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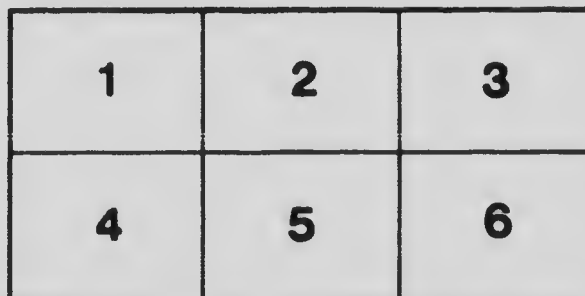
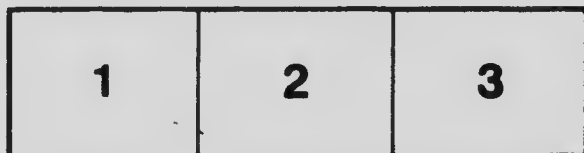
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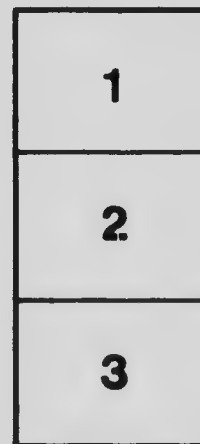
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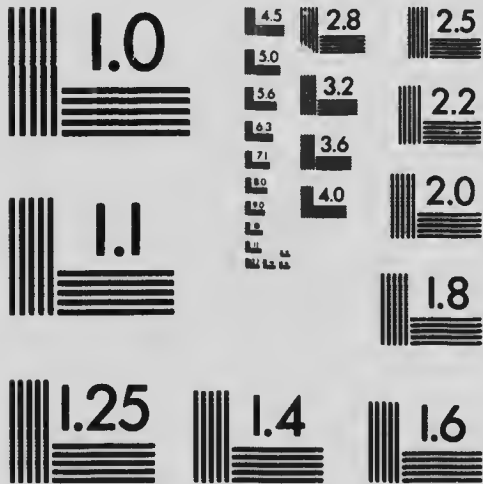
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CONSUMPTION:

TREATMENT AT HOME AND
RULES FOR LIVING.

BY

H. WARREN CROWE, M.D. OXON.

CANADA:
THE CANADIAN ASSOCIATION FOR THE
PREVENTION OF TUBERCULOSIS, OTTAWA.
BRISTOL, ENGLAND: JOHN WRIGHT & SONS LTD.

1909



PREFACE TO THE SECOND EDITION.

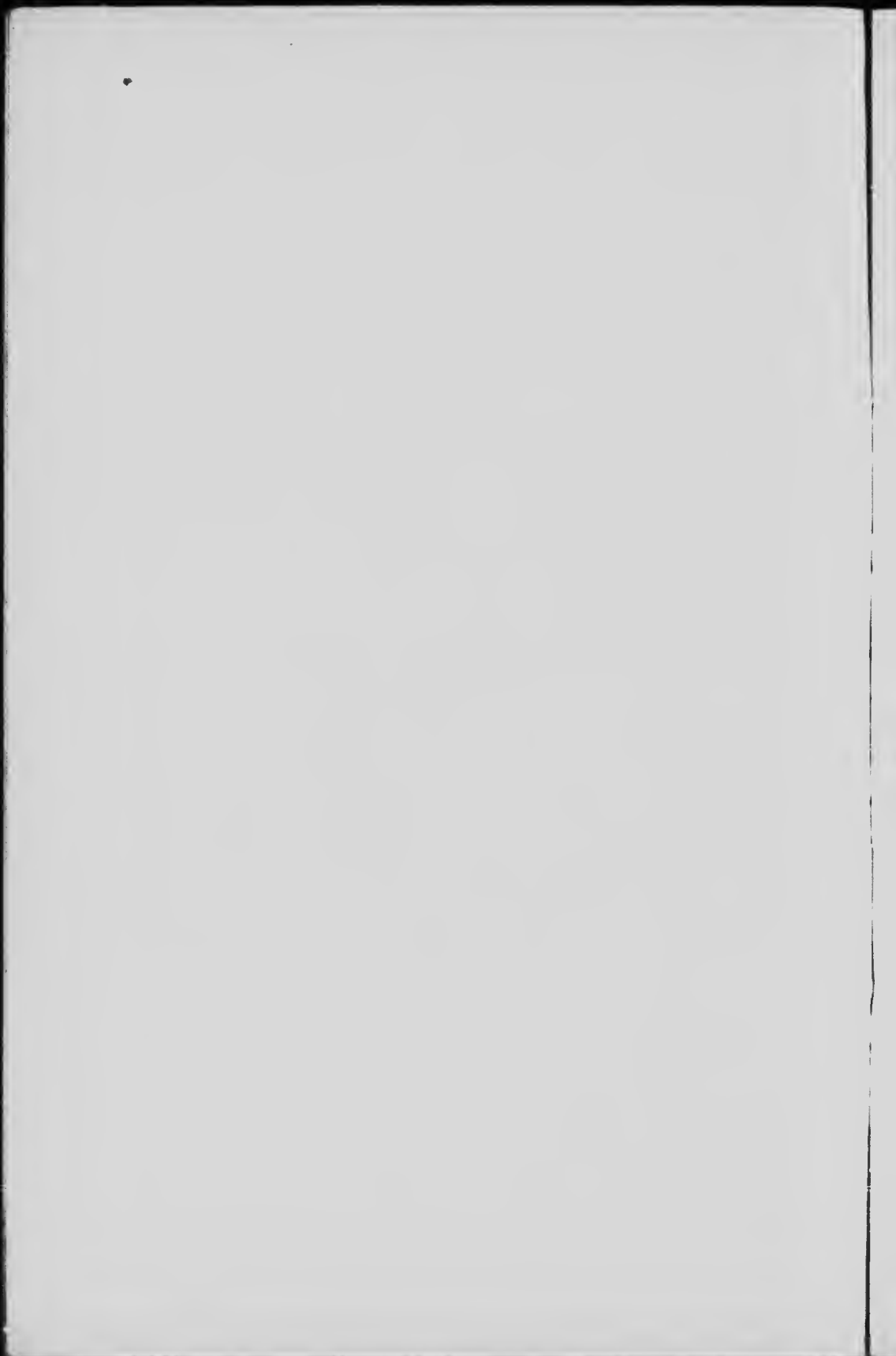
IN issuing a second edition I must express my thanks and appreciation for the kind reception accorded to the book by the members of the medical profession.

