

# TRAINING FOR ATHLETICS

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BOXING	" Tommy Burns
SWIMMING	" J. Wolfe
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ROWING	" W. G. East, etc.
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# TRAINING FOR ATHLETICS.

A COMPREHENSIVE MANUAL  
DEALING WITH ALL BRANCHES  
OF SPORT.

BY THE FOLLOWING AUTHORS :

RUNNING	-	by A. Shrubbs & W. G. George
SWIMMING	-	" J. Wolffe
JUMPING	-	" J. Higgins
BOXING	-	" Tommy Burns
BALL PUNCHING	-	" "Gunner" Moir
ROWING	-	" W. G. East, etc.
CYCLING	-	" M. A. Holbein, etc.
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## PREFACE.

IN placing this work before our readers, we have endeavoured to provide them with the fullest and most comprehensive series of hints and advice generally on the all-important subject of preparing themselves for distinction in that branch of athletics which each or any of them may select.

In pursuit of this object, we have made it our business to collect the opinions of a Champion in each particular branch, so that our readers might have the *very best advice obtainable*, and we trust that, by so doing, we shall have succeeded in issuing a work which will not only prove of considerable value to them themselves, but will also, to some extent, assist in restoring British athletics generally to their proper place, viz., that of undisputed pre-eminence.

It will be noticed that nearly every expert whose views are given in these pages recommends his readers to devote some portion of their preparation to the practice of some one or more of the other forms of athletics which are dealt with therein by other hands. It is this fact alone which we think will lend a more than ordinary value to this book.

For it cannot have escaped the attention of most athletes that that is precisely what athletic experts have a trick of doing. The pedestrian (whether a running or walking man) tells his pupils to go in for ball-punching, Indian clubs, etc.; the boxer advises ball-punching; the

wrestler weight-lifting and jumping, etc., etc.; but hardly ever does one of these mentors think of advising his readers how to set about training for those other branches.

This little failing of theirs, has no doubt, been very beneficial to publishers, inasmuch as it has encouraged the output of a whole library of works dealing with each subject in detail, but it must be admitted that it has been a source of considerable annoyance and inconvenience to the public at large, who have been thereby compelled to load their shelves with a multiplicity of books, which, however instructive in themselves, were, in the majority of instances, mostly superfluous to the person concerned.

All this, however, is now, we trust, obviated by the publication of "Training for Athletics," since by acquiring this book, the athlete can obtain all the information he can possibly require, save and except that which he would naturally seek in some authoritative text-book dealing with the branch in which he is specially interested.

## INTRODUCTION.

EVERY man Jack of us, and, for that matter, every woman Jill as well, has nowadays to undergo a course of training. The powers that be, Board of Education, and so forth, see to that for them.

Hitherto, this overseeing work has been almost entirely directed to the cultivation of our mental powers, and, according to the critics, there are numerous grounds for saying that the supervision in question has been by no means as perfect as it might have been.

Well, this was perhaps only to be expected. For, after all, it has been very largely experimental, besides having been—for traditional and other reasons—far from well devised.

Now it is, I believe, an axiom that a man knows best that subject which he has discovered and studied up himself. All that he really needs is expert advice, or, rather, "pointers" from the leading authorities on the subjects in question. Hints, in short, from the best sources obtainable, which will enable him to economise both his time and his energies.

Of late years, it would seem as though our Educational Authorities, our *Mental* Educational Authorities, were beginning to recognise that it is worse than useless to attempt to cram an unhealthy brain, *i.e.*, a brain which has its habitat in an unhealthy body, with book-learning of any description, since a feeble frame exacts too heavy a drain of nervous (that is to say, cerebral) energy in order to keep it going, to permit of the brain sparing any overplus such as is necessary to properly assimilate such mental pabulum as may be offered to it.

This is, of course, no new discovery. More than 2,000 years ago the highly-civilised and intellectual citizens of Athens, Corinth, and other Grecian states, were fully alive to the necessity of carefully cultivating the bodies of their youth prior to instructing them in any of the arts and

sciences, and the results achieved by this procedure, in the imperishable records which they have handed down to us, bear witness to the wisdom of the course adopted.

The gymnasium was the school of ancient Greece, and just now, when the revived Olympic Games are with us, we are reminded that among the most cultured people of whom history makes mention, it was universally recognised that a scholar must first of all be an athlete.

He should, in short, *train* for athletics, as a preliminary, or rather as an essential, for the great struggle of life itself.

Those (and they are by no means few) who denounce the pursuit of athletic exercise itself, do so in complete ignorance of what it really is, what it implies, and what it entails.

For, in order to excel in any one branch of athletics, a man or woman must *Train*. That is to say, they must gradually develop their mental, physical, and moral powers to the accomplishment of a healthy object. They must learn to control their appetites, passions, and desires in such fashion as cannot fail to make them desirable and useful citizens at a much earlier age than they could hope to become by blundering along the usual paths of a purely scholastic and business education. They will become "Captains of their Souls," by the mere fact that they will have been accustomed, at running, wrestling, boxing, jumping, fencing, etc., to meet failure and defeat without whining, and to similarly achieve triumph at those pursuits without any undue or insufferable exhibitions of vainglory and self-satisfaction.

The athlete who has been through the mill is little liable to suffer from "swelled head," simply because he has undergone a pretty severe and lengthy course of training.

Training, which is *moderation* in excelsis. A carefully graduated system of exercise, which has been adapted to each man's peculiar individuality and constitution.

Adapted to his peculiar constitution? Why, certainly. For no one, man or woman, should think of entering for

any severe course of training until he or she has been thoroughly overhauled and examined by some competent and reliable doctor, who will be able to say whether one is organically sound enough to stand the consequent strain.

If his verdict is *unfavourable*, he will be able to advise you as to the sport in which you can safely indulge. For, no matter how unfitted you may be for the more violent forms of athleticism, there is at least, in the wide field open to you, at least one branch in which you can safely and profitably indulge. For no matter how weak or ill a person may be, he cannot afford to neglect physical exercise altogether. It is as great a necessity to his well-being as either sleeping, breathing, eating, or drinking, since by physical exercise alone can he hope to keep his organs in proper working trim, and his blood in active, healthy circulation.

Supposing, however, that you are *passed* as being in a fit and healthy condition, you can proceed on your way rejoicing. Select the branch of athletics which most appeals to you, and follow out the rules and principles laid down by the expert who deals with it in the following pages. Don't overdo it or any of it, for you may thereby strain yourself and thus become unfitted altogether, to say nothing of getting stale, and thereby baulking yourself of success.

And, apart from the specific advice given under each heading, carefully observe the following simple rules, which will not only ensure your always being fit and well, but which will improve and maintain your health itself, apart from assisting you in your athletic preparation.

#### SIMPLE RULES.

Look after your teeth. This precept ought to be written up over the doors of every public institution. It is one of the most vitally important to all men and women, and is, moreover, one which they most commonly neglect. Impaired teeth inevitably spell an impaired digestion, and an impaired digestion is a certain cause of general ill-health and unfitness. The dentist is, in fact, every whit

as important as the doctor, and if resorted to sufficiently frequently, will avoid any necessity to have recourse to the latter.

