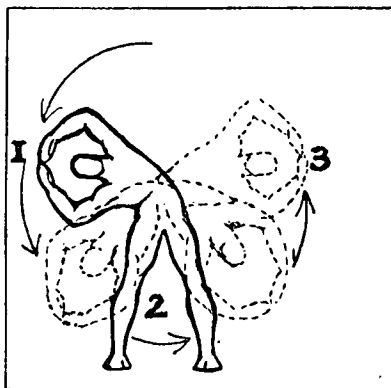
Starting position :

Stride standing with feet straight, arms above head in circle position, finger tips touching, palms facing floor.

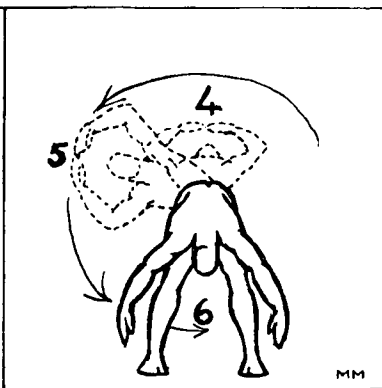
Breathe in before beginning exercise.

BAR 1

BAR 2



1 2 3



1 2 3

MM

BAR 1.

Expiration 3 beats, contracting lower abdominal wall.

The following is a continuous trunk circling movement, and all trunk flexions should be as full as possible. Flex the trunk laterally to the right on 1st beat, forward and downward on 2nd

BAR 2.

Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, continue the trunk circling by extending the spine, bending backwards as much as possible. On 2nd beat, pass through lateral flexion to the right. On 3rd beat

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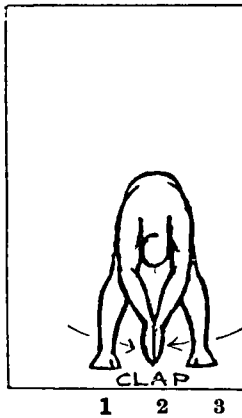
(Trunk circling, *continued*)

beat, upward and to the left on 3rd beat.

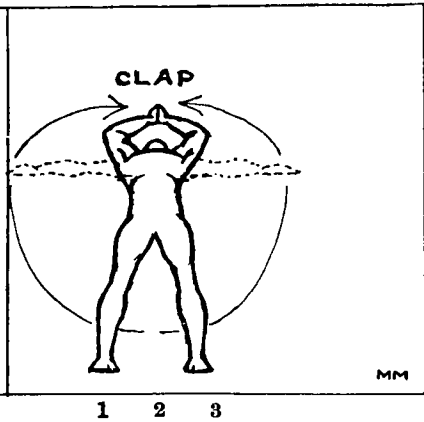
During the whole bar, the arms and hands remain still in relation to the trunk, as in starting position. The head should keep in the centre of the circle formed by the arms and hands. The legs and feet are fixed as in starting position.

plete the trunk circling by finishing with full flexion bending forwards (as described in 2nd beat of 1st bar). The hands part in preparation for the clap on 1st beat of next bar.

BAR 3



BAR 4

**BAR 3.**

Inspiration 3 beats.

On 1st beat, hold the position taken on 3rd beat of 2nd bar, and clap the hands, fingers pointing to the ground, head down. On 2nd and 3rd beats, extend the spine and begin to bend back. The arms are abducted and raised sideways above the head.

BAR 4.

Inspiration 3 beats.

Continue bending back as far as possible, clap the hands above the head, with the elbows pressed back. Maintain the back bend, gradually bringing the hands to the original circle starting position.

Repeat the exercise, but circling to the left.

Advanced pupils who have very supple backs may repeat the exercise from the back-bending position without coming up into the starting position on last beat.

(Trunk circling, *continued*)

Special Remarks :

1. The trunk and head circling should be a continuous movement.
2. The clapping of the hands, both on the trunk flexion and extension, should be a free relaxed movement.
3. The knees should be extended and the feet kept still throughout the exercise.
4. Care must be taken to keep the head well back between the arms and the elbows pressed back.

EFFECTS AND USES :

1. To give general mobilisation to the spine.
2. To give strong work to the trunk and abdominal muscles.
3. To aid digestion and to assist the circulation.
4. To reduce the waist.

EASY RELAXATION

This is not a breathing exercise as it does not aim at obtaining a bigger intake of oxygen. The outgoing breath is used to induce relaxation, there being no contraction of the abdominal wall on expiration.

This exercise is included here because, as nearly everyone suffers from over muscular-tension, a simple method of teaching relaxation will be found of great benefit to almost everyone, and when practised in conjunction with deep breathing exercises will do much to re-establish health.

No Music, or, if desired, very **BREATHING** : Synchronised.
slow four time.

Note.—Relaxation exercises are the only exception to contracting the abdominal muscles on expiration.



Starting position :

Lying on bed or couch, very comfortably supported with cushions under the head, knees, forearms (and when more comfortable a small pillow under the back) with the feet slightly apart, so that relaxation in the hip joint is obtained. The palms should be down.

The position may be varied (size of pillows, etc.) to obtain the position that is most comfortable, and allow of the fullest relaxation for each individual. (*Note.*—It is essential the pupil should be very warm, either in bed, or covered by rugs, and with hot water bottles if desired.)

The breathing must be very gentle, *and with no contraction of the abdominal wall on expiration.* Full relaxation exercises are the one exception to contracting the abdominal wall on expiration, as the outward breath should be used to obtain the fullest relaxation of the whole muscular system.

(Easy relaxation, *continued*)

BAR 1 (Part I).

(In pupil's own time as slowly as possible.)

Inspiration 4 beats.

For 4 beats, gently stretch the whole body, feeling conscious tension in the neck, back, arms to the finger tips; buttocks, legs and feet to the toes (which should be stretched downwards).

BAR 2.

Expiration 4 beats (*no abdominal contraction*).

On 1st beat (and for remaining 3 beats), relax all the muscles as fully as possible, getting a feeling of "letting go" and the body weight sinking into the bed.

Repeat these 2 bars 4 times (8 bars in all), each time making the tension less obvious and endeavouring *to increase the amount of relaxation*.

Part II.

For the next 8 bars the breathing is reduced to a minimum, the pace having been quickened to 2 beats on inspiration and expiration, instead of 4, and should gradually become unconscious as in sleeping.

It is not necessary to try for exact timing, the whole object being to induce a condition of complete relaxation and repose. The exercise can be repeated as often as advisable from the beginning. When used for insomnia the exercise should be performed last thing in bed, the second part of the exercise being more and more prolonged, until it merges into sleep.

EFFECTS AND USES :

1. For teaching relaxation (which is an essential part of all the exercises) in the easiest form by emphasising the difference between obvious tension and relaxation, with the brain and body at rest and no other objective in mind.

2. The performance of this exercise has a calming effect on nervous highly-strung patients, and helps to develop the power of relaxation in normal life.

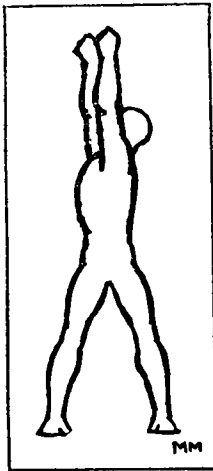
3. Helps to induce sleep by occupying the mind without fatiguing the brain, and by drawing the blood to the extremities by the alternate stretching and relaxing of the muscles, thus gradually relieving mental and bodily tension.

TENSION AND RELAXATION, A

SCHUBERT'S WALTZES 32 (11). M.M.M. RECORD B6 or D12.

TIME : 3 beats in bar.

BREATHING : Expiratory.



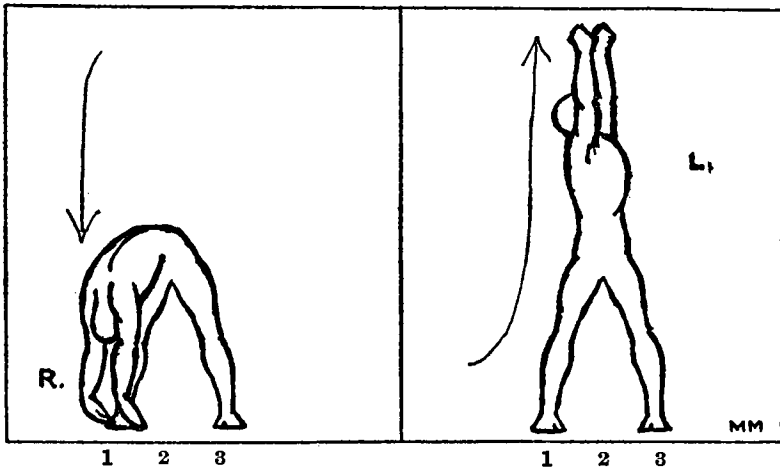
Starting position :

Stride standing with feet straight, body turned to the right, arms stretched upwards, shoulder width apart, fists clenched and turned inwards, head back.

Breathe in before beginning exercise.

BAR 1

BAR 2



(Tension and relaxation, *continued*)**BAR 1.**

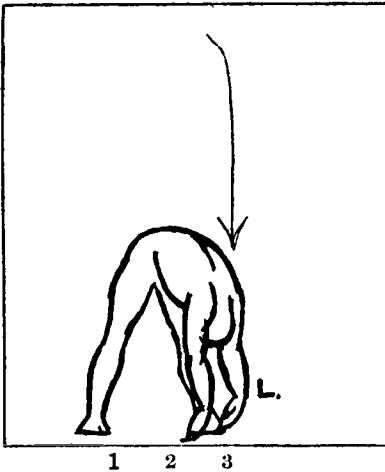
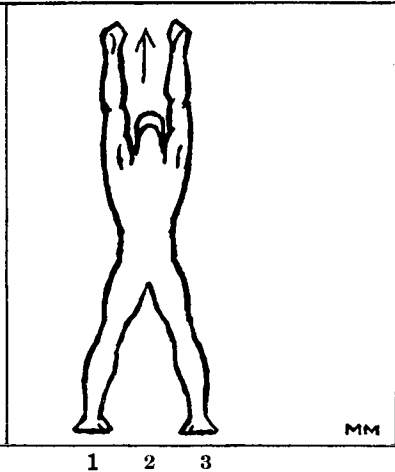
Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, relax completely from the waist, dropping body forward over right knee, hands to floor. Unclench the fists, completely relaxing arms and hands. Remain in this position for 2 beats.

BAR 2.

Inspiration 3 beats.

On 1st beat, raise trunk, tensing arms, with fists clenched above head, turning to face left. Hold for 2 beats.

BAR 3**BAR 4****BAR 3.**

Repeat bar 1, but to left.

BAR 4.

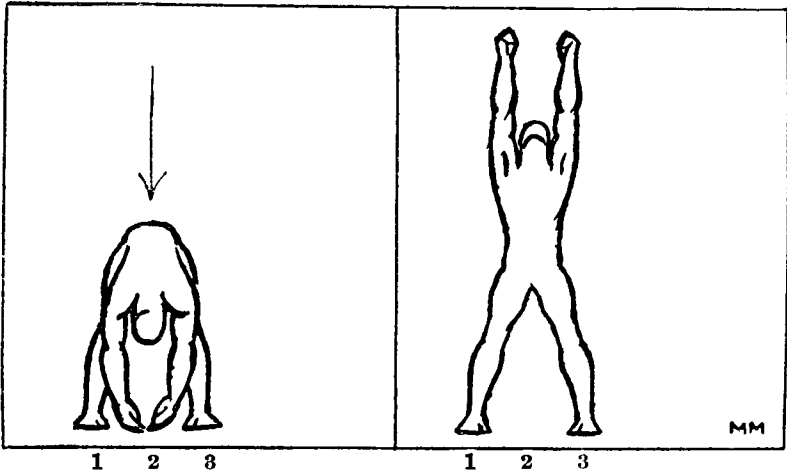
Repeat bar 2, but facing forward.

RELAXATION EXERCISES

(Tension and relaxation, *continued*)

BAR 5

BAR 6



BAR 5.

Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, relax straight forward, hands to floor. Unclench the fists, completely relaxing arms and hands. Remain in this position for 2 beats.

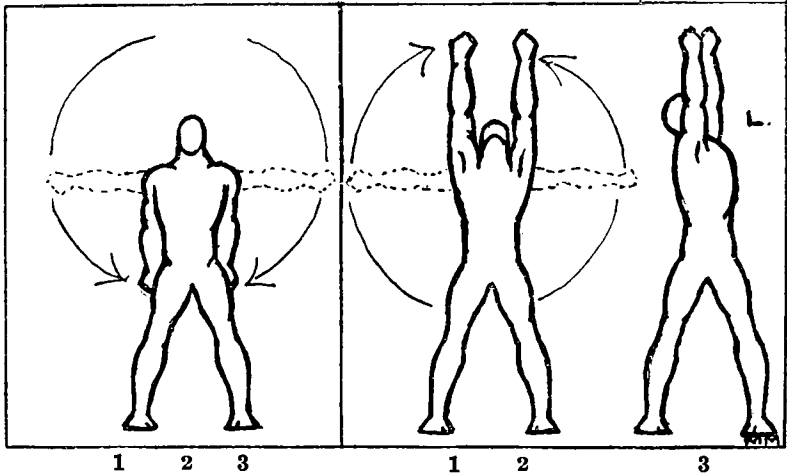
BAR 6.

Inspiration 3 beats.

On 1st beat, raise trunk, tensing arms, with fists clenched above head. Hold for 2 beats.

BAR 7

BAR 8



(Tension and relaxation, *continued*)**BAR 7.**

Expiration 3 beats, contracting lower abdominal wall.

During 3 beats, lower arms sideways and downwards to sides.

BAR 8.

Inspiration 3 beats.