From the many letters I have received, I feel that it has been of real service to consumptives, and advantage has been taken of this opportunity to avail myself of one or two kindly criticisms, which may further enhance its usefulness.

THE AUTHOR.

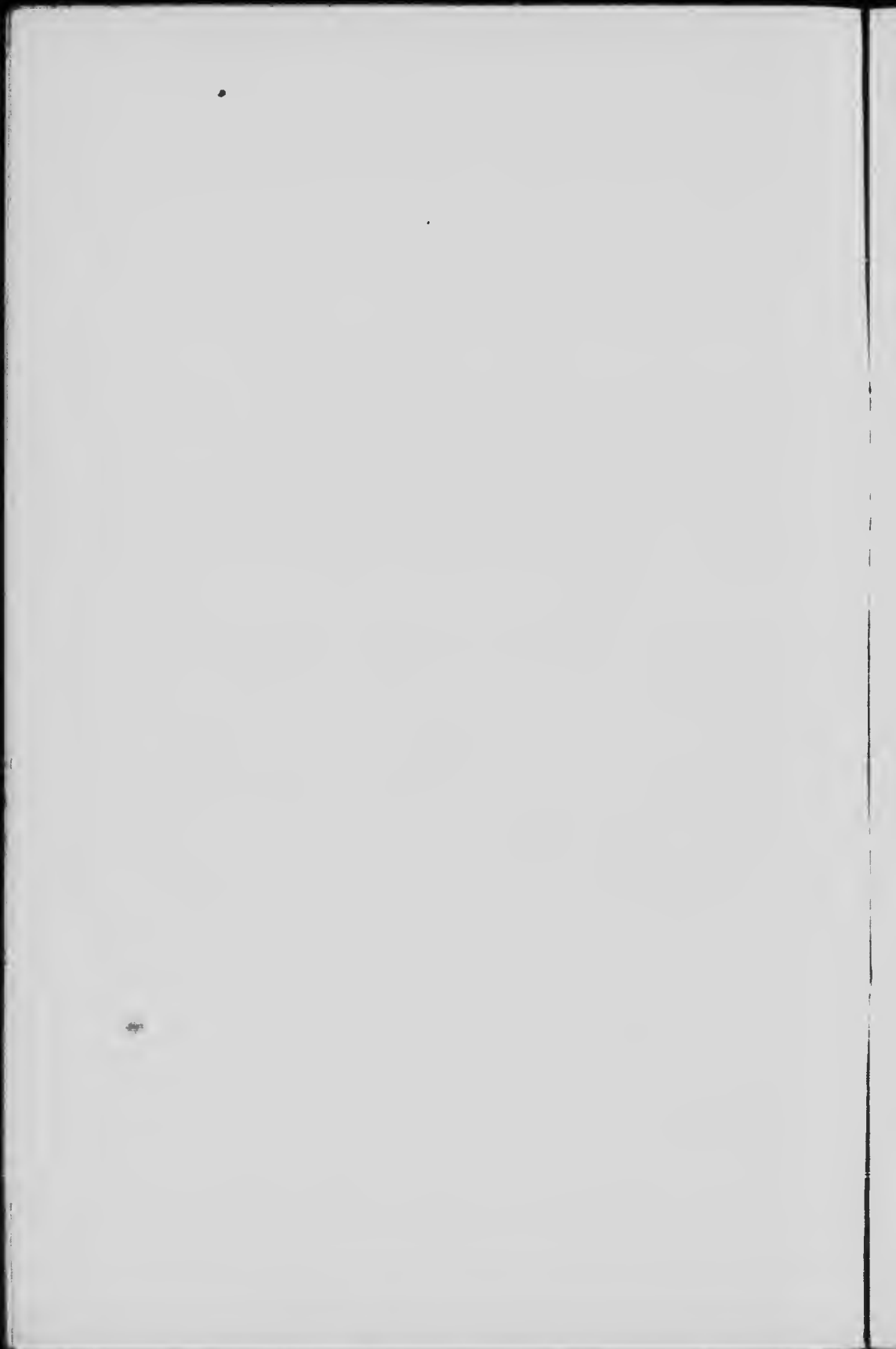
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*Treatment and Rules for
Consumptives.*

INTRODUCTION
TO THE MEDICAL PROFESSION.

I HAVE no doubt that most medical practitioners have experienced, with me, the difficulty of finding time to drill into their consumptive patients all the minute details of their treatment. In the case of those who can afford a few months at a sanatorium, the proper treatment is inculcated, and the probabilities of cure much increased; but for those whose position prevents their taking advantage of such practical training, how much more slender is their opportunity of recovery.