Look after your feet as carefully as you look after your hands. Always wear broad-toed boots or shoes. Don't worry about appearances, for it is surely better to do without pointed toes than it is to be compelled to hobble and limp about.

As to the morning tub. Preferably this should always be cold, but if your constitution won't stand that, take the chill off, exercise for five minutes first with dumb-bells, Indian clubs, developer, free movements, or Jappy Grips, as the fancy takes you, and rub down well with a rough towel.

A cup of hot water immediately on rising, or just before, is a practice to which you should habituate yourself, whether you purpose going in for athletics or no.

Don't go in for any severe or prolonged exercise before breakfast, however you may be urged to do so. It may suit one or two peculiar constitutions, but I am inclined to fancy that those who say they are benefited by so doing really only fancy this.

Eat regularly, exercise regularly, go to bed reasonably early, and neglect neither your business nor your sleep.

Don't go like a bull at a gate at your exercise. Take it quietly. Remember that training is moderation in excelsis, and that you have to work up slowly. As soon as your heavy work is accomplished, have a shower bath, real or improvised, and rub down. Let some of your massage be self-massage; you will derive a lot of benefit by adopting this course. Then wrap up warmly and walk home briskly, or if the distance be too far, walk at least the first mile of the way; or, anyway, go for a mile walk before entering any conveyance, so as to minimise as far as possible all risk of any chill.

These, as already stated, are only simple rules, but they are applicable and, indeed, necessary to every course of training, the several particulars of which I will now leave to be dealt with by their respective authorities.

## ATHLETICS.

BY W. G. GEORGE AND ALFRED A. SHRUBB.

### "100 UP" EXERCISE.

A SPECIAL HOME TRAINING.

THERE is one part of my system of training which I consider had more to do with my success in competition than anything else. I am equally confident that when training for health's sake or for the prevention of breakdowns, there is no better exercise than this which I have christened "100 Up." Some of the advantages of this splendid exercise briefly are these: The short time and the little space required for its practice; it brings into play the entire muscular system; the heart and lungs are *reasonably* exercised; the reduction of adipose tissue, especially that designated *fatty inside*; the particular strengthening of the muscles of the back and abdomen; the non-necessity of stripping (although it is better to do so when time permits), and the fact that any shoes or boots, and even stockings feet, will serve. The "100 Up" can be practised on any ground floor, the space required being no more than six feet square.

*A.—Preliminary practice for preparing the leg muscles for the more severe strain required of them for the "100 Up" Exercise.*

Draw two parallel lines on the ground eighteen inches long and eight inches apart. Place one foot on the middle of each line. Stand flat-footed, the feet lying perfectly straight on the lines. The arms should be held naturally, loosely, and nearly straight, with a slight forward inclination, the body being upright and straight (*Plate No. 1*).

Now raise one knee to the height of the hip (*Plate No. 2*), (that is precisely in the same way as in walking, only the knee action is higher), and bring the foot back and down again to its original position, touching the line lightly with the ball of the foot; repeat the raising and lowering of the leg ten to thirty times; and repeat with the other leg. Practically, this amounts to balancing the body on one leg while exercising the other. Care must be taken

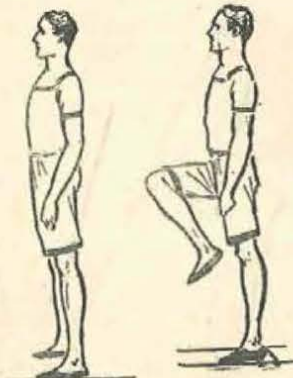


Fig. 1.

Fig. 2.

that the knee comes to the level of the hip every time. This may not be found easy at first, but practice will soon bring about the desired result. Great attention must be paid to keeping the body upright and the legs and feet quite straight while exercising. Practise slowly until the necessary balance is acquired and the exercise accomplished with ease. Otherwise the "100 Up" will be found unsatisfactory. Having thoroughly mastered the correct Form, the student may turn his attention to—

*B.—The Major or "100 Up" Exercise.*

Before giving particulars, I should like again to impress the necessity of maintaining form in every practice. My advice is, directly the correct form is lost, *stop*. Beginners should start the major exercise slowly and on no account strain or over-exert themselves. Nearly all breakdowns

and failures are the result of hurried and injudicious training, or fast work while the system is unprepared for it. On the other hand; slow, well considered, steady practice, rarely, I might almost say, never is injurious; while breakdowns are practically unknown amongst those who start their training slowly, gradually increasing distance, time or pace, as the heart, lungs, and muscles grow accustomed to the strain which is put upon them.

Prepare lines as for the preliminary practice. Stand on them as before, except that the body must be balanced on the ball of the foot, the heels being clear of the ground, the head and body being tilted very slightly forward, and the hands down by the side. Now spring from the toe, bringing the knee to the level of the hip (*Plate No. 3*) (as in the slower exercise), letting the foot

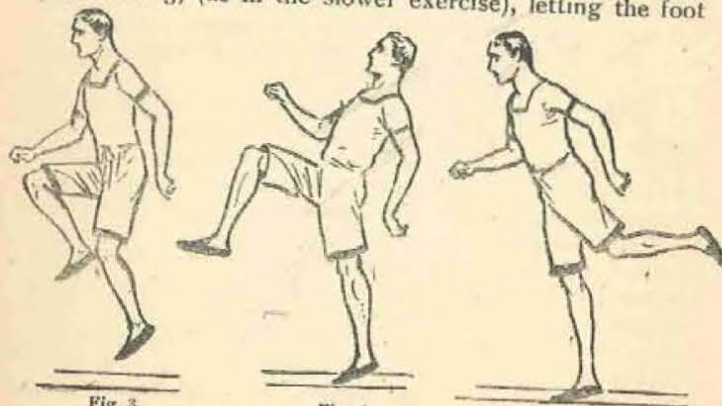


Fig. 3.

Fig. 4.

Fig. 5.

fall back to its original position; repeat with the other leg, and continue raising and lowering the legs alternately. This action is exactly that of running, except that instead of the legs moving forward, the foot drops into its original position on the ground.

The main point to remember is, *Correct Action*. The knees must be brought at each stride up to the level of the hip, while, as the knee comes down, the foot behind should not be carried further backwards than level with



the back. When the knee is brought higher than the hip, the body is thrown out of its perpendicular, backwards (*Plate No. 4*); when the foot is thrown out behind further than level with the back, the body is correspondingly forced forward (*Plate No. 5*). Either is a hindrance to form and pace—the two objects striven for by those who train, whether for health or competition. All such will undoubtedly derive more benefit from doing their practice correctly than the reverse. While doing the "100 Up" use the arms as in running—*i.e.*, hold them almost at full length and swing them half way across the chest, forward and backward a few inches behind the back as each stride is taken. A good practice is to stand still on the lines and use the arms as in running, putting plenty of force into the work, so as to loosen the muscles of the shoulders, and make the upper part of the frame active and pliable, in order that it may act in perfect union with the legs when the "100 Up" is performed.

