

THE HEALTH OF THE SOLDIER; WITH SPECIAL
REFERENCE TO PREVENTABLE DISEASES.¹

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THE subject I have chosen is one of the utmost importance in dealing with the welfare of the soldier, not only in relation to the circumstances under which he lives, but also the conditions under which he serves. We are well aware of the careful military training which each soldier undergoes in order to render him efficient in the performance of his military duties, but in addition to this it should be the duty of every officer and non-commissioned officer so to educate the soldier that he may understand that, in order to be efficient in the true sense of the word, he must be physically fit, and capable of carrying out the important duties assigned to him, not only during peace, but also in war. He must be taught to learn that by attention to his bodily health and well-being in the many changeable conditions under which he is liable to serve—at home, on foreign service, and on field service—he can, to a very great extent, control and limit the many evil effects due to adverse climatic or other conditions, to which he is necessarily exposed, and which have to be encountered.

The main object in view, therefore, being “physical endurance,” it must be obvious to any one that disregard of personal health, thoughtless inconsideration of the injurious effects produced by exposure to adverse and trying climatic conditions, excesses of all kinds, debauchery and drink, must so weaken and impoverish the system that it becomes practically impossible for any soldier, who is regardless of the laws that govern health, to maintain himself in that state of health and physical fitness (with a reserve of vital energy and recuperative power) which is so essential for prolonged physical endurance. Owing to the many varied dependencies of the British Empire, the conditions of service are such that a soldier may be called upon to serve under conditions varying from an arctic cold to a tropical heat: and it is apparent to every one that the state of existence in the one is totally different to the other. Here in India, to which climate my lecture specially refers, the wide variation in the daily temperature is greater than in any

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other country, and it is this great variation of temperature in the twenty-four hours that is so productive of chills, which cause fever, and thus lower the vitality and resisting power of the individual, rendering him more liable to contract other more serious diseases.

Let us now consider the soldier from the time of his enlistment. It will be found that he is far more ready and apt to learn from the example of others than from precept, and it is for this very reason that the daily habits of those with whom he has been brought in contact, more especially the older soldiers, and to some extent the non-commissioned officers, appeal to him so strongly, and either guide him rightly or lead him to do wrong. If he could but be taught to learn that the old adage, *Mens sana in corpore sano*, is more applicable to him than to almost any other career in life, I have no doubt that the general efficiency and standard of health throughout the British Army would be considerably improved. It is therefore to the physical education of the troops that the attention of every officer and non-commissioned officer should be directed, to prevent rather than to cure, and to educate the young soldier to enable him to exercise his own judgment in discriminating between what is right and good for his own personal benefit, and what is thoughtless, foolish, evil and wrong, and to his own personal disadvantage and detriment. Much depends on the methods adopted to impart this necessary knowledge without making it irksome and tedious, and yet at the same time interesting, so as to impress on the young soldier how much depends on his own individual action in maintaining himself in a good state of health. Personally, I have found no difficulty in gaining their confidence and attention in the many lectures that I have delivered to them; and I firmly believe that by a systematic course of instruction, in which the aid of all officers and non-commissioned officers is of paramount importance, it is possible to direct young soldiers into the right way of thinking, so that they can see and judge for themselves, and act accordingly. Apart from these lectures, I have found it necessary to draw up a code of rules for their guidance, which could be distributed and hung up in each barrack-room, so that each man could read them at his leisure. It is called "Rules for Keeping in Health," and to most of us they may appear very simple in themselves; but it is the non-observance of these simple rules that is the cause of so much sickness throughout the British Service, and from my own experience I have found that impressing these simple facts on young

soldiers has led to most excellent results. The rules deal with ordinary indiscretions that are followed by ill-health.

“Rules for Keeping in Health.—For the protection and preservation of health in this country, it is necessary to observe certain simple rules, which are stated hereon for guidance, and it is hoped that every soldier will act up to them, and endeavour to preserve his health and keep himself in good condition.

“(1) Do not spit about in your barrack-room; the habit of spitting on the floor of a room makes it most unhealthy, and is one of the principal causes of sickness.”

This is a very important rule, as many diseases are caused by the sputum, or expectoration, drying up and setting free bacteria that are infective, which are blown about like dust. The chief disease spread by this means is tuberculosis, which was at one time far more common among soldiers than it is at the present day, which improvement is due to better sanitation, improved ventilation, and isolation of affected cases. The habit is a dirty and injurious one, and could be overcome by restraint, care and cleanliness.

“(2) Do not forget to change your clothing when you come in wet with perspiration. If you sit about in wet clothing the surface of your body gets chilled, and this produces fever; and remember that one attack of fever often leads to another. For the same reason, avoid cold winds when you are hot and tired and your clothes are damp.”