Though we look for a day when public institutions will afford all consumptives the opportunity of learning how to cure themselves, that day is yet far distant. Therefore I venture to bring forward this little book as a partial substitute for such practical training. It is my hope that doctors may save much of their time by giving it to their patients, who, by reading these explanations and learning these rules, will become grounded in the first elements of their treatment.

Doubtless for individual patients some rules will be omitted and special ones framed; for this purpose there are blank pages at the end of the book, where further instructions may be noted.

The question of the best method of taking the temperature is left to the discretion of the practitioner, as opinion on this subject is divided. Some sanatoriums allow the oral method, with the proviso that the mouth should be shut and the face kept out of a draught for half an hour before using the thermometer; but the larger number favour the rectal method. Personally, I am strongly in favour of taking the temperature per rectum, as being absolutely accurate, and it is to rectal temperatures that the rules in the book apply. The oral temperature needs such extreme care to ensure accuracy that it may well engender a false sense of security. Further, those who are treated at home usually err on the side of too much or too rapid exercise, and this fault is more likely to be rectified by the discovery of a high rectal temperature taken immediately on their return, than by a relatively low, though still dangerously high, oral temperature taken half an hour later.

I am aware that a book for practitioners to give their patients is somewhat of a novelty in medical literature; but I trust that it will be agreed that its existence is justified if, in any way, it gives assistance to the antitubercular crusade.

PRELIMINARY.

THERE are few consumptives fortunate enough to possess the money and the patience to complete their cure in a sanatorium; a larger number go to learn how to live, and then return to their families and homes to carry out the precepts of their treatment. Unfortunately the largest number of all cannot afford the sanatorium, even for a short time. It is for these more especially this book is intended; yet all consumptives may, I trust, benefit from reading the following explanations and learning these rules.

It has been my endeavour to write a straightforward statement in few words, in order that the reader may accurately comprehend the cause of his illness and the way of his recovery. Further, since a series of bald rules carry but slight conviction, I have explained in every case the reason for the rule. I would recommend the patient to study all the explanatory paragraphs, and having thus mastered the reasons for each rule, to make such rule a part of his very being. Let him live by these rules.

The following pages give what may be considered the ideal treatment of consumption; I have

purposeiy left out alternative details which would confuse the mind and obscure the fundamental points. Yet has this method disadvantages, because individuals differ, and rules beneficial in one case may be unnecessary or even harmful in another. I would therefore earnestly impress on all consumptives that the continuous supervision of a doctor is essential.

It is certain that many consumptives can be cured, and those who are treated in the earliest stages of their malady should be restored to health. Recently many cures have been reported from sanatoriums, and only those in the last stage of this terrible disease fail to improve under treatment. In some cases sanatorium patients have suffered a relapse after returning to their homes, and this is probably due to the fact that the disease, though arrested, was not cured, and a return to former conditions of life and work renewed its activity. Since tuberculosis must not only be arrested, but all traces of it eradicated from the system, and since merely to arrest it may take many months, it follows that before perfect cure can result, treatment must be extremely prolonged. Experience has proved that the longer the treatment is carried out the more certain and lasting will be the resulting cure, and the shorter the period of treatment the more likely a recurrence.

Let us consider the various ways in which a consumptive can set about getting cured :—

1. *He can go to a Sanatorium.*
2. *He can go to a Suitable Climate, living in an hotel or other dwelling house.*
3. *He can remain at Home.*

It will readily be conceded that if the second and third courses can produce as favourable a result as the first, either would be preferable, in order to escape the isolation from friends and the expenses which are unavoidable in the sanatorium system. Though undoubtedly the consensus of medical opinion at the moment is in favour of treatment in a sanatorium, as giving the best prospect of cure, yet I maintain that treatment, either at home or in some suitable resort, will be successful in the case of those who can form a resolution and steadfastly carry it out, and who are sufficiently master of their own surroundings to prevent undue interference by well-meaning but officious relatives. For these the question of locality alone remains, and I would answer : Seek high-lying rather than low ground, moor and forest rather than cultivated fields, country rather than town ; but above all, fresh pure air and sunshine.

In treating consumption our endeavour is (1) To remove the cause, and (2) To increase the resisting power of the consumptive. All the rules

of treatment are framed to further one or both of these objects.

Let us first rapidly review what science has discovered concerning the causation of consumption. It teaches us that there is one cause only, namely, the tubercle bacillus. Concerning this there is no uncertainty. Supposition and conjecture are left behind and the great truth has emerged. The tubercle bacillus grows like the mould in a damp cupboard, and by its action the substance of the lung is destroyed; but more than this, it produces in its growth compounds, excretions if you will, which circulate in the blood and poison the rest of the body, thus giving rise to the fever, weakness, and loss of power in every part.

Through countless centuries of battle with disease, the human race has developed an antagonism to all kinds of harmful microbes. The antagonising power is contained in the blood, which bathes all parts of the lung and actually, by its own germicidal character, exercises a deterrent influence on the growth of the tubercle bacillus. Unfortunately, in the victims of consumption, too often the blood, vitiated by the products of the microbe, fails in its action, and the disease progressively extends.

Since the tubercle bacillus is the sole cause of the disease, and the aim and object of all treatment is to exterminate this microbe, we may test the value of each rule for treatment by enquiring

whether it tends to prevent the growth of the bacillus or no, bearing in mind that its action may be beneficial by strengthening the blood and increasing its germicidal power. But it may be asked how are we to know, except by the result, what the effect on the bacillus of any particular detail of the treatment may be? Experience, and the researches of science will provide the answer and direct our steps.