I advise nobody to attempt more than 20 up at the start, ten for each leg. Very few can manage even so many in form at the outset; but practice makes a world of difference, and once the 20 has been accurately accomplished the number may be steadily increased. Let me warn you, however, against too rapid progress. This may result in a strain or, what is even more likely, a loss of correct form. The knees will not be parallel to the straight lines, or the body will be dragged forward. Do not expect to get true action in a moment. Probably the first few attempts will be disappointments. Be not, however, discouraged. Keep steadily on, and the correct action will come sure enough. Once proficient in that you can work gradually to the "100 Up," and by judicious variation of pace and number, according to the distance of the race in which you desire to compete, you will get as fit as you can possibly desire.

Finally, "100 Up" stands unrivalled as an aid to training for Walking, Running, Cycling, Rowing, Boxing, Football, and Cricket, and, in fact, every kind of sport; while for general health's sake it is absolutely *the best*.

## "100 UP" EXERCISE,

— OR —

## HOME TRAINING FOR RUNNING.

"100 UP" EXERCISE

19

If training for 100 Yards, practise 10 to 20 of the "100 Up" Exercise, fast, or "50 Up," at  $\frac{1}{2}$  speed.

200	"	"	10 to 30	"	"	85	"	"
"	"	"	"	"	"	"	"	"
300	"	"	20 to 50	"	"	120	"	"
"	"	"	"	"	"	"	"	"
440	"	"	50 to 100	"	"	150	"	at $\frac{1}{2}$ speed.
"	"	"	"	"	"	"	"	"
880	"	"	100 to 150	"	"	300	"	at $\frac{1}{4}$
"	"	"	"	"	"	500	"	slowly.
1760	"	"	100 to 200	"	"	"	"	"

### SPECIAL NOTE.

Great care must be taken not to overdo this valuable exercise.

## A TABLE ON TRAINING

FOR COMPETITION FOR ATHLETES AT  
VARIOUS AGES.**Training for boys up to 17 years of age.**

No special preparation required. The usual outdoor exercise and field games indulged in by the ordinary healthy schoolboy or youth of the above age is quite enough to get him in form for any competition.

The "100 Up" exercise should be practised once daily, and a steady run on the track twice a week; but no racing. Plain, wholesome food, and plenty of it, taken at regular hours, will be found all sufficient.

**From 17 to 20 years of age, if well developed and generally healthy.**

Gentle practice consisting of steady runs on the path three times a week, and all the outdoor exercise and walking possible. The "100 Up" twice daily. No trials, or fast racing except in competition. Plenty of rest, and good food. Swimming is an excellent exercise, but rather inclined to make one slow for path work.

**If weakly, or outgrowing strength.**

Keep out of doors as much as possible. On no account violently exert or strain oneself. Massage the limbs and muscles gently and often, but no hard rubbing; get all the rest possible, and do not indulge in too many baths. Whatever work is done on the track let it be of the slowest and lightest order, taking great care to keep the limbs and body well wrapped up and warm when resting. Study form rather than pace. The "100 Up" exercise may be practised very slowly, in strict moderation. Cycling in excess, or scorching, is altogether bad. Steady walking is the best possible form of exercise.

**From 20 to 35 years of age, when robust and strong.**

This is the best period for all active athletics and competition. Moderation is the great thing to study; it does not so much matter about the quantity of exercise taken,

but it does matter about the quality. Fast racing or severe work in training should seldom be indulged in, rather let your preparation be a long, steady one. When once fit, the "100 Up" exercise twice daily and regular practice on the path two or three times a week will be found ample, and there will be very little fear of breakdowns, or want of fitness for any ordinary competition.

**If delicate or weakly.**

Do not practise oftener than every other day. Try and remain cheerful, keep early hours, be in the open air as much as possible. "100 Up" once daily, slowly. Above all, be moderate in everything, and on no account attempt any violent form of exercise without a proper preparation.

**35 years and upwards, when perfectly sound.**

Provided the individual has kept going, that is to say has kept up his active athletic pursuits and constant practice, and has not neglected or abused his constitution, he may continue athletics with perfect safety and with benefit to himself for an indefinite period. Great care, however, must be taken not to start too fast in any practice, or competition; there must be, so to speak, a gradual warming up process, before it is possible to safely extend oneself. If active athletics have been dropped for any length of time it is not advisable to make a fresh start, particularly in direct competition, as doing so generally ends in failure; in fact, an ordinary healthy man of 40 years of age who has never trained for athletics usually beats a retired athlete of the same age, if pitted against him in an impromptu match. Not only does he win, but the effect of the indiscreet, violent exercise appears to be less harmful to him than to the man who has trained; yet with a proper course of training the old athlete would nearly always win, and if he by chance has kept going there is no comparison between the two men, the non-athlete having no earthly chance with "the keep going" one. Finally, the man of 50 years and upwards who introduces athletics into his daily life gets away from the whirl of the city immediately it is possible, lives in a calmer atmo-

sphere, and keeps decent hours, and consequently gets up with a head clearer and fitter for business than the majority of his fellows.

Most people will agree with me that discreet training is beneficial and conducive to a healthy existence and long life. A man need not develop biceps strong enough to fell an ox, his business or pleasure seldom requiring muscle of that sort. To so develop oneself means the wasting of so much nerve power and muscular tissue.

Again, a man who devotes himself exclusively to study, shunning all bodily exercise and pleasure, is only a little less to be pitied than the one who devotes his life to drunkenness or any other excess.

It has often been said, that our public schools devote a too great attention to outdoor sport in general; but without doubt the pre-eminence of Englishmen is due in a great measure to the healthy love of sport and business.

### SPRINTING.

"SPRINTING" may be defined as running at the highest possible speed. The term is often loosely applied to all races up to a quarter of a mile. If, however, one accepts the more restricted meaning, 250 yards or thereabouts may be set down as the limit of a man's ability to travel at top speed. Some may even question the advisability of putting the limit as high as that. If one speaks of a "sprinter pure and simple," one usually wishes to convey the idea of an athlete, whose stamina, or rather whose want of stamina, does not permit him to travel at his fastest for more than 150 yards. It is to the "sprinter pure and simple" that this chapter is devoted.