During 1st and 2nd beats, raise arms sideways and upwards to above head, fists turned inwards. On 3rd beat repeat starting position, but turning to left.

Note.—The exercise can also be done with fingers *stretched* on tension positions.

Special Remarks :

1. Keep the knees straight throughout the exercise.
 2. To get complete relaxation, from the waist make the tensing movements very strong. When holding a relaxed position, make certain that every part of the trunk is limp.
 3. The clenching and unclenching of the fists act as a reminder to emphasise the difference between tension and relaxation.
- If the fingers are stretched the tension must still be obvious.

EFFECTS AND USES :

1. For developing the power of conscious relaxation by differentiating between obvious muscular tension and relaxation.
2. For mobilising the spine, particularly flexion of the dorsal and lumbar regions.
3. For strengthening the extensors of the spine.
4. A useful exercise to aid digestion and stimulate the liver, by the alternate stretching and compressing of the abdominal viscera.

TENSION AND RELAXATION, C
(with deep knee bending)

Music and records as for A.

TIME : 3 beats in bar.

BREATHING : Expiratory.

Starting position :

Standing with feet together, toes and heels touching. Trunk, arms and head turning to the right, as in A, but with fingers stretched.

The movements from the hips up are exactly the same as in A, but on each relaxation movement a *deep knee bending* is added (sitting on the heels). The feet are kept facing straight forward, the knees together bending straight forward every time, the heels being raised on the knee bending.

Note.—On the relaxation and knee bending, the arms being fully relaxed, the elbows flex and the wrists or forearms lie on the ground.

ADDITIONAL USES :

1. For mobility of ankles and knees and hip joints.
2. To give strong work for the quadriceps muscles.

A more complete relaxation is possible as the legs do not have to be kept rigid.

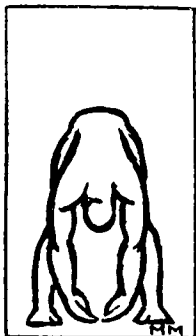
SWINGING RELAXATION

SCHUBERT'S WALTZES 24 (7).

M.M.M. RECORD B6 or D12.

TIME : 3 beats in bar.

BREATHING : Expiratory.



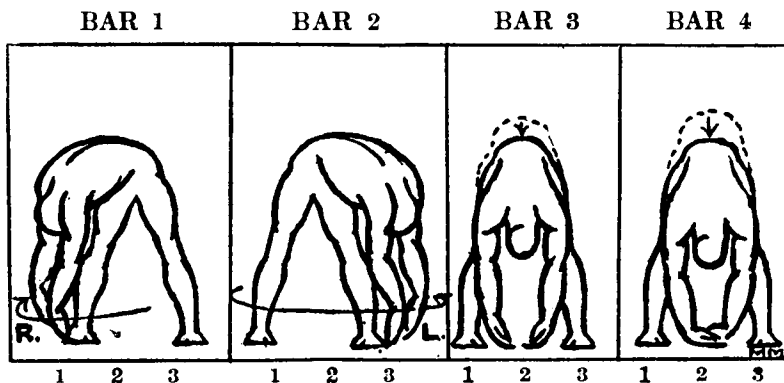
Starting position :

Stride standing, feet straight, with the trunk and neck fully flexed, the arms and hands hanging loosely in front.

Note :

1. In the whole exercise the impetus for the movement comes from the centre of the body and the lumbar region of the spine. The swinging of the arms on different levels increases the range of the body movement.

2. The neck should be completely relaxed throughout the exercise, the head movements being the outcome of the body and arm movements.



(Swinging relaxation, *continued*)

BAR 1.

Inspiration 3 beats.

During 1st and 2nd beats, maintain the trunk flexion, but rotate slightly to the right, and swing the arms in a relaxed manner round the right ankle. On 3rd beat, begin swinging the arms and trunk towards the left leg. The trunk and head flexion is still maintained.

BAR 2.

Inspiration 3 beats.

Repeat bar 1 exactly, but to the left.

BAR 3.

Expiration 3 beats, contracting lower abdominal wall.

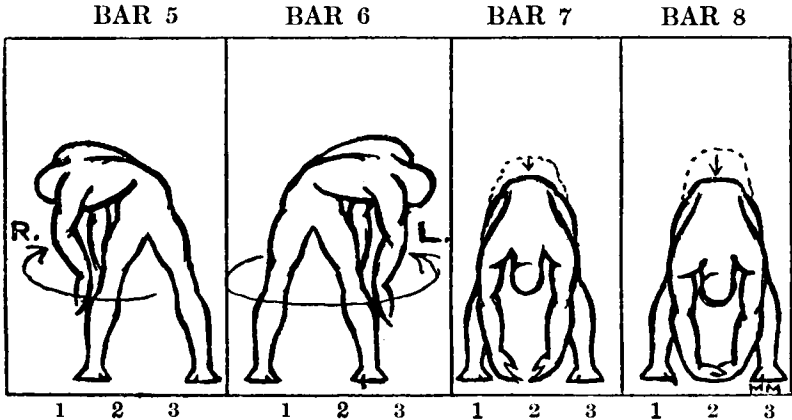
On 1st beat, maintaining trunk flexion, bring the body to the midline, and endeavouring to increase the relaxation of the whole spine, allow the hands to flop on the ground. It is essential for the arms and hands to be completely relaxed even if they do not touch the ground.

During 2nd and 3rd beats, raise the back slightly, still keeping the head down and the arms hanging (see dotted line).

BAR 4.

Continue expiration 3 beats, contracting lower abdominal wall.

Repeat bar 3 exactly.



BAR 5.

Inspiration 3 beats.

Repeat bar 1, but swing the arms round the right knee. The

(Swinging relaxation, *continued*)

spine is still flexed, but not so far. The trunk rotation to the right is a little more marked than when the arm swinging took place round the ankle.

BAR 6.

Continue inspiration 3 beats.

Repeat bar 5 exactly, but to the left.

BAR 7.

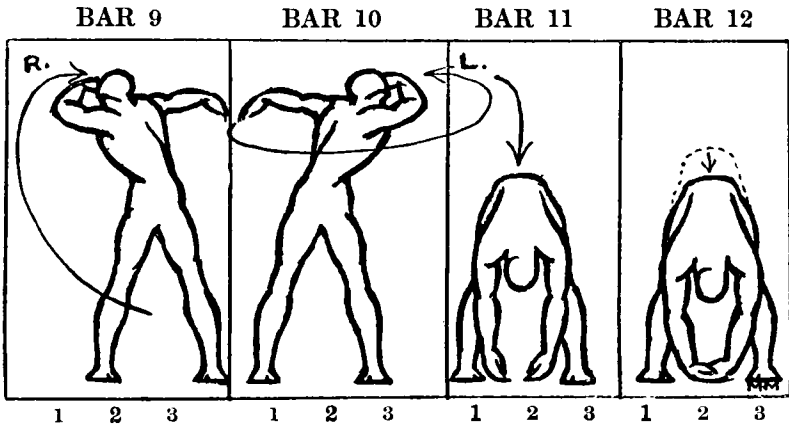
Expiration 3 beats.

Repeat bar 3 exactly (spine again fully flexed).

BAR 8.

Continue expiration 3 beats.

Repeat bar 4, but on 3rd beat, raise the body so that the spine is now only slightly flexed forwards.

**BAR 9.**

Inspiration 3 beats.

During 1st and 2nd beats, rotate the trunk to the right, swinging the arms and hands freely (with a stronger accented movement) round to the right, sideways and backwards at shoulder level. On 3rd beat begin swinging the arms outwards and forwards, and straighten the body. (This movement should be continuous with the swing to the left which occurs in the next bar.)

BAR 10.

Continue inspiration 3 beats.

Repeat bar 9 exactly, but to the left.

(Swinging relaxation, *continued*)**BAR 11.**

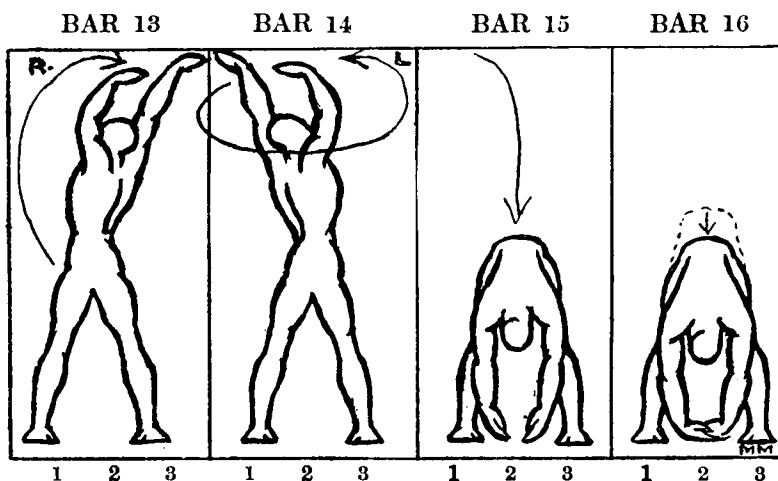
Expiration 3 beats.

Relax forward on the first beat, and repeat bar 3 exactly (spine fully flexed).

BAR 12.

Continue expiration 3 beats.

Repeat bar 11, but on 3rd beat, straighten the back in preparation for the arm swing above the head in bar 13.

**BAR 13.**

Inspiration 3 beats.

On 1st beat, as the arms swing backwards and upwards above the head, the body rotates to the right with a slight extension of the spine (*i.e.*, bend slightly backwards as well as rotate). This swing continues on the 2nd beat. The neck is flexed to the right, and the head movement is absolutely relaxed. On 3rd beat, the arms continue the swinging, and move outwards and forwards as the trunk returns to the normal position, facing forwards. The head follows the hands.

BAR 14.

Continue inspiration 3 beats.

Repeat bar 13 exactly, but swing to the left.

(Swinging relaxation, *continued*)

BAR 15.

Expiration 3 beats.

Repeat bar 3 exactly (spine fully flexed).

BAR 16.

Continue expiration 3 beats.

Repeat bar 4 exactly, finishing in starting position (with trunk and arms fully relaxed forwards).

On repeating the exercise swing to the left first.

Special Remarks :

1. The movements in this exercise should be as continuous and as relaxed as possible.

2. The relaxing movement on bars 3, 4, 7, 8, 11, 12, 15 and 16 should be a complete relaxation of the whole body from the hips upwards.

3. There should be no set position of the head, arms and hands (this is impossible if complete relaxation is maintained), but definite levels should be aimed at on the swinging (*i.e.*, ankles, hips, shoulders and above head). The head follows the movement of the arms, which in turn get the impetus from the centre of the body.

EFFECTS AND USES :

1. To develop the power of conscious relaxation.

2. To mobilise the spine, particularly the lumbar region.

FIRST STRETCHING

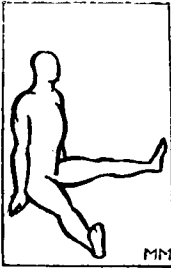
Parts 1 and 2 on ground

SCHUBERT'S MARCHES 38 (Trio). M.M.M. RECORD C8 or D11.

TIME : 4 beats in bar.

BREATHING : Expiratory.

PART I

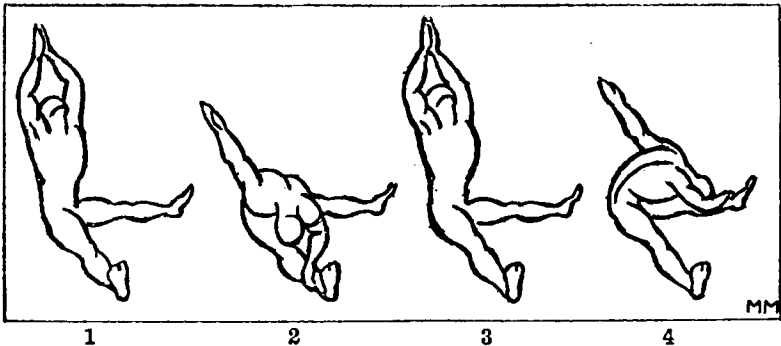


Starting position :

Sitting with legs wide apart, backs of knees touching the ground, body and head straight, arms at sides slightly abducted, hands pronated, palms resting on the ground.

Note.—Both knees must be kept flat on the ground throughout whole exercise, and the legs kept in the normal position, avoiding an inward or outward rotation at the hip joint.

BAR 1



BAR 1.

Inspiration and expiration each alternate beat.

(First stretching, Part 1, *continued*)

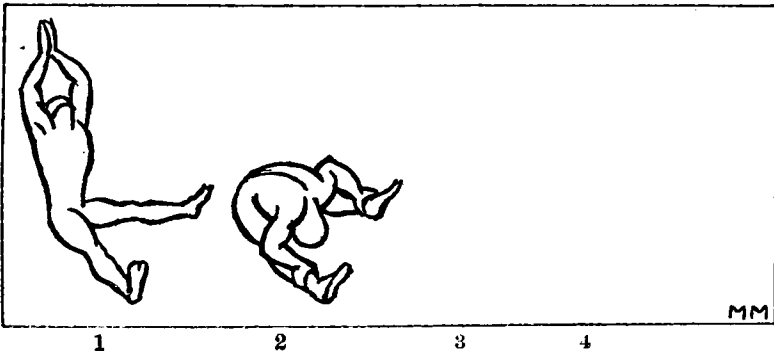
Inspiration 1 beat.

On 1st beat, lift the arms up sideways, and clap hands above head, elbows bent, fingers pointing upwards, neck extended, head back. On 2nd beat (expiration 1 beat, contracting lower abdominal wall), rotate the trunk slightly to the right, bend the body forward, and grasp the right ankle with the left hand, stretching the right arm backwards with the hand about 2 feet off the ground, palm outward, thumb on top. Flex the neck and try to put the forehead on the right knee.