Scientists of recent years have grown the tubercle bacillus on certain nutritive substances in glass tubes, and have noted the influence upon it of various agencies. They have found (a) That the microbe retains its vitality for a long time under adverse circumstances; (b) That it is killed by boiling water, and by carbolic acid and other antiseptics; (c) *That direct sunlight is rapidly fatal to its existence*; and (d) That the expectoration of consumptive people often contains the microbes in large quantities; (e) That this expectoration, when dried, is the chief means of disseminating these microbes.

All these conclusions bear directly on the treatment. We learn that treatment, to be effectual, must be prolonged; *that sunlight is beneficial*; that boiling water and antiseptics may be a safeguard against the spread of the disease between individuals; that the expectoration must be most carefully dealt with to prevent the chance of passing on the infection to others.

There is little doubt that all consumption is contracted in this way by actual infection ; that is, the microbe, voided in the expectoration, becomes dry, and floats in the air as dust, which, entering the lung of a healthy person, is liable to start the disease.

That consumption is an inherited disease is a fallacy, though there is no doubt people may inherit from consumptive ancestors a constitution of body which is suitable for the growth of the microbe, and that these individuals are therefore more liable to the disease than their less susceptible and more fortunate fellows.

We have seen that the great protector against the invading bacillus is the blood. If the body is strong and healthy, the blood also will be powerful and will combat and successfully demolish any microbe that may accidentally enter the lungs. But should the body be weak, ill-nourished, or run down, then also the blood, being deteriorated in quality, will be a less efficient protector, and the microbe, if present, may effect a lodgment. Similarly, when the microbe has gained an entrance into the lung tissue, and is growing, a continuance of low vitality and general weakness on the part of its "host" will be favourable to its growth. On the other hand, general increase of health and vigour in the host will tend to its destruction.

We may summarize these introductory remarks thus :—

1. Consumption can be cured.
2. Treatment, as practised in the best sanatoriums, can, under favourable circumstances, be carried out successfully at home.
3. Treatment must be prolonged.
4. The aim of all treatment is to eradicate the microbe from the lungs. This cannot be done to any great extent directly, but only through the medium of healthy human blood. Therefore we strive in every way possible to increase the power of the blood.

RULES.

THE modern treatment of consumption is sometimes called the "open-air cure," thus taking its name from the most important factor. If one were asked what class of people are the healthiest in mind and body, and the least liable to the ills that flesh is heir to, one would answer, the pioneer, the backwoodsman, the hunter. "They live such a healthy, open-air existence," is a common phrase. Note the conjunction of the words "healthy" and "open-air." Open air, fresh, unused air, free from the contamination of houses and towns: this it is which is healthy and invigorating—"invigorating" in its derivation is the very word, for fresh air puts new strength into us. Therefore :—

RULE I.—Live as much as possible in the fresh air.

Regarding this living in the fresh air there is, unhappily, a strong belief abroad that to sleep in the open air or near an open window is extremely dangerous, and that a cold in the head, if not worse, is the certain result. Now this supposition has been proved again and again to be false, for hundreds of consumptives

have run this supposed risk and are now sleeping always with the air blowing directly over their heads. The actual result is that they are far less liable to chills than before. Nor is the process of getting accustomed to fresh air as formidable as one would expect.

It is absolutely necessary to go through with it. Therefore :—

RULE II.—Learn at once not to be afraid of fresh air either by day or by night.

There are two kinds of draughts in a house. One is caused by air passing out of the house and is loaded with impurities; it carries the so-called “used-up” air. The other consists of pure air entering the house to replace that which escapes. The former must be carefully avoided; the latter is clearly the same as the air on the verandah or altogether away from the house, and is harmless, except that it may chill the body should the bed-clothes be kicked off at night. Since fresh air is what we are in search of —

RULE III.—Study the direction of the draughts, and at night see that your head lies near a window through which air is entering.

It is the practice to build sanatoriums in sheltered places, where violent winds are rare, because it is recognised that rapidly moving air is injurious to damaged lungs. The consumptive at

home will therefore avoid *strong* draughts and violent winds; but let him remember that even these are far preferable to air which is not quite fresh. A roofed balcony or verandah, which in windy weather can be partially closed, provides the best sleeping chamber: but where such accommodation is not available, a wide bay window which will hold at least the head of the bed will answer all practical requirements. All the windows should be open, unless the weather is too stormy. The door of the room must be shut when the wind is strong, but should be opened wide on other days.

RULE IV.—If you suffer from cold, keep yourself warm with plenty of blankets and sleep in woollen sheets.*

Consumption is a wasting disease; there is loss of flesh. In normal health fatigue causes loss of flesh; but this loss is rapidly made good by the food consumed and the rest taken after exertion. Consumptives are often told by their friends that exercise in the open air is the main part of the treatment. But this is not so. Exercise at the right time is undoubtedly beneficial, and rules will be laid down indicating the amount and kind; but since consumption of itself consumes flesh (why else should it be called by this name?), it

* NOTE.—There is no objection to a fire in the room as long as the window is open. In cold weather hot bottles may be permitted.

stands to reason that all conditions which increase waste in the body must be avoided. To the consumptive, during the time that the disease is in progress, all exercise is fatiguing and causes loss of flesh. Exercise must, therefore, be avoided, and the contrary substituted, namely rest.

RULE V. —Remember that rest is the cure.