Now sprinting is the most natural of all styles of running. When a schoolboy is chased by a bull, or a pick-pocket is pursued by a policeman, he sprints—that is, he runs as hard as he can, without the consideration of suiting his pace to the distance to be covered. Hence, because it is so natural, sprinting is the most easily learnt of all styles of running. It follows, moreover, that the

average youngster is much more likely to realise his ability as a sprinter, than as a stayer. His experience on the football and cricket field will have taught him whether he is slower than his compeers. In fact, there are few outdoor games played amongst boys in which a sprinter does not shine above his fellows. Further, judgment of pace finds no place in the stock-in-trade of the crack sprinter. All he requires while actually on the move is speed—and plenty of it. Let it not be imagined, however, that a fast natural runner has only to step on the cinder path to win a sprint championship, or that the aspiring novice has nothing to learn before gaining prizes at 100 yards. Far from it. The first great thing to master is

#### STARTING.

The old system of starting was by placing the toe of one foot in a hole on the mark with the knee bent. The foremost leg bore the weight of the body, the other leg being used to push off with. The other foot occupied a hole a yard or so to the rear, and the arms were extended in practically a straight line. This style is still largely in vogue amongst professionals. About twenty years ago T. L. Nicholas, of Newport, Mon., who subsequently won the quarter-mile amateur championship, became the English apostle of the "hand spring," or "all fours" method of starting, and this is now all but universal among amateurs. The "all fours" method has this advantage—that it enables the runner to remain steadier on his mark (an important consideration when the penalty for "getting over" is borne in mind); and for that reason alone I would recommend its adoption. Briefly stated, the following is the procedure in the "hand spring" or "all fours" style: Plant the left foot firmly, perfectly flat and straight, about six inches behind your mark. By scraping a hole of two or three inches deep in the cinders, make a "bank" for your right foot about two feet behind the left. Stand in position until the pistol-firer gives his caution, "Get ready!" or "Set!"; then drop on to the hands, or rather the corks, which are held protruding

beyond the closed hands. Throw the whole weight of the body on the left leg and the corks. This will leave the right leg free and just sufficiently bent to enable you, directly the pistol is fired, to thrust the right foot sharply and strongly against the "bank" referred to, and so give yourself a big impetus for the first stride. At the starting signal, raise the body, and immediately step out as far and as fast as you can until the tape is passed; and there you have practically the whole art of sprinting. There are, however, a few hints which may assist the youthful sprinter to improve his running. Keep the body steady, and do not throw the head backward to gaze into the sky. Do not "fight the air" with your arms, which, as you swing them across the body, should not be brought higher than the waist. Cultivate a low action, in preference to "high stepping." Nearly all our champions steal over the ground, scarcely lifting the spikes above the cinder path. But, above all, as in every other pastime, the aspirant to fame must practise, practise, practise.

#### TRAINING FOR SPRINTING.

Although the perfection of physical condition is not so necessary for the sprinter as for those who patronise longer distances, it will not do to fancy that one can indulge in immoderate eating and drinking, and reproduce his best form at 100 yards. Still, anyone who, at ordinary times, follows common sense rules in the matter of food needs no special form of diet to assist him in getting and remaining "fit." As to actual practice, try to have a run, if possible, six days in the week. Apart altogether from conscientious scruples, one is all the better for resting one day in seven, and Sunday may very reasonably be reserved for a quiet, though not a too prolonged stroll in the open air. In sprint practice it is well, except in hot weather, to wear a sweater, as there is a fair amount of time spent on the track when one is not actually running. Training is always more pleasant in company, and you should try to get a friend to run with you. Both will benefit by the spirit of rivalry set up. Be careful, how-

ever, that such rivalry does not induce a craze for racing. A second friend, one who has been "through the mill" himself for choice, should be prevailed upon to act as starter by word of mouth, or better still, with a pistol. He should take care not to let you go until you are perfectly steady. A word of warning against too much starting practice is necessary. It is a drawback to the "all fours" style that it exerts a tremendous strain on the muscles at the back of the thigh, which strain frequently causes breakdown. Many sprinters suffer considerable pain and inconvenience from such a strain. And here let me say that if it be your misfortune to hurt the muscle referred to, be advised and rest at once. It is the only way out of the difficulty. Rub the injured muscle morning and evening with a spirit embrocation, and hold the leg under the cold water tap as often and as long as you can bear it.

In training, then, be careful not to overdo the starting business. Three or four times each day should be quite sufficient. After leaving your mark dash ahead for about 40 or 50 yards; then ease up, not too suddenly, coming to a standstill in another 40 or 50 yards. Walk quietly back to your starting place, and repeat the process. A dozen bursts of this kind each day, with an occasional run through the 100 yards at three-quarter speed should give you all the practice you require. Trials against watches are practically valueless. Only the most skilful timekeepers could tell you what you were doing within a yard or two, and if you really must have a trial (though I have not much faith in tests of this sort) let it be against some runner whose form is known, and who is fairly consistent. In order to avoid the strain of starting too much, retire about 20 yards behind the starting point, trot gently up to it, then dash off at full speed, just as if you had gone from the mark itself. It may be frankly admitted that every sprinter cannot become exceptionally smart "out of the slips." Many of our champions, practise as they might, have been left by inferior runners in the first 20 yards. Nevertheless patience and practice will work

wonders with a slow starter. Try, therefore, to dart away at the bang of the pistol, make every effort to lengthen and quicken your stride at each step, and so "get into your running" at the earliest possible moment.

With regard to preparations for longer sprints—that is, distances from say, 150 to 300 yards—opinions differ as to the kind of practice necessary. Everything depends upon the athlete himself. If he stays naturally, his great desideratum will be pace, and he can confine himself to the bursts of 50 or 60 yards, just as if he were training for 100 yards. If, on the other hand, he be a "mere sprinter" he will probably find it necessary occasionally to cover two-thirds of the distance for which he is training at racing pace. A plan recommended by some authorities is to run as hard as you can for as far as you can, endeavouring each time you make the attempt to lengthen the distance. This is no doubt useful to the runner who finds a difficulty in staying the full journey; but it must not be indulged in at every training spin, or staleness will ensue. Since races above 120 yards are nearly always, though not invariably, run round bends, the novice in training should accustom himself to negotiating bends, both left and right hand inside, at top speed, and as close to the inner edge as possible. As being thoroughly fit is more necessary to long-distance sprinting (if such a term be admissible) than to 100 yards running, the aspirant to honours should be rather more particular in his diet. The novice probably knows which foods do, and which do not, agree with his internal economy. These latter he will be wise to eschew. But it may be safely asserted that such luxuries as new bread, plum-duff, steak puddings, most kinds of pastry, strong tea, rich gravies and sauces, are better when taken in moderation, if not left alone altogether. Do not, however, make your life a misery by cutting off every little dietetic pleasure. No need to become a teetotaler or non-smoker. *Moderation* is the great thing.

In racing remember that pluck and judgment both play a part in long-distance sprints. Do not give in because

the other competitors seem to be getting away from you; they may come back to you in the straight, where most races are lost and won. At the same time don't lag too far behind. An idea which a crack sprinter known to myself often found work successfully in long sprint handicaps (which, recollect, cannot be run at 10 seconds to the 100 yards all the way through) was to watch the feet of the man who started just in front of him, thus having a kind of pacemaker and being relieved of the mental strain of making his own running. He was thus left to make his effort up the straight, having probably been landed in a fairly good position by his unconscious pacemaker. Never, if you can avoid it, attempt to pass a competitor when going round a bend. If you do, you give away something by having to describe a larger arc, and there is always a chance of being forced very wide. In running 300 yards it is necessary to go at very nearly top speed the whole way. Sprinters, when running quarter-mile races, usually run at 300 yards pace for about 250 yards, with a slight easy until reaching the straight, when the competitor sprints for all he is worth, and takes the last ounce out of himself to reach the worsted first. Never give in until pursuit of the leaders is absolutely hopeless, and even then struggle on to finish as close up as you can. When feeling "done," remember that your opponents feel every bit as bad as, and perhaps worse than, you do. If, therefore, you goad yourself into one last effort, it may and often will be your great delight to find one or more of your opponents give way, and the victory be yours when you least expect it. In running quarter-mile level races, try before the event to find out your principal opponent's weakness, that is, whether he is a better sprinter than stayer, or *vice versa*. If you discover that he stays well, but does not finish strongly, while you have a fine turn of speed, let him make the pace, waiting on him until the straight be reached. If, on the other hand, he be speedy rather than strong, while you are not of great account as a sprinter, make the pace hot all the way, so as to have him "baked" before he has time to get in his final burst.