Inspiration 1 beat.

On 3rd beat, raise the body and repeat movement of the 1st beat. On 4th beat repeat movement of 2nd beat, but twist and bend to the *left* so that the head touches the left knee, the right hand holding left ankle, and the left arm lifted and stretched behind.

BAR 2



BAR 2.

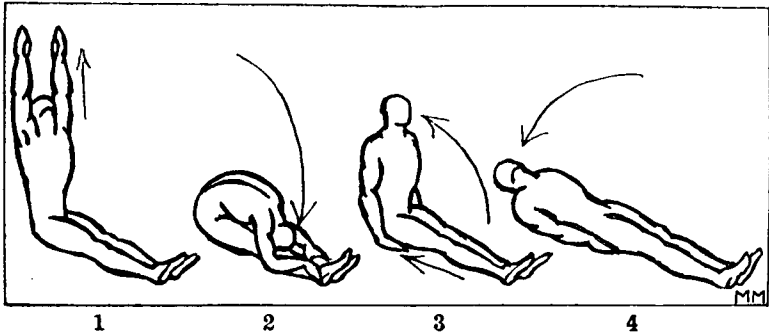
Inspiration 1 beat, expiration 3 beats.

For 1st beat (inspiration) repeat body raising and clapping above head as in bar 1. On 2nd beat (expiration, contracting lower abdominal wall) bend forward *without rotating* the trunk, and grasp both ankles with both hands, and aim at placing the head on the floor between the knees. Hold this position for 2 beats (continuing expiration).

From this position, Part 1 may be repeated as a separate exercise, otherwise Part 2 should be practised alternately with Part 1.

First stretching, Part 2

BAR 3

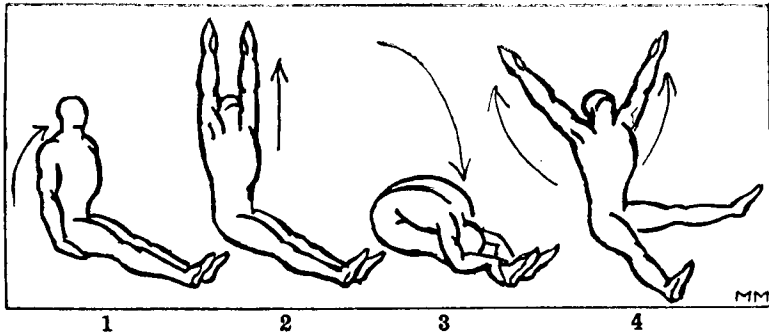


BAR 3.

Inspiration and expiration on alternate beats.

On 1st beat (inspiration) straighten the body, and bring both legs together into long sitting position. Relax and stretch both arms upwards above the head, shoulder width apart, fingers stretched, and palms facing forward. Extend the neck, with the head bent backwards. On the 2nd beat (expiration, contracting lower abdominal wall), flex the neck and the rest of the spine, bending forward so that the head rests on the knees, and grasp both ankles with both hands. On 3rd beat (inspiration 1 beat) raise the body to the upright long sitting position with head straight. Relinquish the hold on the ankles. Mark 3rd beat by hitting the floor with the hands, fingers pointing forward. On 4th beat (expiration, contracting lower abdominal wall), keeping the hands on the floor, and the feet still, lie down flat on the back.

BAR 4



(First stretching, Part 2, *continued*)

BAR 4.

Inspiration 2 beats, expiration 2 beats.

On 1st beat, sit up with the hands still touching the floor, the back quite straight, head up, chin in. On 2nd beat, relax and stretch both arms above head, as for 1st beat of the 1st bar. On 3rd beat (expiration, contracting lower abdominal wall) grasp both ankles with both hands, placing the head on the knees. On 4th beat raise the trunk and abduct both legs to the starting position of Part 1 of this exercise, *i.e.*, stride sitting. Raise both arms with a quick relax and stretch upwards and outwards above the head, palms facing forward, head back.

From this position repeat Part 1 of the exercises. If Parts 1 and 2 are not practised alternately, a variation may be taken by doing Part 1 twice running, and Part 2 once. If a slower time is preferred, the exercise may be performed with 2 beats to each movement instead of 1, and with 6 beats (when head touches the floor) instead of 3.

Note.—When the exercise has been mastered, it is best performed in double quick time.

Special Remarks (Parts 1 and 2) :

1. Keep the knees extended throughout the whole exercise.
2. Stretch up well on the upright sitting positions, and when clapping above the head keep the elbows pressed back, and the fingers pointing upward.
3. When holding the long sitting position in Part 2 be sure to keep the body upright. It should be at right angles to the legs.
4. It is an exercise to emphasise the expiration, so breathe out quickly and strongly when bending forward.
5. On the trunk raising, the neck must be kept straight, chin in.

EFFECTS AND USES :

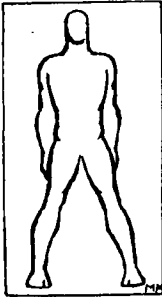
1. To stretch the ham strings and the long-going muscles of the back.
2. To strengthen the abdominal muscles, and especially the recti in Part 2.
3. To aid digestion by the alternate stretching and compressing of the abdominal viscera.

SECOND STRETCHING (STANDING)

SCHUBERT'S MARCHES 38 (Trio). M.M.M. RECORD C8 or D11.

TIME : 4 beats in bar.

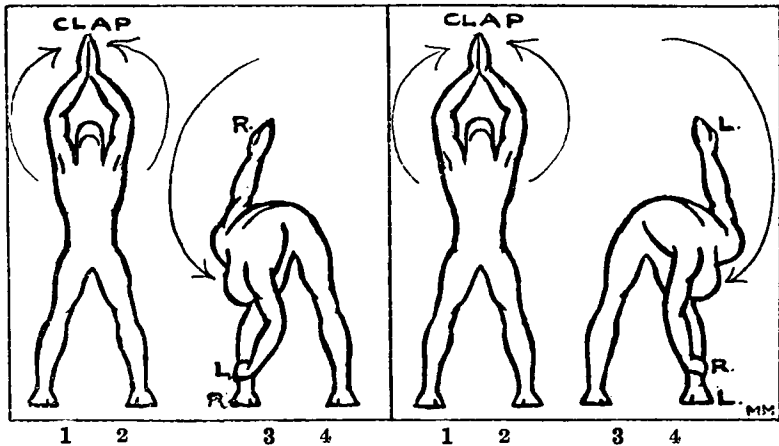
BREATHING : Expiratory.



Starting position :
 Stride standing with the feet
 straight, arms hanging at sides.

BAR 1

BAR 2



BAR 1.

Inspiration 2 beats. Expiration 2 beats, contracting lower abdominal wall.

On 1st beat, lift the arms up sideways and clap the hands

BAR 2.

Inspiration 2 beats. Expiration 2 beats, contracting lower abdominal wall.

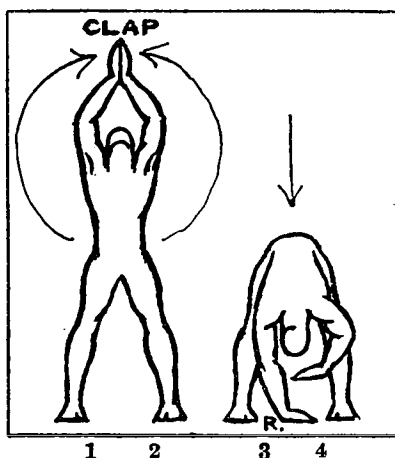
Raise the body and with wide circling movement of the arms

(Second stretching (standing), *continued*)

above the head, with elbows bent, fingers pointing upward, neck extended, head back. Hold this position for 2nd beat. On 3rd beat, rotate the thorax slightly to the right, bend the body forward and grasp the right ankle with the left hand. Stretch the right arm backwards and upwards, palm outward, thumb uppermost. Flex the neck and try to put the forehead on the right knee.

just before 1st beat, repeat 1st 2 beats of bar 1. Repeat 3rd and 4th beats, but bend to the left, grasping the left ankle.

BAR 3

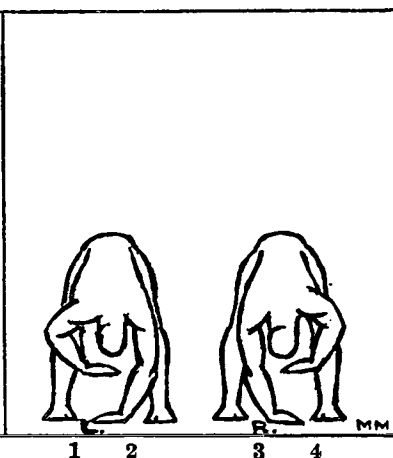


BAR 3.

Inspiration 2 beats. Expiration 2 beats, contracting lower abdominal wall.

On 1st beat, repeat the clap as in previous bar. Hold this position for 2nd beat. On 3rd beat, let the body drop forward with the spine relaxed, and hit the floor midway between the feet with the palm of the right hand, fingers pointing to left foot. On the 4th beat, pull up the lumbar region slightly.

BAR 4



BAR 4.

Continue expiration 4 beats, contracting lower abdominal wall, or if too long breathe easily in for 2 and out for 2.

On 1st beat, repeat hitting movement with left hand, fingers pointing to right foot. On 2nd beat, repeat relaxed movement of lumbar region. On 3rd beat, repeat hitting movement with right hand. On 4th beat, begin to extend spine to starting position.

(Second stretching (standing), *continued*)

To continue the exercise, circle arms sideways and upwards, and repeat, beginning to the left, therefore hitting the floor first with the left hand.

Special Remarks :

When hitting the floor, the whole body, neck and arms and hands, should be completely relaxed.

EFFECTS AND USES :

As in previous exercise.

ADDITIONAL USES :

The downward movement encourages a state of relaxation in the spine, shoulders, and arms, and the hitting of the floor gives an objective which results in attaining greater mobility.

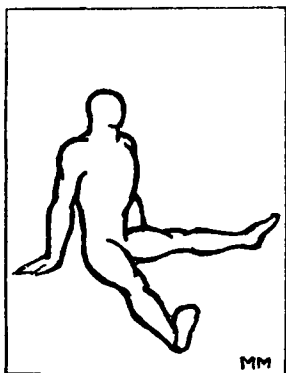
When the movements have been mastered, the exercises may be done as in previous exercise, 1 beat to each movement instead of 2.

ADVANCED STRETCHING

SCHUBERT'S MARCHES 38 (Trio). M.M.M. RECORD C8 or D11.

TIME : 4 beats in bar.

BREATHING : Expiratory.

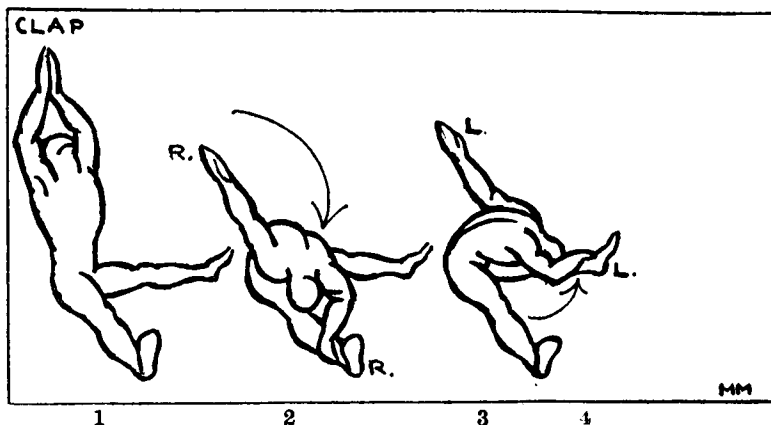


Starting position.

As in First Stretching.

Note.—This exercise can be taken double quick time if preferred.

BAR 1



BAR 1.

Inspiration 1 beat. Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, clap hands above head. On 2nd beat, rotate the trunk to the right, bend forward and grasp the right ankle with the left hand (as in First Stretching exercise). Bend forward until

E.P.F.

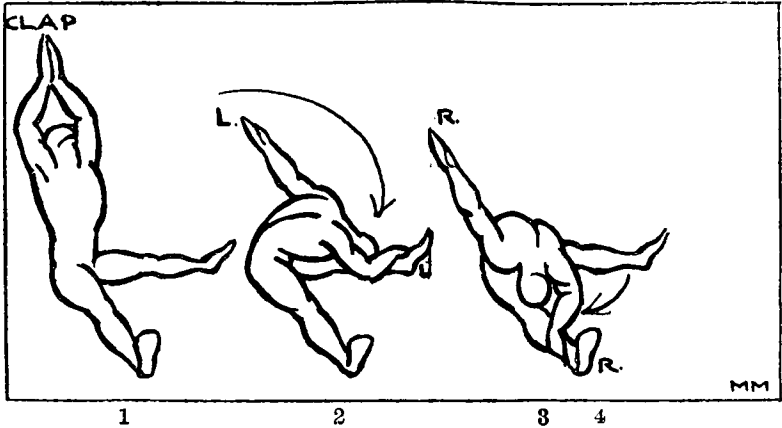
R

STRETCHING EXERCISES

(Advanced stretching, *continued*)

the head touches the right knee. On 3rd beat, keep the head down and the spine flexed whilst rotating the body to the left, and place the head on the left knee. Swing the arms over so that the right hand touches the left ankle, the left arm pointing backwards. Hold this position for 4th beat.