Rest with food is the cure. Exercise is what aids you to regain your strength for a return to the battle of life which comes after the cure. While the disease is in progress, continual waste is going on in the body. Energy, vital force, call it what you will, is being used up in combating the disease, and, as already indicated, it is necessary to avoid everything which may cause unnecessary consumption of energy. Also by every possible means the supply of energy must be augmented.

If we consider the causes through which body-energy is used up in the case of a normal healthy man, and then the ways by which normally this waste is made good, we shall be able to frame some rules for preventing undue usage of energy in disease, and for adding to the available store.

Energy, or force, is used up to some extent by exertion of body or mind, but far more so by fatigue. Therefore :—

RULE VI. —Avoid all fatigue of body or mind.

Again, energy is dissipated by worry and all the smaller ills of life. Therefore :—

RULE VII.—Make up your mind to keep and hold a calm view of life, and await your cure patiently.

How is this lost energy replaced in a healthy man? Obviously by rest and food. We have already seen that rest is the main part of the cure in consumption, and now we add to that "food." Though we have exhausted the factors which in health cause energy to be consumed, yet there remains one factor peculiar to disease, and, therefore, more important than any other, and that factor is *fever*. Before turning to the question of food, therefore, it will be advisable to examine carefully the relation which fever bears to the course of the disease. There is no consumption without fever, and the higher the fever, as a rule, the more active the disease. When there is no fever, no rise of temperature, that is, during the twenty-four hours, then the disease is quiescent and the cure is progressing. Fever is the indicator of the activity of the disease, but, also, high temperature in itself causes increased combustion of fuel in the body, increased waste of flesh and energy. Therefore fever must be reduced, and to that end all our efforts must be directed. These, when crowned with success, will fill us with hope, for reduction of fever means a lessening of activity of

the disease, and at the same time the drain of energy is being diminished.

Though many patent nostrums and legitimate medicines have been credited with the power of reducing fever, yet is their value insignificant beside that of our sovereign remedy, rest.

RULE VIII.—When fever is present, rest!
The best place to rest is in a bed in the fresh air.

Now the importance of the body temperature, which registers the presence or absence and the amount of fever, cannot be exaggerated, for the degree of temperature is the sole guide to the daily treatment. The condition of the lungs, as determined by sounding, may help us from month to month, but this at best is the doctor's guide. Temperature guides both patient and doctor. Your every act depends on the reading of the thermometer.

RULE IX.—Be careful to take your temperature most regularly, in accordance with the chart and directions which follow.

The temperature is ascertained by means of a clinical thermometer, and the reading of the thermometer is recorded for reference on a temperature chart. The patient must consult his doctor as to the best thermometer to buy, and as to the best means of taking his temperature and

charting the readings. Whatever chart is used, it must be kept most regularly. The special consumptive's chart, of which a specimen is given at the end, will be found to be simple and easy of comprehension.

The chart (*see end*) will be seen to consist of a number of upright columns crossed by straight lines. The columns are marked in regular order, A, B, C, D. Every four columns should contain the readings for one day, and when the temperature has been taken, a black dot is placed with pen or pencil on the straight line which indicates the point to which the mercury in the thermometer has risen. To take an example, let us suppose that the chart is begun on August 8th. In the top space put the day of the month. On waking in the morning take your temperature, after first carefully shaking down the thermometer.

RULE X.— Never forget to shake down the thermometer before taking the temperature. Shake down to 97° .

We will suppose the mercury reaches 97.6° . Make a black dot in column A, on the corresponding line on the chart. Next, at 12 noon, or immediately after the morning walk, take your temperature again. Then in column B put a dot and join to the dot in column A, as in the accompanying chart. Now note on the space above columns A, B, whether you have had rest or exercise, and

how much. Thus, R. for rest and E. for exercise, followed by a note of the distance gone. In the afternoon and evening do the same in columns C, D. The space for pulse rate and tension may be left for the doctor to fill in at his discretion.

But why all this trouble about taking the temperature four times a day? Would not once, or twice even, be sufficient to show what amount of fever may be present? No! And for the reason that in consumption temperature varies so much from hour to hour during the day, that only by frequent charting can we gauge the true extent of the temperature. A consumptive differs from a normal man in that his temperature is very unstable. The slightest exertion will send it up, and, even under most favourable circumstances, there is usually a rise in the evening somewhere between four and six o'clock. This the column C is calculated to register.

At the beginning of the treatment it is most advisable to go to bed for a few days and carefully record the temperature at the proper times. Should the thermometer, either morning or evening, rise above "normal," or 98.4° , or during the day indicate a temperature higher than 99° , our strongest advice is to remain in bed until the temperature is found constantly below these limits. When you are assured that this is the case, then make your first step forward, which is to walk about the room for five minutes,

and immediately return to bed and take your temperature. If not raised now, the next day do a little more, e.g., walk about, then sit down, and then walk again for a few minutes, but always take your temperature immediately after these first beginnings of exercise. Thus, doing a little more day by day, and testing your advance by the thermometer, you will gradually arrive at the full daily routine, details of which are given on page 33.

But perhaps the temperature may be high, either at some particular hour, or even all day. Then there is nothing for it except to go to bed and *stay there* until it comes down to normal. This may take a long time, even weeks; but do not despair, in time rest will do its work and the fever will abate—the disease will be arrested.

It is worth remembering when your heart fails you, that a disease which has taken perhaps years in coming on, cannot be controlled in a few days.

RULE XI.—Test each step in your advance by the thermometer. The more gradual the advance, the less likely the return of the fever.

You are more likely to overdo the exercise than the rest. Therefore :—

RULE XII.—When in doubt, rest.