## MIDDLE DISTANCES.

By "middle distances" is generally meant all those between 440 yards and three-quarters of a mile. There are, however, numbers of the old school of athletes who maintain that the quarter-mile should be called a sprint. I consider such a term for the distance altogether a wrong one; because it is impossible to run a greater distance than 300 yards at a sprinting pace, and there are very few athletes who have even run so far at full speed.

Many of our best quarter-milers claim that this distance is the hardest of all races to run. Here again I must differ. My contention is that the greater number of quarter-mile runners are essentially sprinters, and although they, by strict training, are able to stay and accomplish good performances at the distance, 440 yards is in reality too far for them. Hence the pain and difficulties experienced by them in finishing even one heat, whilst many find it quite impossible to repeat their preliminary time in the final. On the other hand, a true middle-distance runner finds very little trouble or inconvenience in running his first heat, and invariably runs faster in the final.

## THE QUARTER-MILE.

*Training for 440 yards.*—These hints are for the use of those who cannot give their whole time to training. When training for distances (by this I mean any distance exceeding 300 yards) it is necessary to pay a stricter attention to diet than when training for sprinting, and to accustom oneself to running round both ways of the track. On getting out of bed drink a glass of hot water, and take a cold bath, if accustomed to one. Then have a good rub down, dress slowly, and practise about 50 of the "100 Up" exercise, as previously described. Breakfast should consist of chop or steak, fish or lightly boiled eggs, with plenty of green stuff or ripe fruit to follow; whilst cocoa is far better than either tea or coffee to drink. A gentle stroll of about half a mile after breakfast, before business, will be found very helpful. During the walk make a

practice of inflating the lungs to their fullest capacity by inhaling through the nose, and exhaling through the mouth evenly and slowly (see chapter on Health). In the course of the morning (about twelve o'clock is the best time) practise "100 Up" if possible. Make the mid-day meal the principal one. A good cut from a joint, with plenty of green vegetables, eating sparingly of potatoes, and a half tankard of good stout or ale, finishing off with stewed fruit and milk pudding, will suit most constitutions best.

On leaving business get a cup of cocoa, or milk, and some toast. Go to the athletic ground, strip and get a rub down, not too hard, finishing with a spirit embrocation. Get into your running costume. On Mondays, Wednesdays, and Fridays commence by running 500 or 600 yards at a steady even gait, then walk half a lap, and indulge in three or four short fast sprints from 50 to 70 yards, making the last one the longest and fastest. Put on a coat or dressing gown, and stroll about quietly for five or ten minutes, taking great care to keep the body and legs quite warm, and finish up with a 250 to 300 yards run at three-quarter speed. Go straight into dressing-room, take a shower bath (if possible), and have a rub down with towel, embrocation, and with the hand. Dress slowly, walk home when practicable. Have a plain tea (watercress is excellent). After a short rest take a quiet walk, and even an occasional cigar will often do more good than harm (if used to smoking); finish up the day with a glass of ale and a biscuit, and retire early.

On Tuesday, Thursday, and Saturday substitute 200 to 300 yards for the 500 or 600 yards; run at quarter-mile speed, then rest, and afterwards practise starting, including one or two sprints of 50 yards. Once fit, it will only be necessary to run once or twice a week on the track, but keep up the "100 Up" exercise twice daily.

*How to run a quarter-mile race.*—At the crack of the pistol dash away at top speed, settling down into your longest natural stride at about 60 to 80 yards. Maintain this mode of progress, doing your best to improve style, and length-

ening each stride as it is taken. Do not lift the knee higher than level with the hip, nor throw the back foot behind further than necessary; that is to say, let the action be a long, low gliding, forward one. Keep the body and head well balanced, very slightly bent forward, and the arms and hands carried low. At the 300 yards post (140 yards from home) gather yourself together for a final burst, striving all you know to lengthen your stride, and at about 60 to 40 yards from the tape sprint at your fastest, and never give up till the tape is passed. Some men gallop in their final burst, and I have seen some wonderful wins accomplished by men who finished in the way described, notably H. R. Ball and Horace Crossley.

There are some few athletes who have run their fastest as follows:—

Start off at three-quarter speed, keeping it up for 100 yards, then gradually increase the pace till the top speed is reached at about 250 yards. From this point maintain a sprint, or endeavour to do so, all the way home. Although I do not believe in this latter method of running 440 yards, I have known several good men who ran much faster by adopting the system. I would, therefore, advise all to give both ways a trial; only be quite sure that your trial horse or timer is reliable, otherwise you will be exerting yourself uselessly. Refrain from practice one day before, and also the day of a race. For all distance races a good rub down and a very moderate dose of the "100 Up" exercise will be found all-sufficient for these two last days.

#### 600 YARDS.

*Training for 600 yards.*—Practically the same work (only a little longer) is required for this distance as for the quarter-mile. The chief points to remember are, to get all the outdoor exercise you can, to live plainly, well, and regularly, and not to hurry in your preparation.

After the rub down, let your practice on Mondays, Wednesdays, and Fridays consist of from 800 to 1,000 yards at a moderate pace, then rest, and afterwards sprint 80 to 100 yards two or three times at three-quarter speed,

and finish with a 300 to 350 yards fast burst. Retire to dressing room, and rub down, etc., as described in previous chapter. On Tuesdays, Thursdays, and Saturdays run from 400 to 500 yards at three-quarter speed; then practise starting, and finish with a 200 yards sprint at nearly top speed, and dress. Make a rule of always having at least one good long country walk a week, and a steady walk home after your evening runs on the path, occasionally, will be found very beneficial.

*How to run a 600 yards race.*—Start at top speed, but steady down into natural stride in the first 50 yards; maintain an even gait for at least 440 yards, then gradually lengthen stride, and when fairly in the straight for home sprint and keep going all the way to the tape.

#### THE HALF-MILE.

*Training for 880 yards.*—The half-mile race is, perhaps, the most entertaining of all from a spectator's point of view; but it is a most difficult and trying one to run. For instance, to get inside two minutes for the full distance it is necessary to run the first quarter in from 54 to 56 seconds, and to keep going for another quarter is no easy matter, unless a man is properly trained and possessed of real grit.

The diet and "100 Up" exercise required is similar to that recommended previously, except that the "100 Up" may be increased with advantage to an occasional 200 Up, with a little more walking exercise. An excellent plan is to walk to and from business once or twice a week, when practicable.