The necessity of observing this rule is obvious. It is a common practice for men to play games, and when the game is over and their clothes wet with perspiration, to sit on the stone steps of verandahs, or under a “punkah,” and get thoroughly chilled, the consequences being headache, fever, bowel complaints, bronchitis, tonsillitis, inflammation of the liver, pleurisy, or pneumonia, and, if a malarial subject, an attack of ague. In the hot weather, more especially during the rainy season, all damp or wet clothing should be changed as soon as possible.

Within the last few years, every soldier has been provided with three silver-grey flannel shirts, instead of two as formerly, and there should be no difficulty in carrying out this rule. It would be better, however, if all men were encouraged to provide themselves with a simple flannel shirt and trousers for wear during games; they are inexpensive, and could be purchased by contract and sold at a very moderate price; this would help to ensure the clothing being changed after the game is over. I would further suggest for the

health and comfort of the soldier, that sleeping suits of light flannel should be provided at a moderate cost; this is a matter of very great importance. Nothing can be more injurious to health than sleeping in a shirt that is damp with perspiration, whereas a dry, comfortable, light flannel sleeping suit would not only be a protection to health, but enable the soldier to air and dry his shirt during the night. I should also like to mention under this heading the advisability of providing a medium merino sock, in place of the white cotton socks sometimes worn during the hot weather months. The white cotton socks soon get soiled, and are very quickly and easily worn out, so that the men are not disposed to wear them. Many men wear the thick grey worsted sock through the hot weather, and anything more uncomfortable or likely to cause tender feet cannot be imagined. Light merino socks would be more comfortable, more durable, and gladly worn.

“(3) Do not delay in reporting sick, if you are not feeling well, if you are constipated, if you have a slight attack of diarrhoea, or if you feel chilly and have a slight touch of fever; go to the hospital, and by a timely dose of medicine it may be easily and readily cured. If you meet with an accident, or get bitten by any animal, reptile or insect, go to the hospital at once and get the wound or injury attended to without delay, it may be the means of saving your life.”

The delay in reporting sick is, unfortunately, of too common occurrence, and often leads to the spread of some preventable disease before sanitary measures can be adopted to arrest its progress. This refers especially to infectious diseases and enteric fever. In cholera epidemics, which are of much less frequent occurrence in the present day than in former years, the observance of this rule is of the very greatest importance. There is a form of fever very common in India, produced by exposure to the sun, or caused by a chill, and there is also a form of fever due to exhaustion and lowered vitality, which may aptly be termed “the fever of exhaustion.” Both these forms of fever are very common among young soldiers, and are especially incidental to military service, and it is when the system is in such an enfeebled, feverish, and debilitated condition that the young soldier is particularly liable to contract other serious diseases to which he may be exposed, and that are prevalent in the locality. It should therefore be impressed on all ranks that the delay in reporting sick, often from thoughtless, selfish motives, is not only dangerous to the individual, but also to others. With regard to wounds and injuries, more especially the

bites of rabid dogs, or venomous reptiles, it is absolutely necessary that immediate action should be taken in order to save life.

“(4) Do not have a long drink before meals, it weakens digestion, and also makes you disinclined for food. Eat your food slowly, and masticate it well; when food is eaten hurriedly it produces pain, flatulence, sickness and diarrhœa.”

The habit of drinking before meals is common among the working classes, who invariably drink beer at some public-house on their way home to their mid-day dinner; the beer being, therefore, drunk before and not with dinner. It has been customary in the Service to open the canteen before the dinner hour for the same reason, the men preferring to drink beer before their dinner, and personally I see no reason to alter their custom, provided, of course, that no one is allowed to drink more than one pint of beer or stout. I do not think that this amount of beer would be injurious to those who are accustomed to drink it, but if a larger amount is consumed by any man, he becomes drowsy, satiated, and disinclined to eat his dinner. A better arrangement would be to issue the beer in the dining-room of the barrack, or mess, so that it could be drunk during dinner. In many regiments, I believe, this arrangement is in force. This rule equally applies to drinking a large quantity of water or mineral water just before meals, as the action of the gastric juice is thereby weakened, and digestion interfered with. As regards eating food hurriedly, and without masticating it sufficiently, the injurious effects caused by indigestion are too well known to need any further remark.

“(5) Do not drink to excess, a moderate amount of beer, say a pint with dinner, and a pint in the evening, may do a man no harm; but a larger quantity of beer, or indulgence in spirits, produces nausea, pain in the stomach, colic and diarrhœa, a disinclination for food, and a restless, unhappy condition.”