The action of rest is twofold. The first is, as we have seen, entirely beneficial. The second is

harmful. Rest reduces the fever and aids the cure, but inasmuch as unused powers degenerate, so the ultimate result of rest, if carried to extremes, is to weaken the powers of the body.

RULE XIII.—Reduce the fever by rest. When the fever is controlled, then take exercise.

The kind of exercise which may be taken is also to be carefully regulated, and the following rule is of great importance :—

RULE XIV.—All exercise is to consist in slow walking on the level.*

RULE XV.—Never walk more than two miles an hour.

If it should rain it is far better to get wet, even soaked to the skin, than to run for shelter. Lose a train rather than hurry to catch it. Once overheated and fatigued, the temperature may rise and the work of weeks be destroyed. Remember that it is at the time when the vitality is low through fatigue that the microbe of tuberculosis is able to increase its hold.

Up to this point the rules which have been set forth apply chiefly to the first stages of treatment: to the time when the disease is slowly

* When the cure is well advanced the pace of walking may be increased, and hill climbing resorted to; but the very greatest care must be taken to avoid any excessive fatigue. How often after a long walk has the overtired consumptive fallen again a victim to a fresh accession of the disease, from which it has taken months to recover.

being controlled. Now it is necessary to give some further rules for those who are sufficiently advanced to be able to take a fair amount of exercise every day. But before doing so I must impress on all consumptives, whatever the stage of their cure, that only very cautiously must they exceed the regulation walking speed.

We will, for the sake of brevity, speak of the morning temperature as the A temperature, and the others as the B, C, and D temperatures respectively, in accordance with the chart.

RULE XVI.—If the A temperature is over $98\cdot4^{\circ}$ (normal), you must rest all day.

The lower your morning temperature the more satisfactory your condition.

RULE XVII.—If the B temperature, i.e. that taken immediately after exercise, is over $100\cdot4^{\circ}$, rest all the afternoon.

RULE XVIII.—If the C temperature is over 99° after rest, or over $100\cdot4^{\circ}$ after exercise, rest all the next day.

RULE XIX.—If the D temperature is over 99° , rest all the next day.

Doubtless the reader will wonder at this seeming inconsistency; on page 23 he was told that his temperature must not rise above normal, and now rules have just been given which definitely suggest that the temperature may without harm rise to 100° .

But, as already indicated, in the first case the

disease was in progress, and the cure for the disease is rest. Whereas in the present case the disease has been arrested, it is no longer progressing, and we are starting to build up the body and the powers of resistance by suitable exercise. However, the fact that the mischief is not progressing should from time to time be proved, and this may be done in two ways. First, by a day's complete rest on a couch out of doors, when the temperature should remain below 99° ; and secondly, by comparing the chart with that of a normal healthy man. See the chart, in which it will be noticed that the B and C temperatures of a normal man may rise after exercise to 101° , but half an hour later they will have dropped to 99° or below, and a little later to normal. Hence we get the following rule:--

RULE XX.—If above 100° after your morning walk, rest half an hour and take it again. If now it is under 99° the cure is progressing.

It is unnecessary to take this additional temperature every day, only now and again, to convince yourself that the raised temperature is not from fever, but is due to exercise. Let it be understood that fever is not synonymous with high temperature, but fever is high temperature at the wrong time.

The third way in which the advance towards health may be tested is by the weight, which should steadily increase. An excellent cheap

weighing machine, the "Standard," can be obtained for a sovereign, and the weight should be recorded once a week.

Thus much for waste of energy and vital force. It is dissipated by fatigue and by fever. Rest prevents excessive loss of energy; but we must now consider how the unavoidable loss may be made good, and a reserve balance placed at our disposal.

This brings us to the third great factor in the treatment of consumption. The first was fresh air; the second was rest, and its accompanying exercise, carefully regulated; the third is food: wholesome, flesh-forming, fat-forming food. In the early days of sanatorium treatment, "stuffing" was considered one, if not the most important, part of the regimen. Now, though we by no means belittle the value of overfeeding, we try to administer food in a palatable way, and under conditions which render its digestion easy. The old stories of patients being obliged to eat enormous quantities of food, and even when sick having to return and try again, are now a thing of the past. But it must be remembered that not only has sufficient food to be taken to replace normal waste, but also a further amount to replace the waste caused by the disease itself. The question of diet then, and quantity, must be most carefully considered. Food is taken in by the mouth, absorbed after digestion in the stomach and

bowels, and used by the body to replace waste. It is the fuel which drives the engine. If more is eaten than can at the moment be used, it is not lost, but is stored up as fat. Fat in the body is as the corn in a granary—ready for use in time of famine. Now, since one of the greatest difficulties in treating consumption is that of the digestion, it is necessary to lay up a store of fat, so that if at any time the digestive apparatus strikes work, as is unfortunately but too frequently the case, there will be a reserve to fall back upon.

RULE XXI.—Therefore try to put on fat.

We have just foreshadowed a danger, namely, that the digestion may refuse to work. Bearing this always in mind, and also keeping to the rule to eat as much as possible in order to get fat, we see that it is necessary to be extremely circumspect in our methods of taking food. For most people it will be found that three large meals a day, at long intervals, are more easy of digestion than the same amount of food would be if administered in more frequent doses.

RULE XXII.—Take three large meat meals a day at as long intervals as possible, say, at 8 a.m., 1.30 p.m., and at 7 p.m.

One of the most fattening foods we possess is good, rich milk, and being easily taken it is therefore, the more valuable.

In order not to destroy the appetite, the milk should be taken immediately after a meal, hence the rule :—

RULE XXIII.—At each meal eat as much as ever you can, then drink a pint of milk.