The path work on Mondays, Wednesdays, and Fridays should consist of a steady 1,000 yards, three-quarters of a mile, or even a full mile. Then put on a coat and trot or stroll about the ground for ten minutes, keeping the body and limbs well wrapped up and warm. Then go to the mark and sprint a few times, anything up to 100 yards, finishing with a good striding 300 yards dash. Stride out to your utmost capacity, running in your best form, and the last 50 yards at your fastest. On the other days start

by running 400 yards at three-quarter rate, finishing the last 50 yards at full speed. Afterwards practise starting and sprints, finish with a good striding 600 yards, and the usual rub down. A quiet walk before riding home will always prevent a chance chill or cold.

*How to run a half-mile race.*—The half-mile race is often run in heats; when such is the case I am very much inclined to think it is not only the hardest of all races to win, but the most difficult to advise upon. To run the race, however, in one heat considerably simplifies matters in both respects.

*If run in one heat, or the final.*—The better plan, I think, is to leave the mark at your best pace, gradually pulling yourself up at about 50 yards, when you should be running in your very best form. Keep going at an even, consistent gait for 440 yards, then take a pull at yourself, bracing up, so to speak, for the final effort. At the 300 mark from home settle down to your work in real earnest, making one long run all the way home, gradually increasing the length of stride and pace right to the tape, and sprinting the last few yards, if it be possible to rise to it.

*If a heat only.*—Make quite sure before starting how many are entitled to run in the final. Start and run the first 440 yards as before described; then when you take a pull at yourself and get going again, do not punish yourself more than necessary, to secure a position qualifying for the final.

It is very difficult to say (given an opportunity) if it is better to wait in front or behind when running in a heat; this must be left to the athlete himself. Some men have the happy knack of being able to pull up and get going again without deterioration, whilst others go all to pieces if thrown out of their natural and usual way of progression.

#### THREE-QUARTERS OF A MILE.

*Training for 1,320 yards.*—The three-quarters of a mile race is a comparatively rare event in the athletic world, and, strange as it may appear, it is a much more trying race to run than the mile. Men as a rule find the third

quarter a terrible stumbling-block. It is the time that one feels at his very worst, even in the mile race; but when the third quarter becomes the finishing point, as is the case in a three-quarter-mile run, the majority of even our best men fail to stay the distance properly, and many collapse altogether, and find it quite impossible to finish. The training, therefore, for this distance must necessarily be rather severe, and should consist of something like the following: Monday,  $1\frac{1}{2}$  miles slowly, rest, and 600 yards at three-quarter speed. Tuesday, 1 mile steady trot, and 1,000 yards good three-quarter speed, finishing the last 100 yards at fastest. Wednesday, three-quarter mile slowly, but finishing the last 200 yards fast; rest, and one or two sprints. Thursday, go half-mile fast; rest, and two sprints of 100 yards. Friday, one mile steady, finishing the last quarter fast.

In addition two or three good long country walks weekly, plenty of "100 Up" and breathing exercise as described on another page.

*How to run a three-quarters of a mile race.*—Race away at the report of the pistol at full speed, settling down into ordinary stride at 20 or 30 yards. Keep at a uniform pace for 880 yards, then take a slight easy for 200 yards, and finish the last 240 yards in one long run, gradually increasing the length of stride and pace. If a sudden spurt is attempted failure generally follows, but a steady working up of pace usually proves successful. This, however, is only learnt by practice and strict attention to detail and individual constitution.

#### THE MILE.

THE Mile Race can only be likened to the 100 yards sprint for popularity, and I should think there have been a greater number of races run at a mile than at any other distance except the sprint; yet it is the minority which must be reckoned when counting the number of properly trained athletes who have run the distance; in fact, I am convinced there are only a very few out of the many thousands who have run the race, who have taken the trouble to get themselves really fit for the distance.



Now why is this? My idea is that when the ordinary athlete takes up mile running and training he generally in his preparation takes his cue from, and follows the example and methods adopted by those known to him who happen to be running the distance. This plan, however, is altogether a bad one. The right thing to do is to formulate a plan of preparation to suit the athlete's individuality; by this means only can the best results be attained. To make myself perfectly clear, and to give an example, I will quote my own personal experience *re* "How I became a Miler." In 1878 I was an apprentice to chemistry at Worcester, and I made up my mind to try and run a mile. First, I figured out the time I thought the mile should be run in. Secondly, I started testing my theories *and particularly* my own constitution and capabilities; the result of this study soon convinced me that the then existing records at the distance were by no means good. Having formed these ideas, I prepared a schedule and at once started to try and demonstrate that my suppositions were correct.

I have a very vivid recollection of reading aloud (for the first time) this prepared schedule to a few of my club-mates, and how they laughed and ridiculed the idea of any such record as therein laid down ever being established; nevertheless, I believed in my schedule and stuck to my guns, and as I still possess the original, I here append a copy of it in its entirety.

*How to Train.*—Run every day, on a track if possible, otherwise a good field or road, but do not run *fast*. Steady long runs, anything up to two miles, with occasional shorter bursts of a quarter to half a mile, and a few sprints, always finishing the last 50 to 100 yards of the longest run at fastest, and complete rest one or even two days before a contest, will soon make one fit. Once well, be careful not to do too much work. With regard to food, eat anything you fancy (an athlete taking an interest in his work is not likely to desire anything which will be harmful to him).

*How to race.*—Get off the mark at fastest, steady up

after going 20 yards, falling into a long even stride; keep up this uniform pace, never altering the length of stride or natural gait till the home straight is reached; once there, gradually lengthen the stride as each step is taken, so that the nearer you get to the tape the faster will be the pace, and finish the last few yards sprinting. Don't look round, or bother about opponents; simply run your own race, making up your mind exactly where each foot shall fall as the strides are taken; this latter will fully occupy your attention, and by so doing take a big load off your mind, and very often be the unconscious means of winning the race.

*Time Table for possible Record, written on June 1st, 1878:—*

		min. sec.		Times for laps.	
				min.	sec.
1st lap	... 440 yards	...	59	1st	59
2nd lap	... 880 yards	...	2 2	2nd	1 3
3rd lap	... $\frac{3}{4}$ mile	...	3 8	3rd	1 6
4th lap	... one mile	...	4 12	4th	1 4

It is very remarkable how closely I approached the above table when establishing the existing record of 4m. 12 $\frac{3}{4}$ sec. at Lillie Bridge on August 23rd, 1886, more than seven years after writing the above.

*Time Table of actual Race, run on August 23rd, 1886, at Lillie Bridge:—*

		min. sec.		Times for laps.	
				min.	sec.
1st lap	... 440 yards	...	58 $\frac{1}{2}$	1st	58 $\frac{1}{2}$
2nd lap	... 880 yards	...	2 2	2nd	1 3 $\frac{1}{2}$
3rd lap	... $\frac{3}{4}$ mile	...	3 7 $\frac{1}{2}$	3rd	1 5 $\frac{1}{2}$
4th lap	... one mile	...	4 12 $\frac{1}{2}$	4th	1 5

My contention is that it is distinctly unwise to attempt to imitate when training; rather make a thorough study of one's own peculiar constitution and act accordingly. It is likewise quite impossible to give a *set of rules* on training for distance races, because each individual requires a different treatment to get and to keep properly fit. The amount of exercise can only be apportioned after a very careful study of the physique and constitution of the subject. To be able to run a mile *well*, the athlete must possess a sound constitution, speed, dash, undoubted

stamina, determination, good judgment, and, above all, be thoroughly trained.