BAR 2

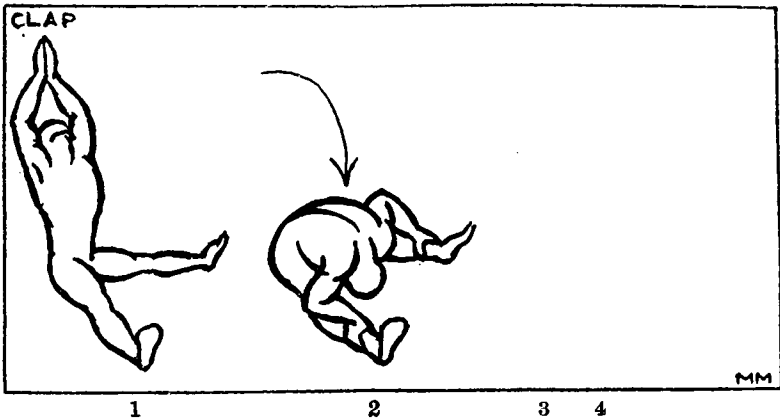


BAR 2.

Inspiration 1 beat. Expiration 3 beats, contracting lower abdominal wall.

Repeat bar 1, but beginning to the left first (head on left knee first).

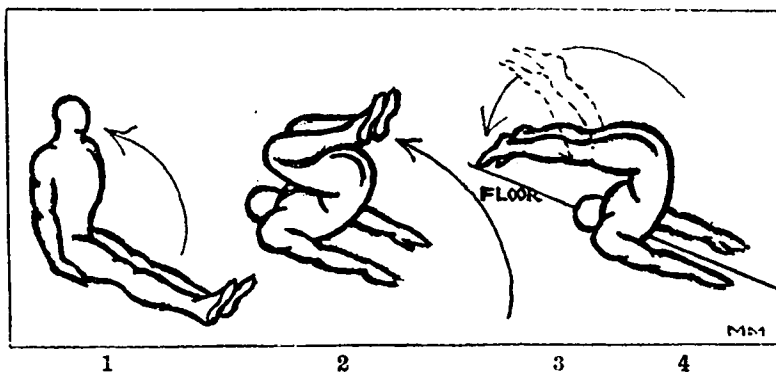
BAR 3



(Advanced stretching, *continued*)**BAR 3.**

Inspiration 1 beat. Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, raise and straighten the body, and clap hands over head as in bar 1. On 2nd beat, bend forward and grasp both ankles with both hands, putting the head on the ground while continuing to keep both knees well extended. Hold this position for 3rd and 4th beats.

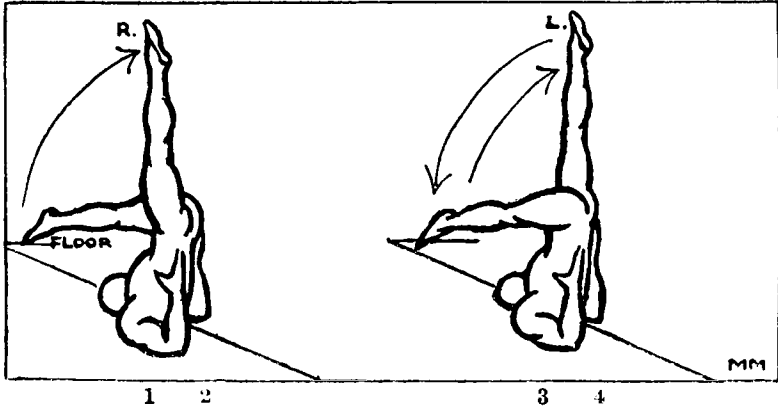
BAR 4**BAR 4.**

Inspiration 1 beat. Expiration 3 beats, contracting lower abdominal wall.

On 1st beat, bring the legs together, raise the body and sit with the hands at the sides, palms resting on the floor (fingers pointing forwards). On 2nd beat, lie down and bend both knees, drawing them up towards the head, bringing the pelvis off the ground and keeping ankles and legs together. On 3rd beat, extend the knees, taking the legs over the head until the feet touch the ground behind the head on the 4th beat. The weight of the body should now rest on the head, neck, shoulders and arms. The spine is fully flexed from the dorsal region to the coccyx (*i.e.*, from the shoulder blades downwards). The whole bar is one continuous movement, as impetus is necessary to draw up the pelvis and arrive at the final position.

(Advanced stretching, *continued*)

BAR 5

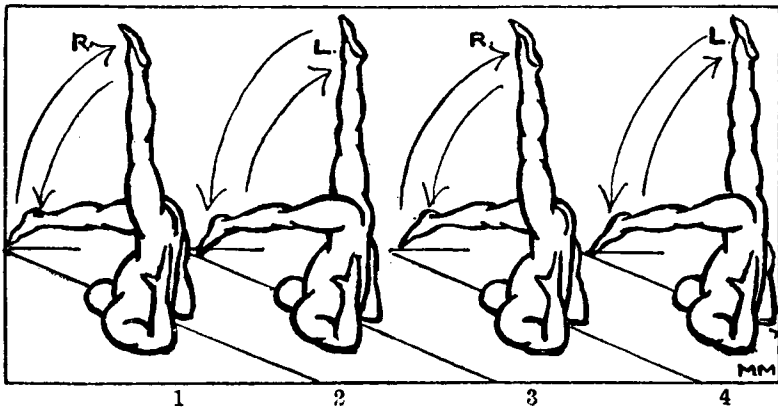


BAR 5.

Inspiration 4 beats.

On 1st beat, place the hands on the hip bones, and lift the right leg as high as possible by straightening the pelvis and the spine. The body is now balancing on the neck, shoulders and elbows. Both legs should be wide apart, the left knee still backwards towards the head, knee extended, toes touching the ground. The right leg should stretch directly upwards in alignment with the body. Hold this position for 2nd beat. On 3rd beat, reverse the position of the legs. (Right leg backwards over head, left leg upwards.) Hold this position for 4th beat.

BAR 6



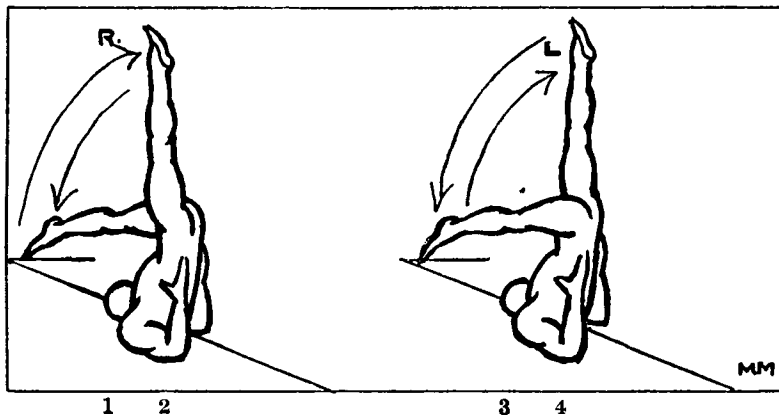
(Advanced stretching, *continued*)

BAR 6.

Expiration 4 beats, contracting lower abdominal wall.

Repeat the movements of bar 5, but twice as quickly, taking 1 beat to each of the 4 movements, finishing with the right leg backwards, left leg upwards.

BAR 7

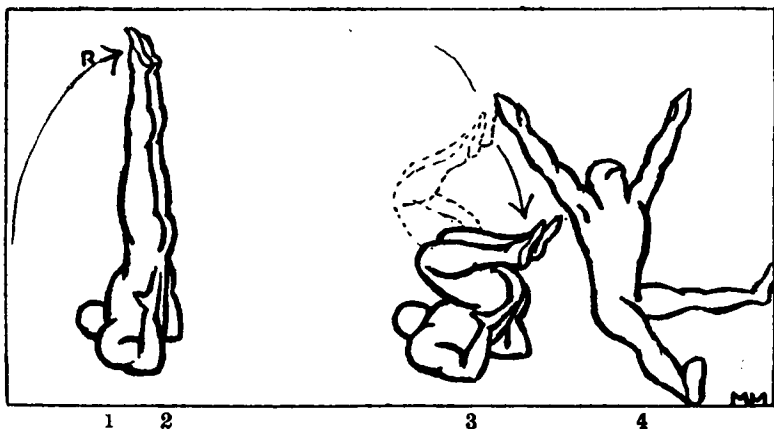


BAR 7.

Inspiration 4 beats.

Repeat bar 5, lowering left leg and lifting right on 1st beat.

BAR 8



(Advanced stretching, *continued*)

BAR 8.

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, raise right leg to meet left, so that both legs are now stretched upwards in alignment with the body. Hold this position for 2nd beat. On 3rd beat, bend both knees and lower first the lumbar region and then the sacrum to the ground and begin to raise the trunk. On 4th beat, return to upright sitting position, and stretch both legs out on to the ground (wide apart as in starting position) and straighten the body. Stretch the arms upwards and outwards above the head in a V-shape, palms facing forwards, neck extended, head back. 3rd and 4th beats are a continuous movement.

Precautions :

1. For older pupils, or even where there is rigidity in the upper dorsal region of the spine, the second part of the exercise should be performed with care, the teacher helping to support the weight of the pupil's legs when they come over the head to avoid any strain in the cervical region if the dorsal spine is too rigid.

2. It is most important when lowering the body to the ground on the 3rd beat of bar 8 to uncurl the spine so that the lumbar vertebræ reach the ground first, the weight of the body being transferred *gently* to avoid jarring the spine, or bruising the vertebræ.

Special Remarks :

As in First Stretching.

EFFECTS AND USES :

First part of exercise as in First Stretching.

ADDITIONAL USES :

1. The movement of the legs call for more agility and increase the value of the exercise from the point of view of general spinal mobility.

2. The weight of the legs over the head causes the maximum of flexion of the spine, particularly in the upper dorsal region.

3. For any tendency to visceroptosis (dropping of the internal organs) the second part of the exercise is very useful if carefully performed.

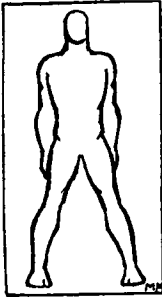
SIDE STRETCHING

SCHUBERT'S MARCHES 46.

M.M.M. RECORD C9 or D11.

TIME : 4 beats in bar.

BREATHING : Expiratory.

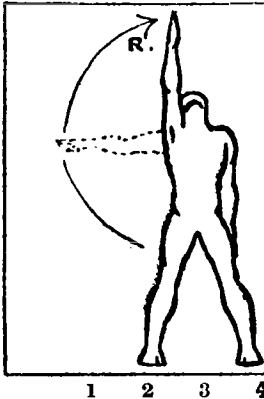


Starting position :

Stride standing with feet straight, arms at sides, head straight.

Note.—If the head movement is found difficult, the head may be kept straight throughout the exercise.

BAR 1

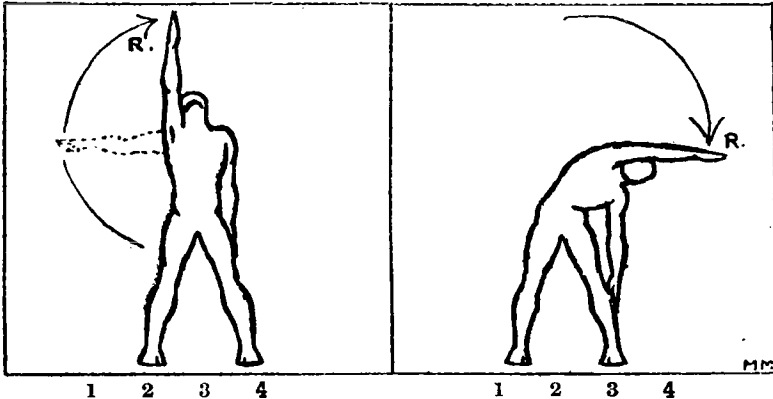


BAR 1.

Inspiration 4 beats.

On 1st beat, outwardly rotate the right arm, and abduct it. During the 2nd, 3rd and 4th beats, swing the arm sideways

BAR 2



BAR 2.

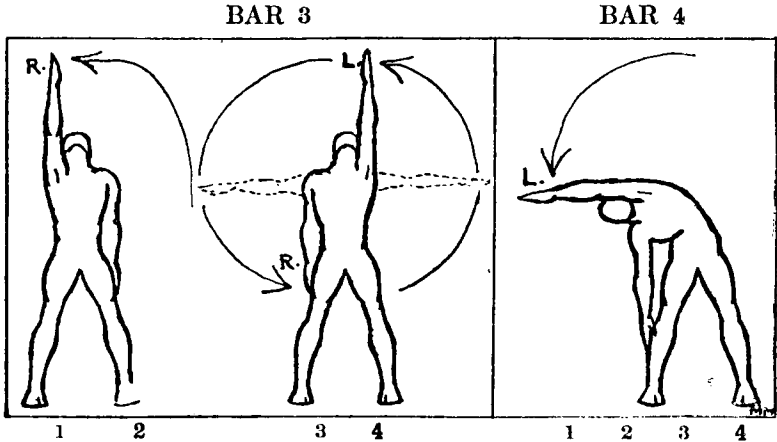
Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, begin lateral flexion of the trunk to the left (head normal). On 2nd, 3rd

(Side stretching, *continued*)

and upwards, moving it continuously, finishing on the 4th beat with the arm stretched upwards as much as possible, and the fingers pointing to the ceiling, palm facing the ear, head back.

and 4th beats, bend over as far as possible. The arms remain still in relation to the trunk, but through the lateral flexion, the left hand slides down the side of the left leg as far as possible, and the right arm (which should be almost touching the right ear) swings over to the left with the body. The elbow joints of both arms should remain extended throughout the exercise.

**BAR 3.**

Inspiration 4 beats.

During the 4 beats, the trunk is slowly raised to the upright position. The arms move simultaneously and reverse their rotations and position, finishing with the left arm pointing upwards (palm inwards), and the right arm down, resting against the right leg. Head back by 4th beat.

BAR 4.