I can almost hear the consumptive reader, whose great trouble is that he cannot eat at all, simply gasp at the apparent impossibility of carrying out this rule. But indeed I can assure him that, after a very short time, when the fever is reduced to nearly the normal, he will find no difficulty in following this portion of the treatment, if he will be careful to observe the following rules, than which perhaps none in the whole book are more important.

RULE XXIV.—Never take food immediately after rising in the morning or after exercise : lie on a couch in the open air for one hour before the midday and evening meals, and for half an hour before breakfast.

RULE XXV.—Rest for an hour after each meal.

Up to this point the patient has been engaged in learning how to cure himself. It is, however, his bounden duty to do everything in his power to prevent his being a source of infection to others. The disease is passed from one person to another by means of the dried excretion, and therefore

the careful disinfection of the phlegm, of the mouth, and of whatever comes in contact with the mouth, will prevent any spread of the disease. From any chemist a pocket spitting-bottle may be bought, and this should always be used when out of doors. Some antiseptic should be put into the bottle fresh every day, and for this purpose a solution of one part in twenty of pure carbolic acid is very effective. The bottle must be emptied each day, and the contents burnt, with or without a little sawdust. The empty bottle should then be boiled with a little washing soda. It is convenient for patients to have two bottles, then one can be in use whilst the other is being cleaned. When the cough comes on, a handkerchief must always be held in front of the mouth. Paper handkerchiefs are very good for use, as they can be burned when soiled. Ordinary handkerchiefs should either be steeped in disinfectant immediately after use, or boiled.

An excellent method is to keep a saucepan specially for this purpose, containing a little 1-20 solution of carbolic, filled up with water. Handkerchiefs are put into this as soon as used and once a week the pot is boiled, and the handkerchiefs, after well boiling (ten minutes), are sent to the laundry.

The consumptive should have his own knife, fork, and spoon, and always eat off the same plate and drink from the same cup. After use

these should be scalded out. If care is exercised in following these directions, the consumptive may feel that he, at any rate, is not a focus for the spread of the disease. It is by teaching each consumptive to disinfect his phlegm, and thus to kill the microbes, which might cause consumption in others, that we hope to stamp out the disease.

In order to summarize, as it were, the foregoing treatment, the "order of the day" on the following page will be found useful. The hours are provisional, and may be altered to suit the requirements of each individual, and this order is only for those who have reduced the fever. For those whose temperature prevents their rising at all, the same meal times should be observed, and the amount of food. It will generally be found that the presence of fever does not prevent large quantities of food being taken.

TIME TABLE.

- 7 a.m.—Take temperature (col. A).
 Rise and take your bath quietly (before a good fire, if in winter in the bedroom. The windows being closed for the purpose, the bath may either be warm and followed by a cold sponge, or cold altogether. Dress quietly and slowly, and then lie down in the fresh air for half an hour before
- 8 a.m.—Breakfast, consisting of porridge, eggs and bacon, fish or ham, chops or some other meat: a little tea or coffee may be taken, plenty of butter with toast or bread, and, lastly, a pint of milk.
- 8.30-9.15. Rest again quietly in the open air, and, according to your doctor's instructions, take exercise for from five minutes to three hours. Then, immediately after this exercise, or at
- 12.30 p.m.—Return to the house and take your temperature (col. B), and again half an hour later, if necessary. Now lie down until
- 1.30 p.m.—Then take your mid-day meal: soup or fish, meat, poultry or game, plenty of pudding, farinaceous, suet or fruit, cheese and biscuits, plenty of butter, which is fattening. Finally, a pint of milk. Fluid taken during the meal should be but little, and may consist of beer or light wine. Rest again until
- 3 p.m.—Take, if permitted, your afternoon exercise, or remain resting during the remainder of the day, in your chair in the open air.
- 5.30 p.m.—Or immediately after exercise—take the temperature (col. C), and note on the chart whether after exercise or rest.
- 6 p.m.—Lie down for an hour before
- 7 p.m.—The evening meal, which may well be as full as you can make it, and should include one meat dish. Take the third pint of milk, then rest and amuse yourself until
- 9 p.m.—Undress quietly and get into bed, taking your temperature (col. D) ten minutes later.

How monotonous ! How unvarying ! It may be so, but ask yourself this :—

Would I rather undergo this treatment for a year, and then be able to do and to live absolutely as other people, cured of my disease : or would I rather—getting worse and more feeble from day to day—die within a few years at most ? Or put it another way :—To what length will I go to save my life ?

Before concluding, let me give the reader one warning. Often, perhaps, during the treatment there may come some little set back ; a rise of temperature ; a hæmorrhage from no apparent cause. This or the other. Do not be disheartened, but go to bed and start from the beginning again. Be assured that rest is the cure, and that each time you have to return to the primitive first cure, namely, rest in bed, you will require a less number of days to bring you back to the right road.

Another consolation, if progress is slow, may here be offered. The body has to be taught to produce an antidote to the poison of the tubercle bacillus. At first it does so slowly, but later more and more rapidly : and thus every day you live is a day gained, for the blood is steadily gaining the power to neutralize the poison formed by the microbe, and thus to restore your life.

APPENDIX.

BREATHING EXERCISES.

CONSUMPTION, except in very mild cases, always causes destruction of some portion of the lung, and therefore the patient, though his cure may be complete, will have, proportionately to the extent of the destroyed tissue, the less lung to breathe with. It becomes therefore very essential that the remaining healthy portion of the lung should be trained to its full capacity of breathing power by suitable exercises; for since contraction gradually takes place in the diseased area, the unaffected part of the lung may be made to expand and take the place of the portion destroyed.