#### TRAINING FOR THE MILE.

I do not think my opinions have altered in the slightest since writing my schedule for my own use in 1878. To my way of thinking, there is but one way to get thoroughly fit, and that is, to exercise daily on the path; but let your runs be over the distance slowly, or under the distance fast. A good plan is to run on alternate days, anything from one to two miles slowly on one day, followed on the next by a quarter to three-quarters of a mile at a good speed, with one or two sprints. This, together with the "100 Up" exercise and an occasional walk, and the usual rub down as recommended previously, will be found quite sufficient. A very good rule to follow is to strip and be weighed daily. Then enter the weight in a book. This will tell you fairly accurately if the exercise you are taking is suitable, or otherwise. Should you lose or gain a lot of weight from day to day, you will be able to counteract either, by altering the quantity of exercise or clothing worn when at work, always taking into consideration the general state of the health at the time. One other most valuable test (and this applies to all distances run) is, *measure your strides daily*; the proper way to do this is to take two strides in each measurement; this must be done, because most men take a longer stride with one leg than with the other. Several measurements at different parts of the track should be taken during the ordinary practice spins, and these must be carefully compared. Should they be found accurate and alike, day by day, you may be quite sure that you are running well and in your best form; should, however, they be short or irregular, there is surely something wrong. Give this, then, your best attention and find out the cause: the most usual one is *staleness*.

The subjoined table will explain more clearly what I mean. This table was taken by my friend, Mr. William Caldicott, of Worcester, when in America with me, and represents my training and weights when preparing for my races with the late L. E. Myers in 1882.



W. G. GEORGE and the late L. E. MYERS.  
Taken a few days after their three famous races at New York,  
November 30th, 1882.

Courtesy of Stark Center - AUS

A Table showing the training and weights of W. G. George whilst preparing for the series of races with L. E. Myers, which took place in New York in 1882:—

Date.	Morning Work.	Afternoon Work.	Weight
1882			(stripped)
October 18 ...	1,000 yards and 1 mile, slow ...	$\frac{1}{2}$ mile, three-quarter speed ...	147 lbs.
" 19 ...	$1\frac{1}{2}$ miles, slow ...	No run; very wet ...	146 lbs.
" 20 ...	1,000 yards, three-quarter speed ...	$\frac{1}{2}$ mile and 350 yards, fast ...	148 lbs.
" 21 ...	1,000 yards and 700 yards ...	Did not run ...	148 lbs.
" 22 ...	$\frac{1}{2}$ mile, three-quarter speed ...	1,000 yards, slow ...	147 lbs.
" 23 ...	1,000 yards and 700 yards, slow ...	Did not run ...	146 lbs.
" 24 ...	$1\frac{1}{2}$ miles and 1,000 yards, slow ...	do. ...	148 lbs.
" 25 ...	$\frac{1}{2}$ mile trial (time 1 m. 58 $\frac{1}{2}$ s.) ...	1,000 yards, slow ...	148 lbs.
" 26 ...	1,000 yards, medium ...	350 yards, fast (twice) ...	147 lbs.
" 27 ...	$\frac{1}{2}$ mile do. ...	650 yards, fast ...	147 $\frac{1}{2}$ lbs.
" 28 ...	1 mile do. ...	700 yards, fast ...	146 lbs.
" 29 ...	No run; very wet ...	1,000 yards, slow; 350 yards fast ...	146 $\frac{1}{2}$ lbs.
" 30 ...	704 yards (time, 1 m. 33 s.) ...	$\frac{1}{2}$ mile, three-quarter speed ...	146 $\frac{1}{2}$ lbs.
" 31 ...	1,400 yards, slow ...	700 yards, fast ...	145 $\frac{1}{2}$ lbs.
November 1 ...	704 yards (time, 1 m. 33 $\frac{1}{2}$ s.) ...	1,400 yards, slow ...	145 lbs.
" 2 ...	700 yards, fast ...	Did not run ...	147 lbs.
" 3 ...	Long walk ...	do. ...	147 lbs.
" 4 ...	$\frac{1}{2}$ mile race. Myers, first; time, 1 m. 56 $\frac{1}{2}$ s. Time, 1 m. 57 s.	George beaten 2 yards ...	147 lbs.
" 5 ...	1 mile, medium ...	Walking ...	146 $\frac{1}{2}$ lbs.
" 6 ...	1 mile do. ...	do. ...	146 lbs.
" 7 ...	1,000 yards, fast ...	$\frac{1}{2}$ mile, fast ...	146 lbs.

GEORGE v. MYERS

Date.	Morning Work.	Afternoon Work.	Weight
1882.			(stripped)
November 8	Did not run for three days. Was distinctly stale. Changed mode of living. Measured strides very irregular		145 lbs.
" 9	One mile race. George, first; time 4 m. 21½ s. Myers' time, 4 m. 27½ s.		145 lbs.
" 10	Walking	Walking	146 lbs.
" 11	do.	700 yards and ¾ mile, slow	146 lbs.
" 12	do.	Did not run...	146½ lbs.
" 13	000 yds, 350 yds, and 700 yds, slow	350 yards, fast	146 lbs.
" 14	¼ mile (time 3 m. 14½ s.)	Did not run...	146 lbs.
" 15	¼ mile, fast	do.	146 lbs.
" 16	Did not run...	Myers being ill	146 lbs.
" 17	Day of race, but was abandoned.	Did not run...	
" 18	Did not run...	do.	
" 19	do.	do.	
" 20	do.	do.	
" 21	do.	do.	
" 22	do.	do.	
" 23	¼ mile, fast	1 mile, slow	148 lbs.
" 24	1 mile, slow	do.	148 lbs.
" 25	Did not run. "100 Up" only	Did not run. "100 Up" only	147 lbs.
" 26	do.	do.	147½ lbs.
" 27	do.	do.	147 lbs.
" 28	do.	1 mile, slowly, through snow	147 lbs.
" 29	do.	Walk through snow	147 lbs.
" 30	¼ mile race. George, first; time, 3 m. 10½ s. Myers fell insensible 5 yards from home	Myers fell insensible 5	149½ lbs.

\* This was a terrible race, both falling insensible.

## HOW TO RUN THE MILE RACE.

It is quite impossible to give better advice here than that given in my original schedule on page 35. I should like, however, to explain that the most trying time in a mile race is the third quarter, and it is here where the majority of races are won and lost. It requires a vast amount of pluck and determination to struggle through this trying portion of the race, but it is just the part where one should strive to run at his very best. If this is done the falling off in time in comparison with the other quarters will not be so apparent. The third quarter is always the slowest (in a properly run race), whilst the first is the fastest, and the last *should be* the second best, but the second, more often, is so. In conclusion, a good miler can usually run any distance up to ten miles.