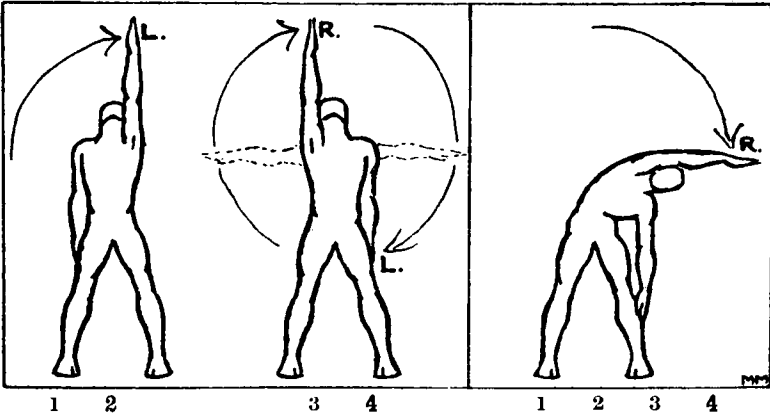
Expiration 4 beats, contracting lower abdominal wall.

Repeat bar 2 exactly, but flexing the trunk to the right, with the left arm above the head, and the right arm sliding down the right leg.

(Side stretching, *continued*)

BAR 5

BAR 6



BAR 5.

Inspiration 4 beats.

Repeat bar 3, reversing the arms and finishing with the right arm up and the left down on the 4th beat.

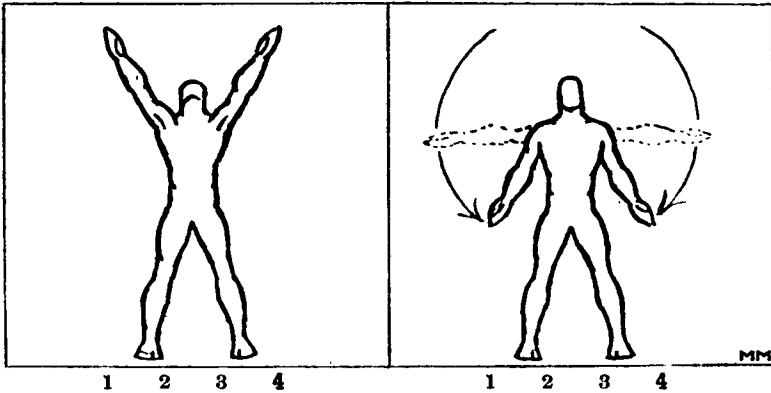
BAR 6.

Expiration 4 beats, contracting lower abdominal wall.

Repeat bar 2 exactly, *i.e.*, bending to the left.

BAR 7

BAR 8



BAR 7.

Inspiration 4 beats.

On 1st beat, maintain the lateral trunk flexion to the left,

BAR 8.

Expiration 4 beats, contracting lower abdominal wall.

During the whole bar, the

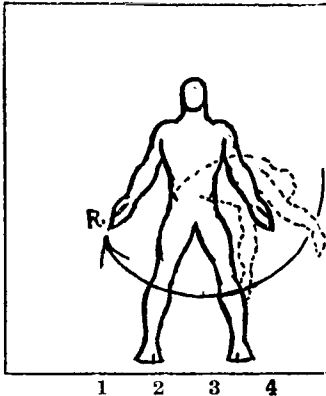
(Side stretching, *continued*)

and swing the left arm across the body at hip level. For the remaining 3 beats, slowly straighten the body to the upright position, swing the left arm upwards to chest level on 2nd beat, in front of the face, passing through the midline on 3rd beat, and finishing upwards and slightly outwards on 4th beat. The right arm being upwards as the body straightens, on the 4th beat, opens out to an upward V position to match left arm. Head back by 4th beat.

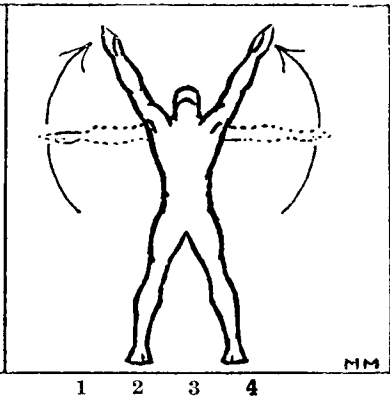
arms are slowly brought down, moving on the frontal plane, reaching the finishing position at hip level on the 4th beat. Head straight.

Repeat from bar 1, with the left arm stretching up first. Substitute previous bars 7 and 8 with the two following bars :

BAR 7



BAR 8



BAR 7 of the repeated exercise. (When the left arm is lifted first.) The trunk flexion in bar 6 would have been to the right with the left arm up. On 1st beat, bring the left arm across the face, keeping the elbow straight, and as the

BAR 8 of the repeated exercise. During the whole bar, the arms are slowly raised sideways and upwards, moving on the frontal plane, finishing on the 4th beat in the position already described in bar 7 of original exercise (see page 249).

(Side stretching, *continued*)

trunk slowly straightens, continue the arm swing down and across the body, finishing on the 4th beat with both arms sideways at hip level, and the head down (as described in bar 8, actions of the front person).

Note.—In bar 7, the left arm always does the greater movement, passing across the body.

If this exercise is used for class-work, an effective pattern can be made by the pupils working in couples, standing one behind the other. The front person should begin with the right arm, and perform the exercise exactly as already described. The back person should start with the left arm, and reverse the movements, doing the repeat bars 7 and 8 in order to make a good design.

Note.—The ending need not be different. If the reverse movement of the arms just described in the last 2 bars is too complicated, the value of the exercise will be the same if the movements of the 7th and 8th bars are repeated exactly, ending with the arms outward and downward at hip level.

Special Remarks :

1. Care should be taken to limit the movement to lateral flexion only, avoiding any trunk rotation or forward bending.
2. The arms throughout the whole exercise should be kept straight, with the elbow and wrist joints extended.
3. The head should be kept straight in relation to the trunk, except during the 7th bar, when the neck is extended and the head bends backwards, and during the 8th bar, when the neck is flexed and the head relaxes forwards and downwards.

EFFECTS AND USES :

1. For lateral trunk flexion of the spine, and for stretching the intercostal muscles.
2. For slimming the waist.
3. For giving strong work for the side flexors and the extensors of the back.

LUMBAR STRETCHING

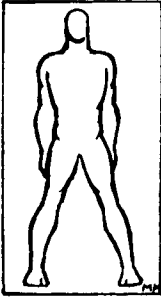
SCHUBERT'S MARCHES 46.

M.M.M. RECORD C9 or D11.

TIME : 4 beats in bar.

BREATHING : Deep.

(In for 8 beats, out for 8 beats.)

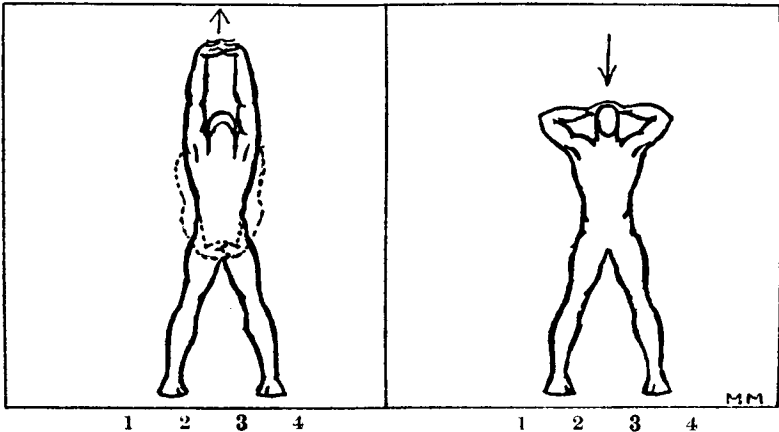


Starting position :

Stride standing with feet straight, arms by sides as in First Standing Stretching.

BAR 1

BAR 2

**BAR 1.**

Inspiration 4 beats.

On 1st beat clasp hands.

For 3 beats, lift arms forwards and upwards above the head, keeping hands clasped, palms down, head back. Continue stretch upwards for 4th beat.

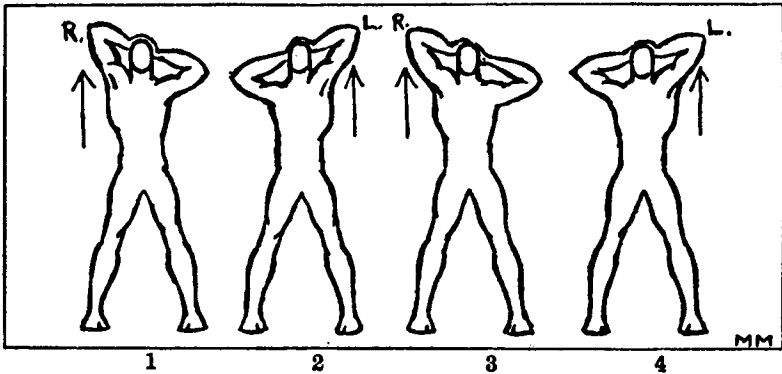
BAR 2.

Continue inspiration for 4 more beats.

For 3 beats, bend the elbows and lower the hands so that they rest on the head (fingers still interlaced). Head straight. Draw the shoulders down on 4th beat.

(Lumbar stretching, *continued*)

BARS 3 AND 4



BAR 3.

Expiration 4 beats, contracting lower abdominal wall.

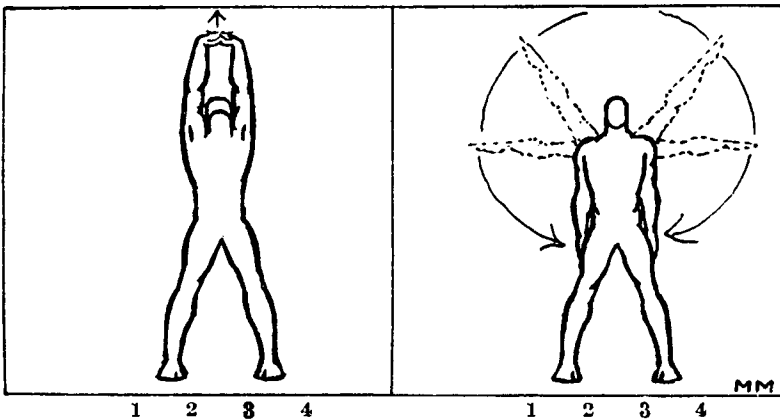
On 1st beat, raise right shoulder, stretching right lumbar and intercostal region, carrying thorax slightly to the right. To assist this movement, press the hands slightly on the head. On 2nd beat, drop the right shoulder whilst drawing up the left. On 3rd beat, repeat 1st movement. On 4th beat, repeat 2nd movement.

BAR 4.

Continue expiration and abdominal contraction for 4 more beats. Repeat 3rd bar exactly.

BAR 5

BAR 6



STRETCHING EXERCISES

(Lumbar stretching, *continued*)**BAR 5.**

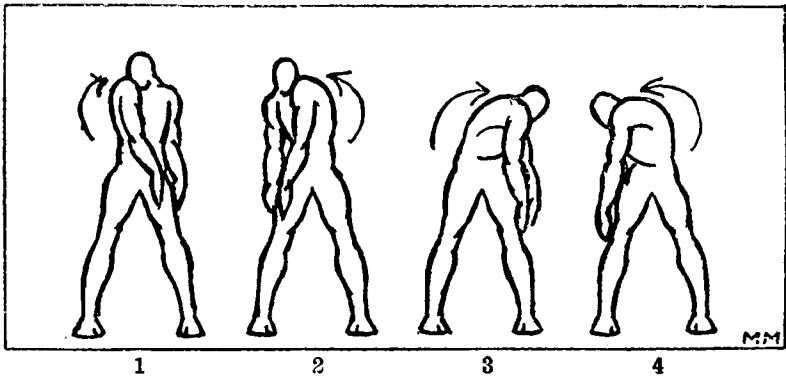
Inspiration 4 beats.

For 3 beats, stretch the arms up as much as possible (hands still clasped, palms down). Head back. Continue stretch upwards on 4th beat.

BAR 6.

Continue inspiration 4 beats.

On 1st beat, unclasp the hands and during the whole bar maintain the stretch and circle both arms outwards and downwards. Head straight. The forearms are supinated until the 3rd beat, and pronated on the 4th beat, when the palms rest on the sides of the legs.

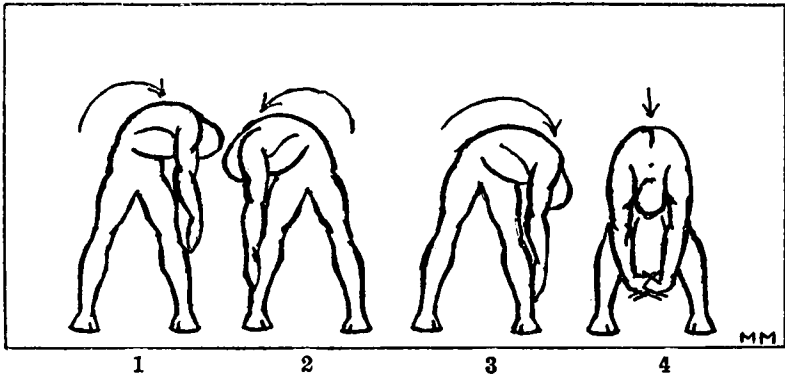
BAR 7**BAR 7.**

Expiration 4 beats, contracting lower abdominal wall.

On 1st beat, draw the right shoulder forward and across to the left, whilst bending the body slightly forward. On 2nd beat, repeat the movement to the right. On 3rd beat, repeat the 1st movement, but rather more strongly, carrying the body further forward and round to the left. On 4th beat, repeat this movement to the right.

(Lumbar stretching, *continued*)

BAR 8



BAR 8.

Continue expiration and contraction for 4 more beats.