Let it be distinctly understood that as long as the disease is in any degree active, breathing exercises carry with them the risk of drawing tubercular material and microbes into healthy portions of the lung; therefore breathing exercises should never be undertaken until all danger of such extension of infection is over.

It is not a matter of great importance what kind of breathing exercise is adopted; the following I have found valuable :---

1. Stand behind a kitchen chair, square the shoulders and grip the top of the chair-back with both hands, palms uppermost, keeping the elbows in, so as to rigidly fix the arms.

2. Expand the chest by a series of rapidly drawn breaths somewhat similar to the panting of a dog. When the proper degree of expansion is achieved a peculiar sensation of tightness underneath and below the shoulder blades will be experienced.

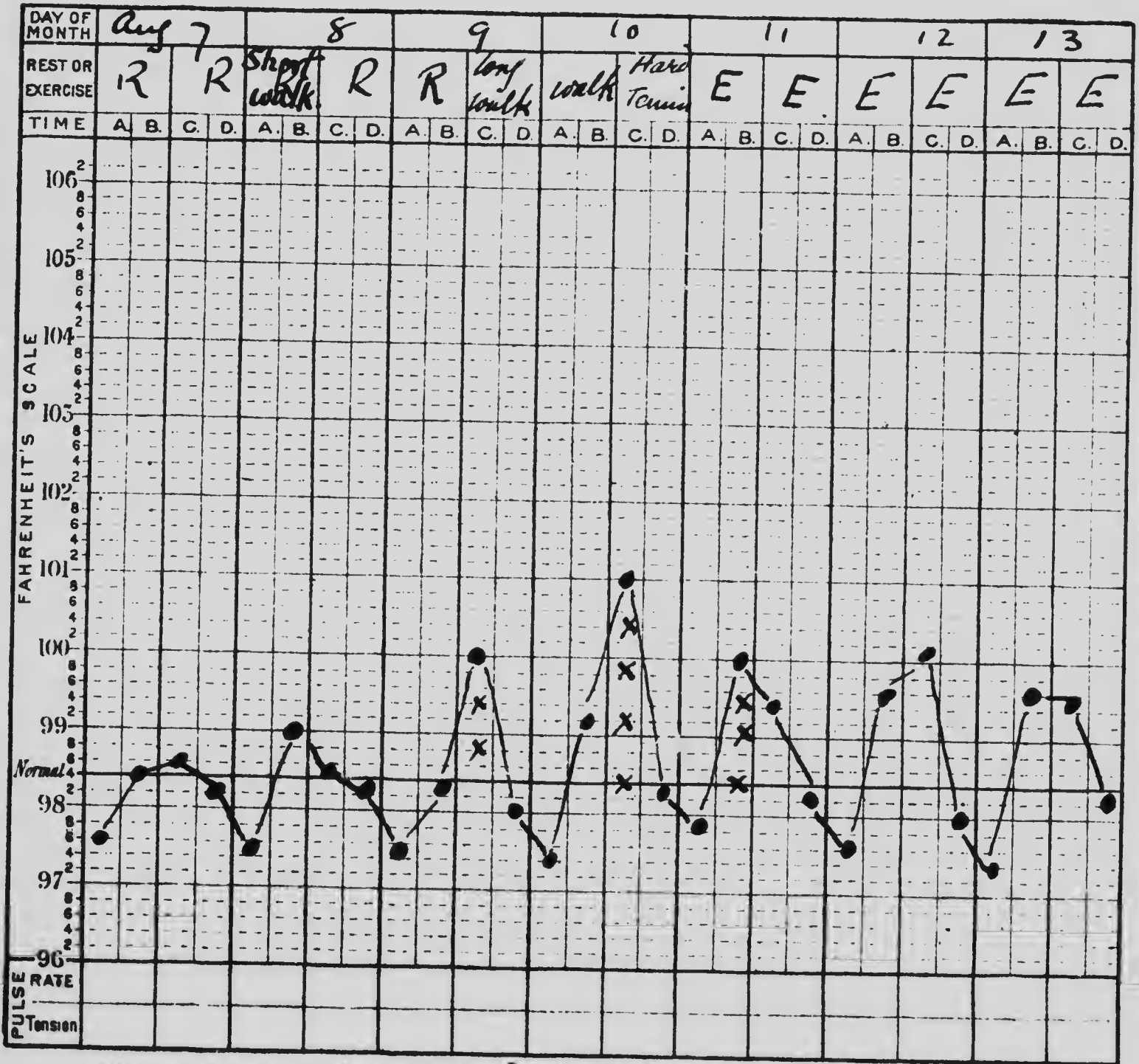
3. Allow the act of expiration to take place naturally.

This exercise should be practised for two or three minutes, morning and evening, until the lower part of the chest can be made to expand without the aid of fixation of the arms and panting breaths. When facility is acquired in this mode of breathing, deep inspirations should frequently be taken during the day.

Owing to the conical shape of the lungs, expansion of the lower portion of the chest is most valuable, for though the apex of a cone may expand without increasing the size of the base, complete expansion of the base must cause increased volume of the apex.

Chart of a Normal Man.

TEMPERATURE TO BE TAKEN:—A. On waking in the morning. B. Immediately after the morning walk or at 12 noon.
C. Immediately after the afternoon walk or at 5.30 p.m. D. Ten minutes after getting into bed.



X Temperature taken at intervals of ten minutes to show decrease immediately after exercise

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