## ON HEALTH.

*Exercise.*—I believe the most prevalent ailments of old age are gout, rheumatism, and diabetes; all these diseases are caused more or less by neglect of regular muscular exercise.

Now, the man who undergoes regular exercise keeps the skin action perfect, and by so doing perspires freely, and expels all unwholesome and detrimental excretions from the system; another point is that regular and discreet exercise tends to keep all the blood vessels in full working order and active, and so prevents any chance of withering away, or inability, through lack of exercise, to perform their allotted tasks. On the other hand, too violent or excessive exercise is quite as bad, or worse, than none at all, often causing irredeemable injury, and particularly heart trouble. Violent exercise before breakfast should always be avoided. There are very few constitutions strong enough to inhale the raw atmosphere of the early morning, without food, with benefit to themselves, and I am of opinion that many cases of influenza, chest trouble, and consumption could be traced to the old-fashioned system of early morning training and excessive exercise.

*On feeding.*—Feeding, in a measure, depends on the individual. Some being fat, and others thin, it stands to reason all do not require the same foods. For instance, the thin man wanting to fatten up would, with advantage, feed on chocolate and cocoa, eggs in abundance, milk, meats, soup, fish, asparagus, potatoes, peas and all vegetables, fruits, sugar, milk puddings and starch foods, whilst he would abstain from taking vinegar, acids, &c., and from doing any violent exercise, as well as taking too many baths and excessive massage. Not so the fat man, wanting to thin down. He will have to be satisfied with two meals a day, avoiding potatoes, sugar, soups, stimulants, effervescing drinks, and all highly-seasoned, rich foods; while he may eat Gluten bread, or biscuits, or toast, meat (sparingly), fish, seakale, spinach, Spanish onions, tomatoes, and all green vegetables and fruit (not sweet), three or four lemons per day being excellent, and drink fresh lemon juice and water, and a glass of hot water the last thing at night and the first thing in the morning. Plenty of daily exercise, bathing, and frequent massage. The ordinary individual requires three meals daily, with a light repast thrown in. The best time for these are: breakfast at 8 o'clock, a substantial meal at 1 and 8 p.m., and a light tea at 5 o'clock. The nature and quantity of the food eaten must depend on the constitution of the individual; some few thrive on vegetables alone, whilst most (like myself) believe in a meat diet. All foods should be eaten at regular hours, and slowly, and masticated well; the mealtime should be made the merriest function of the day—a special point being made to cast aside, for the time being at least, all worries or business troubles. Liquids of all kinds should be avoided between meals.

*On breathing.*—Learn to breathe through the nose, asleep or awake; this can always be done except when taking any special exercise, such as the following (which I strongly recommend to all as a particularly excellent-ten-minute-daily-before-breakfast exercise).

Stand in the open air or at a window and fill the lungs

to their fullest capacity by inhaling through the nose, slowly, then open the mouth and exhale also slowly. This operation should take anything from five to ten seconds in its performance, and will be found to greatly improve the lung power and chest measurement, whilst it immediately produces a splendidly warm glow all over the body; deep breathing also freshens the oxygen in the blood, and so increases the power and vigour of the nerves, muscles, and body generally. A regular practice of this breathing exercise *must* enhance perfect health and long life.

In respect to breathing, when in competition of any kind, I have often heard trainers and others tell competitors to breathe through the nose, but my experience and observation has taught me that this is next door to an impossible feat, if one intends to get the best results out of oneself. My advice is not to attempt to breathe through the nose, but practise a *regular* breathing through the mouth during the continuance of all violent exercise and competition. This I am confident will be found the most satisfactory method, and be far less exhausting than breathing through the nose. This particularly applies when swimming, where it would be quite impossible to breath otherwise than through the mouth.

*On bathing.*—Too frequent bathing is decidedly weakening, therefore it depends on the physique of the individual whether he should, or should not, indulge in the daily bath. The same argument applies to whether it is best to use hot or cold water, and also the quantity of hand-rubbing necessary. Soft water is always best, when procurable, and a little sea-salt added to the bath will be found excellent, and might always be used with advantage.

*On clothing.*—This is a most important factor to health, and, strange to say, it is one which is constantly neglected. Existing as we do on a portion of the globe subjected to all imaginable changes of climate, one must at all times be fully prepared for its eccentricities, and be in a position to resist their ill effects to the same degree necessary, we will say, as it is for a batsman to resist the

different changes of bowing. What, then, constitutes proper clothing? To start at the top, "headgear." Every sensible white man desirous of keeping free from the ill-effects of the sun will agree that a light, well-fitting hat, capable of shading the neck, is the thing required in a broiling summer sun; a sun bath is good for everyone's joints, so is water bathing, but we must respect both, for they can easily upset the general system, especially of one out of condition. In the colder weather it does not so much matter what kind of hat is worn, but the light, soft, warm sort are always the most comfortable, and far better than the heavy, hard one, except, perhaps, as a protection from Hooligans.

*What to wear next the skin.*—Keep comfortably warm; to do this it is necessary to wear well-shrunken flannel. The texture depends altogether on the conditions of the atmosphere. Pants and jerseys made of Scotch wool are particularly good for the hot weather, being light and permitting of free ventilation, whilst they absorb an extraordinary quantity of moisture.

*On boots.*—Broad-toed, well-fitting shoes or boots should always be worn, with low heels and good broad substantial soles; the uppers must be light and pliable, and leather lined; two pairs of shoes should be kept going at the same time, one on the feet and the other on the trees, changing daily. The best fitting and most comfortable boots are always those made to order from one's own lasts; but not all of us can afford such luxuries, although I advise all who can to do so.

Finally, moderation is the essential. Early hours, a cup of hot water immediately on getting out of bed, and a contented mind will be the greatest of all helps towards good health and perfect happiness.

W. G. George  
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## TRAINING FOR CROSS-COUNTRY RUNNING.

BY ALFRED A. SHRUBB.

OF all forms of pedestrianism—and, indeed, of all branches of athletics—there can be nothing superior to cross-country running for either pleasure or health. The sport itself is ideal, whether a race be contested in fine or muddy weather. Track or road running is apt to grow monotonous, however exciting it may be; but there is nothing monotonous in an open country run.

Even the training itself is almost as enjoyable as the race, and from first to last I defy anybody to find a single point to cavil at.

The varying nature of the ground covered, moreover, assists enormously in building up one's physique and in bringing into play every individual group of muscles, so that the long-distance track-runner, and, indeed, athletes in almost every branch, will be well advised to devote a fair proportion of their attention to field races, as they will materially assist one's progress.

### CROSS-COUNTRY TRAINING.

The track must naturally be abandoned altogether for cross-country preparation, and one's practice carried out pretty religiously over country as closely resembling that on which the actual race will be contested as can be found within easy distance.

Work your spins up in length from about five miles, then eight miles to ten miles, and vary backwards and forwards. Run in company wherever possible, and pick out as much bad and heavy ground as you can; but run three times every week. Get out by yourself if necessary