On 1st beat, repeat the preceding movement to the left, but increasing the stretch on the lumbar region by taking the body further round and on a lower level. On 2nd beat, repeat movement to the right. On 3rd beat, repeat preceding movement to the left, but at a still lower level. On 4th beat, relax body as far forwards as possible, arms relaxed downwards, but hands clasped (fingers interlaced, palms up).

Note.—During the last 2 bars there are no set positions for the arms, which should be completely relaxed. The positions are decided by the movement of the shoulders, from which the arms should hang loosely. The neck is also completely relaxed so that the head follows the movements of the arms.

Special Remarks :

1. Accentuate the upward stretching movement as much as possible. On the shoulder and body movements, feel conscious of stretching localised to the lumbar region.

2. Throughout the whole exercise, the legs and feet act as a supporting base. Care must be taken that the knees are kept extended.

EFFECTS AND USES :

1. To obtain the maximum upward stretch in the lumbar and intercostal regions during the 1st 4 bars.

2. To give the maximum lumbar stretching on different levels.

3. The gradual flexing and rotating of the trunk also mobilises the lumbar and posterior pelvic joints.

4. It is a useful exercise for stimulating particularly the action of the liver and the peristalsis of the intestines, thus aiding digestion and counteracting constipation.

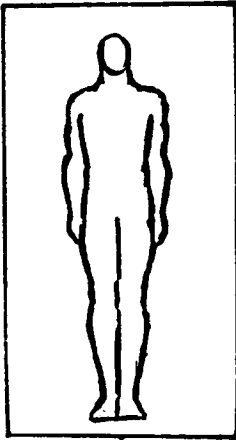
FIRST SCISSORS

SCHUBERT'S MARCHES 59.

M.M.M. RECORD C10 or D15.

TIME : 4 beats in bar.

BREATHING : Synchronised.

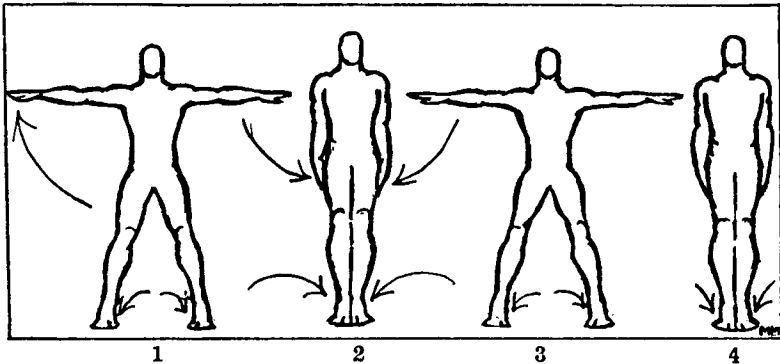


Starting position :

Normal good standing position.

Note.—In all springing exercises in this book, the spring always takes place so that the landing occurs exactly on each beat of the bar. Therefore the preliminary spring occurs just before the 1st beat. The landing positions only will be described, it being assumed that all springs will be as wide and as high as possible.

BAR 1



BAR 1.

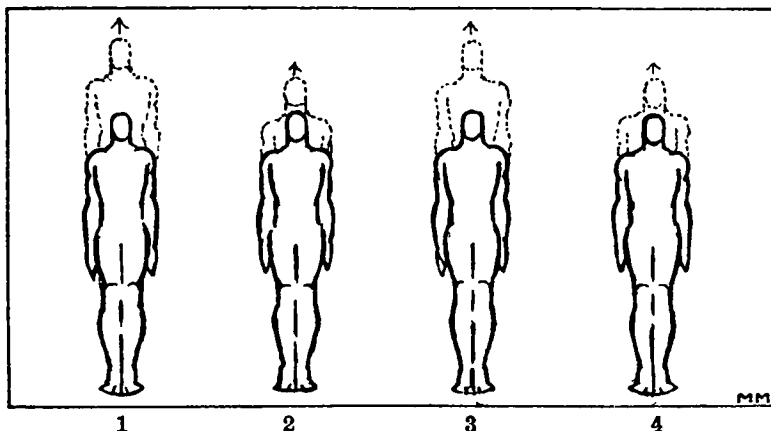
Inspiration 4 beats.

On 1st beat, land in stride position on the balls of the feet,

(First scissors, *continued*)

ankles and knees relaxed, feet slightly turned out, raising both arms to shoulder level with palms down. On 2nd beat, spring with feet together and drop hands to sides. On 3rd beat, repeat the movements as described for 1st beat. On 4th beat, repeat as for 2nd beat.

BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

Before 1st beat, keeping legs and feet together, spring up as high as possible, with knees and toes extended, and land on 1st beat, relaxing knees, ankles and feet. Repeat springing, and landing on 2nd beat, but this second jump should be a small rebound after the 1st big spring. On 3rd beat, repeat the big jump as for the 1st beat. On 4th beat, repeat the rebound as for the 2nd beat. The arms throughout this 2nd bar remain hanging close to sides.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

1. Keep the heels off the ground throughout the entire exercise. Whilst springing in the air, stretch the knees, feet and toes as much as possible, but in order to ensure a light landing, and to avoid jarring the spine, be sure to relax the knees, ankles and feet.

2. Emphasise throughout the alternation of tension and relaxation. This rule should apply to every exercise, and in all sports

(First scissors, *continued*)

springing, and jumping movements used in tennis, football, hurdling, high jump, long jump, running, etc.

3. Control the arms during bar 1, lifting them as far as shoulder level only.

EFFECTS AND USES :

1. To teach and develop good spring and correct landing, agility, lightness and control of breath.
2. To teach alternation of tension and relaxation.
3. To develop the muscles of the legs and feet.
4. To improve the circulation.

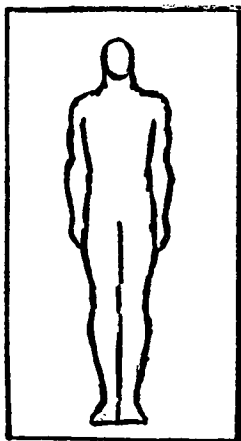
THIRD SCISSORS

SCHUBERT'S MARCHES 59.

M.M.M. RECORD C10 or D15.

TIME : 4 beats in bar.

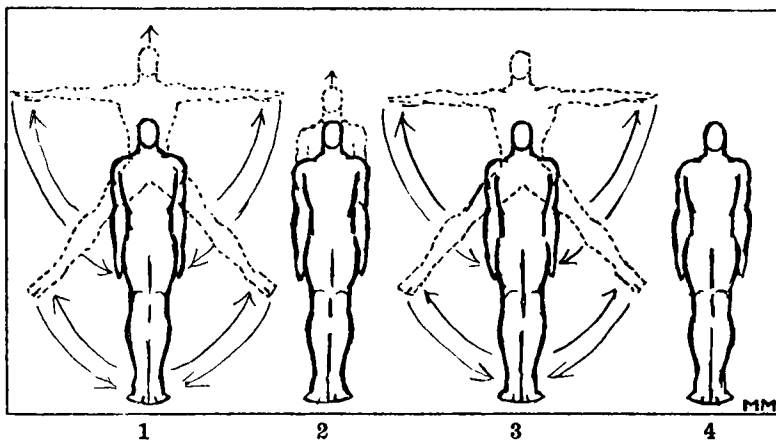
BREATHING : Synchronised.



Starting position :
Normal good standing position.

Note.—For timing of springs see previous exercise.

BAR 1



BAR 1.

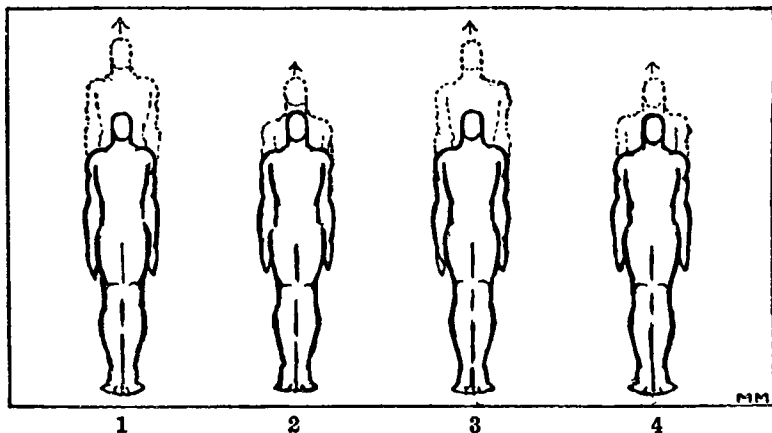
Inspiration 4 beats.

On the last half beat of the previous bar (see diagram), spring as high as possible, abducting both legs as near hip level as

(Third scissors, *continued*)

possible, and lift both arms to shoulder level. On the 1st beat of the bar, land with feet together, on toes, with knees and ankles relaxed, and drop the arms to the sides. On the last half of the beat, give a little rebound jump with feet together, landing on the 2nd beat. On 3rd and 4th beats, repeat from the beginning.

BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

Before 1st beat, keeping legs and feet together, spring up as high as possible with knees and toes extended, and land on first beat, relaxing knees, ankles and feet. On 2nd beat, repeat springing and landing, but this second jump should be a small rebound after the first big spring. On 3rd beat, repeat the big jump as for the 1st beat of this bar. On 4th beat, repeat the rebound as for 2nd beat.

The arms throughout this bar remain at the sides.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

Special Remarks :

As in previous exercise.

ADDITIONAL REMARKS :

1. Abduct the legs as wide apart as possible during bar 1. Keep the body upright, the knees well extended, and the head up with the chin in.

2. A progression on the previous exercise, as it gives greater endurance and a higher spring. Relax knees and ankles as before on landing.

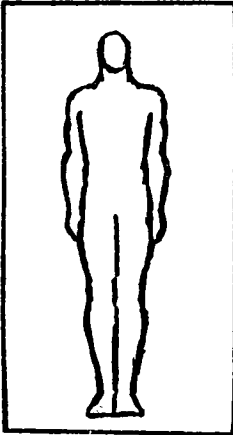
FIFTH SCISSORS

SCHUBERT'S MARCHES 59.

M.M.M. RECORD C10 or D15.

TIME : 4 beats in bar.

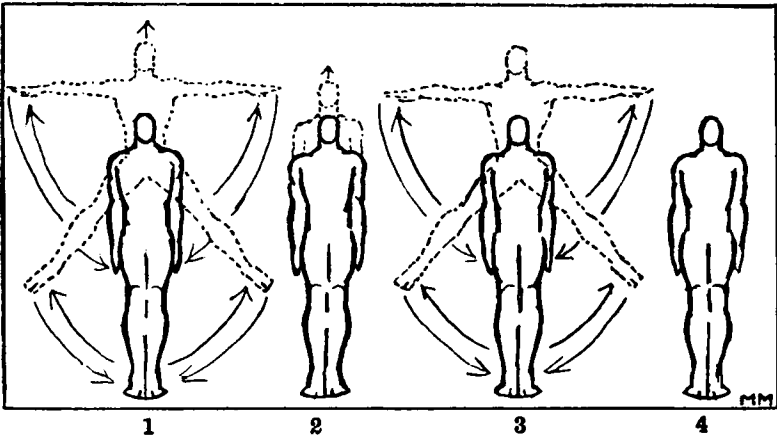
BREATHING : Synchronised.



Starting position :
Normal good standing position.

Note.—For timing of springs see previous exercise.

BAR 1



BAR 1.

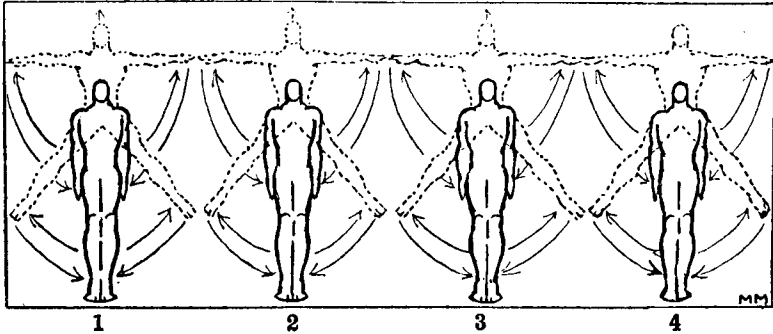
Inspiration 4 beats.

On last half beat of previous bar, spring as high as possible,

(Fifth scissors, *continued*)

abducting both legs as near hip level as possible, and lift both arms to shoulder level. On 1st beat of bar, land with both feet together, on the toes, knees and ankles relaxed, and drop the arms to the sides. On last half of this beat, give a little rebound jump with feet together, landing on 2nd beat. On 3rd and 4th beats, repeat exactly from the beginning.

BAR 2



BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On last half beat of previous bar, spring as high as possible with the legs and arms abducted, as described in bar 1. Land on 1st beat of the bar, and on the last half of this beat, repeat the big spring with legs and arms apart. Land on the 2nd beat. On 3rd and 4th beats, repeat exactly.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

SPECIAL REMARKS AND EFFECTS AND USES :

As in previous exercise.

This exercise is, however, a progression on the First and Third Scissors, calling for greater endurance and more spring and agility. It is essential to insist on good landing.

SPINAL RAISING

(for hollow back)

standing against wall, or free standing

SCHUBERT'S MARCHES 46.

M.M.M. RECORD C9 or D11.

TIME : 4 beats in bar.

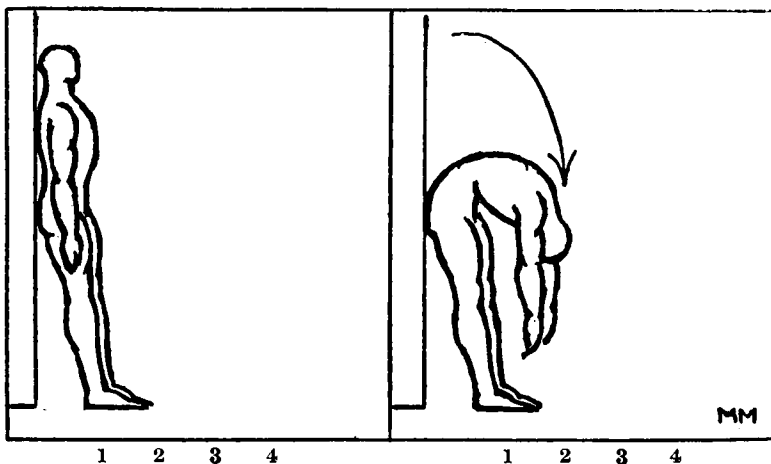
BREATHING : Deep for Bars 1 and 7, synchronised for other bars.

Starting position :

Stand with the back against a wall with the heels and toes together (6 inches to 1 foot away from the wall).

BAR 1

BAR 2



BAR 1.

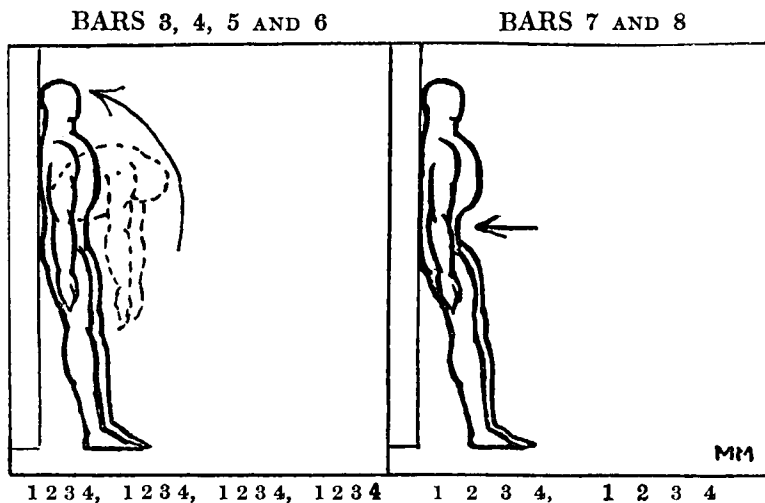
Inspiration 4 beats.

For 4 beats expand the thorax and maintain best posture with head up, chin in.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

For 4 beats, let both arms and the whole body relax and drop forward, still keeping the sacrum against the wall, and the legs straight.

(Spinal raising, *continued*)**BARS 3, 4, 5 AND 6.**

Inspiration 4 beats, expiration 4 beats, alternate bars.

For 4 beats draw up the spine gradually, beginning at the base. Try and press each vertebra against the wall in turn. The lumbar spines are the most difficult to press back, and the *most important*. Still keeping in contact with the wall, extend the dorsal spines, keeping the head still dropped forward. *Finally* extend and press back the cervical spines, stretching up the head, keeping the chin down and in.

BARS 7 AND 8.

Inspiration 4 beats and expiration 4 beats, contracting lower abdominal wall.

On 7th bar, for 4 beats expand the thorax and maintain best position with head up. On 8th bar breathe out strongly, contracting the lower abdominal wall, and pressing back the lumbar spines. The body is upright for this bar as in the starting position.

(Spinal raising, *continued*)*Special Remarks and Precautions :*

1. As this exercise is for correcting hollow back, pay special attention to the pressing back of the lumbar region.
2. Always keep the sacrum in contact with the wall.
3. As soon as the unfolding and pressing back of the spinous processes is understood, it will be found much easier to do in conjunction with deep breathing, the abdominal contraction assisting in the pressing back of the lumbar region.
4. As more muscle control is obtained the exercise should be done with the heels nearer to the wall, but not so near that the lumbar region cannot be pressed against the wall, that being the main object.
5. The exercise performed in free standing without the aid of a wall is a progression, but when the back is *hollow* the exercise should still be practised against a wall, as it is much more corrective.

EFFECTS AND USES :

1. An exercise for correcting hollow back and for general postural training, being a preparation for normal good standing.
2. Useful for gentle mobilisation of the spine, and for developing the extensors of the spine, abdominal and trunk muscles.

Note.—In cases of *flat back* the exercise should only be performed in free standing, extending the spine as much as possible on the upright position.

SPINAL EXTENSION

(for flat back)

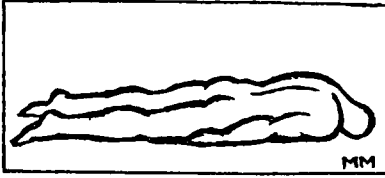
lying in ventral position

SCHUBERT'S MARCHES 44.

TIME : 4 beats in bar.

M.M.M. RECORD B3 or D11.

BREATHING : Synchronised.

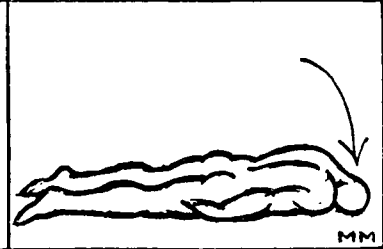
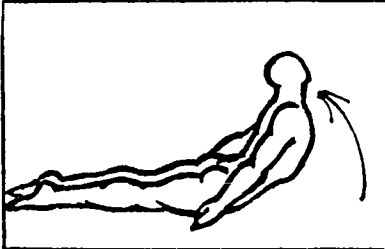


Starting position :

Lying face downwards, arms by sides, palms down, legs straight and together, head turned sideways with left ear resting on floor.

BAR 1

BAR 2



BAR 1.

Inspiration 4 beats.

Moving continuously for 4 beats, outwardly rotate and abduct both arms, thumbs uppermost, lifting them about a foot from the floor. At the same time, extend the spine, trying to hollow the lumbar region, and (keeping the legs and lower abdominal region on the floor) raise the trunk as much as possible. Turn the head, looking straight forward, and tilt it slightly backwards.

BAR 2.

Expiration 4 beats, contracting the lower abdominal wall.

Moving continuously for 4 beats, lower arms and body slowly to the floor to the starting position, but with the head turning to the left (the right ear resting on the ground). By the 4th beat, the whole body should be relaxed.

Repeat the whole exercise from the beginning, but lower the head to the right side during the repeat of bar 2.

(Spinal extension, *continued*)

Special Remarks :

1. Lift the chest as high as possible from the floor, and draw the shoulder blades together with the arms outwardly rotated from the shoulder joints.
2. Keep the pelvis, legs and feet down on the floor.
3. Aim at complete relaxation when the trunk is lowered to the floor, not insisting on the abdominal contraction on expiration, as this may make the exercise too exhausting.

Precaution :

This is a strong exercise and should only be given if the pupil is able to perform the exercise without strain. To facilitate the hyper-extension of the spine and raising of the trunk, the teacher may assist by holding down the ankles. Additional help may also be given by the teacher kneeling sitting with one leg on either side of the ankles, grasping the pupil's hands, and assisting the trunk raising by gently pulling the arms upwards and drawing the shoulder blades together.

EFFECTS AND USES :

1. A strong exercise for the trunk and back muscles.
2. It stretches the pectorals, expands the chest and corrects kyphosis (round shoulders).

SPECIAL EXERCISES PERFORMED SITTING

For school children, students and all sedentary workers. The "chair exercises" are meant to be performed two or three times a day during working hours, the "eye exercise" once a day.

These exercises are specially designed for those whose occupations entail sitting for several hours in succession as they are performed *sitting at a desk or table*.

Each exercise takes *only one minute* to do.

If another minute can be given, two head exercises already described should be added. "Head Nodding and Turning" and "Head Circling."

For the physically defective, the chair exercises can be augmented by adding any of the breathing exercises, and the arms only of any exercises that are suitable, such as the "Opposition Exercises" or "Thoracic Twisting."

CHAIR EXERCISES

"BREATHING AND STRETCHING"

and

"LUMBAR MOBILITY"

Objects

Exercises

Deep breathing with expansion of thorax to increase intake of oxygen.

1. Breathing and stretching.
Parts 1, 2 and 3.

Stretching of the intercostal and extensor muscles of the body.

Stretching and mobilisation of the lumbar region.

2. Lumbar mobility.
Parts 1, 2 and 3.

EYE EXERCISE

"EYE MOBILITY"

A general eye exercise, better performed during scholastic work than at a gymnastic or dancing class.

BREATHING AND STRETCHING

Starting position :

BARS
1, 3, 5, 7

BARS
2, 4, 6

BAR
8



BARS
9, 11, 13, 15

BARS
10, 12, 14

BAR
16



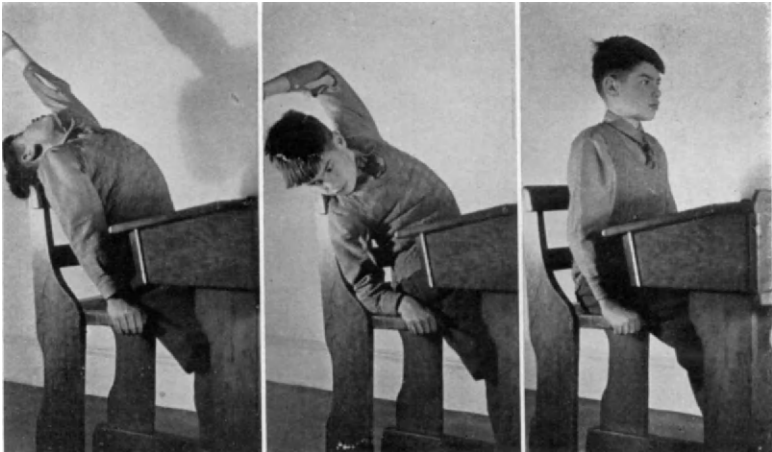
[To face page 268.]

(Breathing and Stretching, *continued*)

BARS
17, 19, 21, 23

BARS
18, 22

BARS
20, 24



BARS 17, 18, 19.

The right arm is stretched up and the side flexion is to the left.

(Breathing and stretching, *continued*)

BREATHING AND STRETCHING

SCHUBERT'S MARCHES 3 or 44.

M.M.M. RECORD B3 or A2 or D11.

TIME : 4 beats in bar.

BREATHING : Deep.

PART 1. Upward Stretching.

When performed in class, the rhythms should be tapped on a desk by the teacher, or clapped with the hands.

Starting position :

Sitting as far back as possible on chair or bench, knees flexed to a right angle, feet parallel and firmly planted on the ground, spine slightly flexed, head dropped forward, hands resting on desk or table, fingers interlaced.

BAR 1.

Inspiration 4 beats.

During beats 1 and 2 (keeping hands clasped) turn the palms upwards quickly, extend the elbows and take the arms upwards and backwards over the head. Extend the spine over the back of the chair, letting the head drop back. On each of the following beats, 3 and 4, make an effort to take the arms still further back and to increase the extension of the spine.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

During the 1st 3 beats, bring the arms back to starting position, relaxing arms and body, slightly flexing the spine, letting the head drop forward. Hold position for 4th beat.

BARS 3 AND 4.

Repeat bars 1 and 2 exactly.

BARS 5 AND 6.

Repeat bars 1 and 2 exactly.

BAR 7.

Repeat bar 1 exactly.

BAR 8.

Expiration 4 beats, contracting lower abdominal wall.

During this bar, bringing the head up, put hands (still clasped) behind neck, letting elbows come forward, flexing the neck and relaxing the upper part of the body, but not flexing the spine as much as in starting position.

(Breathing and stretching, *continued*)

PART 2. Spinal extension

BAR 9.

Inspiration 4 beats.

During 1st and 2nd beats, draw the elbows back, extending the spine over the back of the chair, pressing head back against hands and keeping the chin in. On each of the following beats (3 and 4), make an effort to take the elbows still further back and extend the spine still more.

BAR 10.

Expiration 4 beats, contracting lower abdominal wall.

During this bar, slightly flex the spine, letting the elbows come forward, as in bar 8.

BARS 11 AND 12.

Repeat bars 9 and 10 exactly.

BARS 13 AND 14.

Repeat bars 9 and 10 exactly.

BAR 15.

Repeat bar 9 exactly.

BAR 16.

Expiration 4 beats, contracting lower abdominal wall.

Unclasp the hands and during this bar gradually bring elbows and hands (palms facing inwards) down to chair level, finishing with the hands resting on the front edge of chair. This should be a continuous movement with the arms relaxed and the elbows and hands drawn down close to the body. Draw the body forward to the middle of the chair, the spine straight, head up, chin in, ending in best sitting position.

PART 3. Side stretching

BAR 17.

Inspiration 4 beats.

During 1st and 2nd beats, extend the right knee forward (keeping foot on ground) and the right arm upwards and backwards, extending the spine over back of chair, letting the head drop back. The left hand grasps edge of chair to keep the balance. On each of the following beats (3 and 4), make an effort to increase the extension of the spine and the stretch from toes to finger tips.

(Breathing and stretching, Part 3, *continued*)

BAR 18.

Expiration 4 beats, contracting lower abdominal wall.

During 1st and 2nd beats, turn head sideways and down over left shoulder, relax the right arm so that the forearm falls toward the left over the head, palm down. Flex the spine to the left and allow the left elbow to rest on the chair. On each of the 3rd and 4th beats, make an effort to increase the side flexion and the stretch of the intercostal muscles, keeping the right foot stretched out in front.

BAR 19.

Inspiration 4 beats.

Repeat bar 17.

BAR 20.

Expiration 4 beats, contracting lower abdominal wall.

During beats 1, 2 and 3, relax the right arm, letting it pass close to the body till it rests again on the edge of the chair. Draw the right foot back to the original starting position beside and parallel with the other foot. Straighten the spine, sitting upright, head up, chin in. Hold position for 4th beat.

BARS 21, 22, 23 AND 24.

Repeat the last 4 bars, but stretching left side and bending to right.

Special Remarks :

1. This and the following exercise, if properly performed, should be pleasant and restful to do, and should produce a feeling of general well-being and mental alertness.

2. This exercise should be done slowly in order that in each case the stretch may be taken to the limit, followed by a correspondingly complete relaxation.

3. The breathing should be as full and as deep as possible.

EFFECTS AND USES :

To counteract the bad effects of prolonged hours of sitting (with spinal flexion, downward pressure on intestines and reduction of breathing to the minimum) by movements having the reverse effects, *i.e.*,

1. Spinal extension.
2. Upward stretching.
3. Deep breathing.

LUMBAR MOBILITY

SCHUBERT'S MARCHES 46 or 24. M.M.M. RECORD A2 or C9 or D11.
 TIME: 4 beats in bar. BREATHING: Deep.

PART 1. Lumbar stretching

Starting position :

Sitting upright on middle of chair, knees bent to a right angle, feet parallel and firmly planted on ground, hands resting on front edge of chair.

BAR 1.

Inspiration 4 beats.

During the 1st beat, interlace the fingers of both hands just in front of the waist. During 2nd and 3rd beats, take them upwards and place the palms of the hands on the top of the head. Hold this position for 4th beat, with head well up and chest expanded.

BAR 2.

Expiration 4 beats, contracting lower abdominal wall.

On each of the 4 beats, without changing the position of the arms or the head, flex the trunk sideways alternately right, left, right, left, stretching the lumbar region by accentuating the lift of the shoulder on the opposite side.

BARS 3, 4, 5, 6, 7 AND 8.

Repeat the trunk movements of bars 1 and 2 exactly, three times, but the hands remaining on the head.

PART 2. Thoracic twisting

BAR 9.

Inspiration 4 beats.

On 1st beat, straighten spine, coming into same position as at the end of bar 1. On 2nd and 3rd beats, unclasp hands and bring elbows down sideways to shoulder level, hands in front of chest, palms down, fingers straight a few inches apart. Hold this position for 4th beat, drawing the shoulders well down.

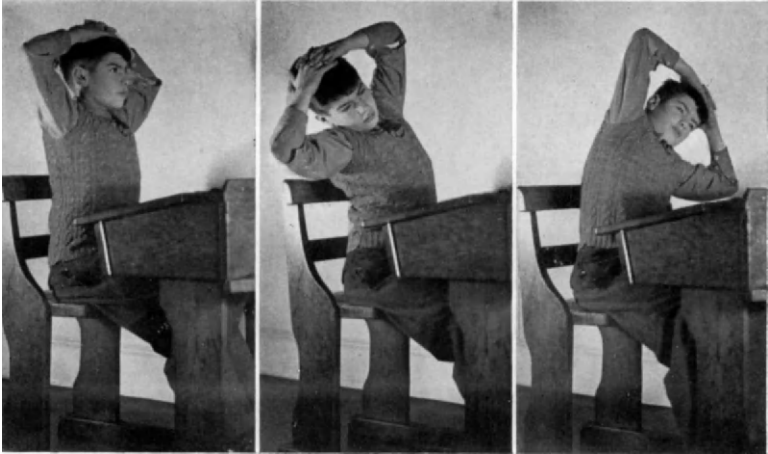
BAR 10.

Expiration 4 beats, contracting lower abdominal wall.

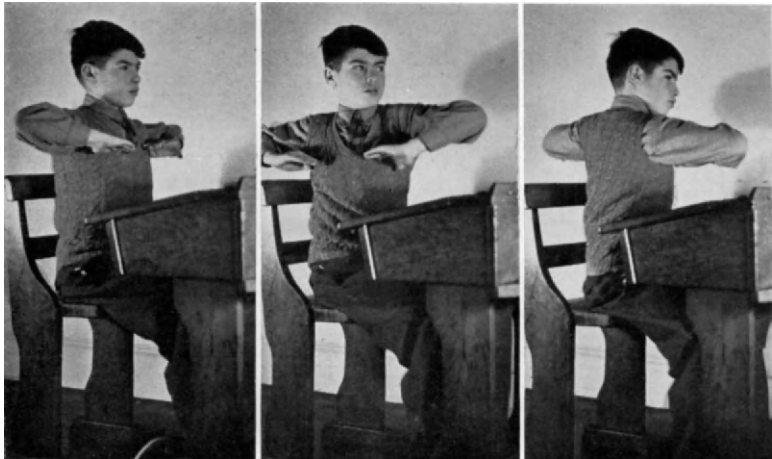
On each of the 4 beats, without changing the position of the

LUMBAR MOBILITY

BARS **BARS 2, 4, 6, 8**
1, 3, 5, 7 Beats 1, 3 2, 4



BARS **BARS 10, 12, 14, 16**
9, 11, 13, 15 Beats 1, 3 2, 4

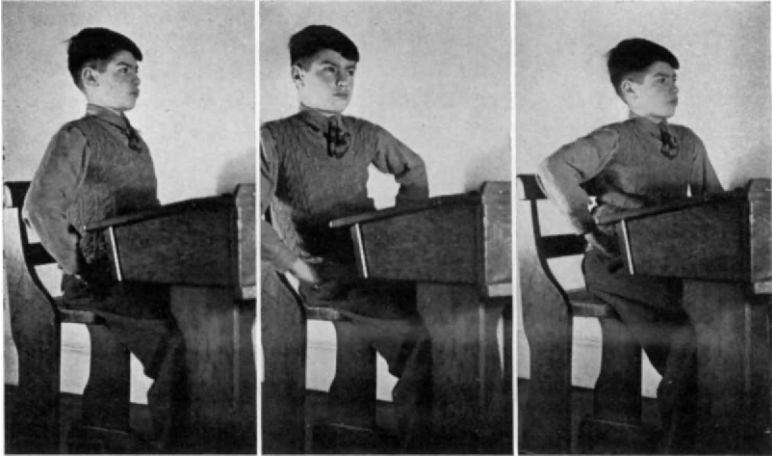


[To face page 272.]

(Lumbar Mobility, *continued*)

BARS
17, 19, 21, 23

BARS 18, 20, 22
Beats 1, 3 2, 4



BAR 24.

Return to normal good sitting position.

Mr. Barton, Headmaster of the South Kensington Preparatory School for Boys, has kindly allowed one of his boys to pose for the photographs illustrating the "Chair Exercises."

(Lumbar mobility, Part 2, *continued*)

arms, rotate the thorax as far as possible, alternately right, left, right, left. Keep shoulders well drawn down, elbows at shoulder level and head facing forward the whole time.

BARS 11, 12, 13, 14, 15 AND 16.

Repeat the trunk movements of bars 9 and 10 exactly, but without changing the position of the arms.

PART 3. Lateral mobility

BAR 17.

Inspiration 4 beats.

On 1st beat, turn trunk to face forward. During 2nd and 3rd beats, bring the hands down, passing close to the body to a low hip grasp, thumbs behind, fingers in front, shoulders down, head up with chin in. Hold this position for 4th beat.

BAR 18.

Expiration 4 beats, contracting lower abdominal wall.

On each of the 4 beats, without changing the position of the arms and hands, move the whole thorax laterally, alternately right, left, right, left. The movement may be assisted by fixing the hips with the hands, pushing them in the opposite direction to that in which the thorax is moving.

BARS 19, 20, 21, 22.

Repeat bars 17 and 18 three times without changing the position of the arms.

BAR 23.

Repeat bar 21 exactly.

BAR 24.

Expiration 4 beats, contracting lower abdominal wall.

Lower arms to the sides, ending in good normal sitting position, back straight, head up, chin in.

Remarks and uses as in previous exercise.

ADDITIONAL USES :

1. To mobilise the lumbar region and the abdominal viscera in order to counteract the condition of intestinal stasis which results from long hours of sitting.

2. By the above, to stimulate full functioning of the mind as well as the body.

EYE MOBILITY

SCHUBERT'S WALTZES 66 (4). M.M.M. RECORD B4 or D12.

TIME : 3 beats in bar.

BREATHING : No special breathing.

Starting position :

Eyes looking straight ahead.
This exercise should always be done sitting, preferably in cross sitting position (see p. 110), or if the back is flat, in kneel sitting, or it may be done sitting on a chair.

Keep all face muscles relaxed throughout the exercise.



The right eye only is depicted in the diagrams, but both eyes work simultaneously.

Breathe in own time, without effort, both in and out by the nose.

PART 1. Blink, shut, look to corners.

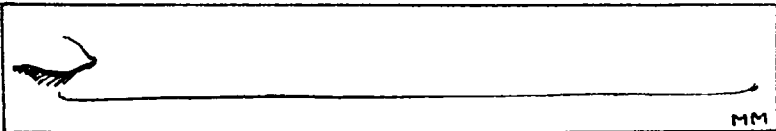
BARS 1, 3, 5, 7.



BAR 1.

Eyes, for whole bar on each half beat, blink, blink, blink, blink, blink, blink.

BARS 2, 4, 6, 8.



BAR 2.

Shut eyes on 1st beat, and keep shut for remainder of the bar.

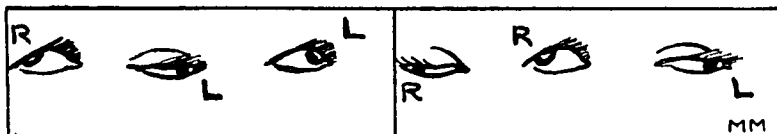
(Eye mobility, *continued*)

BARS 3, 4, 5, 6, 7 AND 8.

Repeat bars 1 and 2 three times (8 bars in all).

BARS 9 AND 13

BARS 10 AND 14



BARS 9 AND 10

Eyes, one movement to each beat. Up right, down left, up left, down right, up right, down left.

BARS 11 AND 15

BARS 12 AND 16



BARS 11 AND 12.

Up left, down right, up right. Shut for whole bar.

BARS 13, 14, 15 AND 16.

Repeat bars 9, 10, 11, 12, but begin eyes looking up left top corner first, and reverse.

PART 2. Blink, squeeze, look up, down, side.

BARS 1, 3, 5 AND 7.



BAR 1.

Eyes, for whole bar on each half bar, blink, blink, blink, blink, blink, blink.

EYE EXERCISE

(Eye mobility, *continued*)

BARS 2, 4, 6 AND 8.



BAR 2.

Squeeze eyes shut for whole bar.

BARS 3, 4, 5, 6, 7 AND 8.

Repeat bars 1 and 2 three times exactly (8 bars in all).

BAR 9

BAR 10



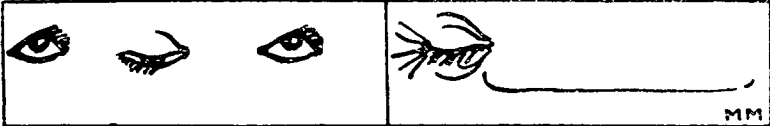
BARS 9 AND 10.

Eyes, up, down, up.

Down, up, down.

BAR 11

BAR 12



BARS 11 AND 12.

Eyes, up, down, up.

Squeeze eyes shut for whole bar.

BAR 13

BAR 14



BARS 13 AND 14.

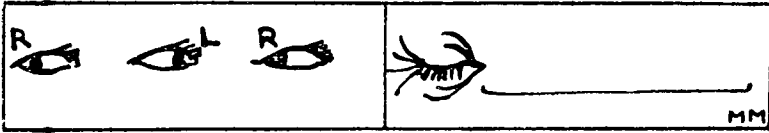
Eyes, look right, left, right,

Left, right, left.

(Eye mobility, *continued*)

BAR 15

BAR 16



BARS 15 AND 16.

Eyes, right, left, right.

Squeeze shut.

PART 3. Blink continuously, circle eyes.

BARS 1, 2, 3, 4, 5, 6, 7 AND 8.



BAR 1.

Eyes, blink, blink, blink, blink, blink, blink.

BARS 2, 3, 4, 5, 6, 7 AND 8.

Repeat bar 1 exactly seven times, 48 blinks (8 bars in all).

BARS 9 AND 11

BARS 10 AND 12



BARS 9 AND 10. BARS 11 AND 12 repeat exactly.

Circle eyes up, right, down, left, up, right, down, left, a continuous movement.

BARS 13 AND 15.

BARS 14 AND 16



BARS 13 AND 14. BARS 15 AND 16 repeat exactly.

Circle eyes up, left, down, right, up, left, down, right, a continuous movement.

(Eye mobility, *continued*)*Special Remarks :*

1. No special breathing is given with this exercise, as most people find it necessary to concentrate the whole attention on the eye movements. The mouth should be kept shut, the breathing being easy, in and out through the nose.

2. It is essential to maintain good posture throughout the exercise, for as the body is immobilised for the whole exercise, if it is in a bad position, the faults of posture will be accentuated.

3. For the same reason, the position must be comfortable and free from tension. The muscles of the face must be quite relaxed.

4. There must be *no* movement of the head when the eyes are turned, or the main object of the exercise, to mobilise the eyes, is defeated.

5. This is simply a *general* eye exercise, and does not aim at correcting defective sight. Any difficulty in seeing should be quickly observed and a specialist consulted.

6. If the performance of this exercise produces giddiness or any discomfort in the region of the eyes, it is advisable to consult a doctor, as it may be an indication that the liver is out of order, or that some eye strain is present.

7. If the eyes are tired it will be found most helpful to cover them with the palms of both hands (to exclude all light) for two minutes after performing the exercise, and then to splash them with cold water.

EFFECTS AND USES :

1. To put the eye muscles through their full range of movement.
2. To rest the eyes by shutting and blinking them.
3. To increase the circulation in the region of the eye by squeezing the eyes with the surrounding muscles, and by the other movements.