The ultimate and certain result of excessive drinking in this country is that the bodily system becomes so enfeebled that it is unable to resist any serious illness, and it is a well-known fact that abscess of the liver, a very dangerous and fatal disease, is commonly caused by excessive drinking of beer or spirits. Owing to the existence of the coffee-shop, supper bar, Royal Army Temperance Association and similar institutions, excessive drinking is gradually disappearing, and many men in every unit are found to be total abstainers. There are many diseases caused by excessive drinking, all of a very serious nature. The habit becomes a mania, and

before very long the person addicted to excess becomes a total wreck, both physically and mentally, and utterly useless.

“(6) Do not eat any fruit that is unripe and hard, and do not eat any fruit that is over-ripe and in a soft, fermenting state; they both may produce great pain, colic and diarrhoea, and sometimes may predispose to cholera.”

This rule is very important, and its non-observance attended with severe abdominal symptoms, sometimes terminating fatally. I remember the case of a young soldier in the King's Own Scottish Borderers who was suffering with severe colic and hæmorrhagic stools due to his having eaten some hard, unripe pears, and his reason for having eaten them was because he was told that they would not get any riper. Fruit should be eaten when ripe, but not over-ripe. Another very important point in connection with the eating of fruit sold by native hawkers is that all fruit should be washed and peeled, if possible, before being eaten. It is quite a common practice for natives to soak a piece of dirty cloth in foul, contaminated water and then place it over the fruit, the consequence being that the fruit becomes contaminated with infective material; such fruit has been known to cause dysentery and enteric fever.

“(7) Do not eat or drink anything that is manufactured in the native bazaars.”

This is one of the most important rules. A very large proportion of sickness, notably, enteric fever, has been traceable to the consumption of bazaar-made articles of food and drink. There should be no necessity for any soldier to eat or drink in native bazaars, owing to the various means provided in barracks to meet all his requirements. The want of cleanliness in manufacture, and the insanitary surroundings in all native bazaars, render articles of food and drink liable to contamination, and become sources of infection.

“(8) Do not drink water from any stagnant pool, pond, tank, ditch, or well; all such water is often of the foulest description and liable to cause very serious illness. It is better to restrain your thirst until you return to barracks, where the water is good and wholesome. Only tap-water from stand-pipes should be drunk.”

The last sentence refers to a pure piped water supply, such as we have in Agra. The drinking of water from pools, ponds, tanks, streams, rivers, or wells is fraught with very serious danger to health, owing to the habits and customs of the natives of this country, whereby all such water is contaminated and rendered unfit

for drinking. Where the necessity arises water should be boiled before drinking, in order to destroy the infective bacteria that it contains. This sanitary measure is adopted on the line of march, in standing camps, on field service, &c. ; but it must not be accepted that enteric fever, dysentery, cholera, &c., are only contracted by drinking an impure water supply ; there are many other channels by which the infection is conveyed, yet, as foul, dirty water, and water from the above-mentioned sources, is frequently a recognised means of infection, soldiers should be especially cautioned against drinking any water that has not been passed as fit for drinking. Many years ago, I remember being on the line of march with a mountain battery. The men, mules and horses waded through a muddy stream, and one of the men stooped down, formed his hands into a cup and drank some of the water. His example was immediately followed by three or four others, but, fortunately, I happened to see it and immediately stopped it. Shortly after arrival at the practice camp two of these men were admitted to hospital with enteric fever. There was a plentiful supply of drinking water accompanying the battery, and no need whatever for drinking this muddy water. While in South Africa I happened to be in medical charge of a cavalry regiment, and on more than one occasion I found men of other mounted corps drinking water from shallow ponds that was quite unfit for consumption. I remember one trooper wading his horse into a shallow, filthy pond, the water in which was so foul that his horse refused to drink it, though parched with thirst ; but to my horror the rider dipped his water-bottle from his saddle into the pond and drank the water. No doubt every sanitary precaution was taken in his own camp for the proper boiling or filtration of drinking water, and he might have filled his water-bottle from a water-cart, with a little extra trouble and a longer ride ; but what good purpose can it serve when men, directly they get out of the precincts of their camps, where good water is provided, will purposely and thoughtlessly drink any water that they may come across. The supply of a sufficient number of water-carts to accompany each unit is the only way to prevent the drinking of water from dangerous sources. In my opinion there should be at least one water-cart per squadron to every cavalry regiment, and at least one water-cart per company to every infantry battalion.

“(9) Do not expose yourself unnecessarily to the sun. The direct rays of the sun are very liable to cause fever. Never go out in the sun without sufficient covering to your head.”

Exposure to the sun is one of the most potent factors in the causation of fever, apart from sun-stroke and heat apoplexy. The glare caused by the sun is very powerful, and affects the brain through the optic nerves. I am, therefore, strongly in favour of all men wearing darkly tinted spectacles to shade and protect their eyes during the hot weather months.

“(10) Do not forget to wash your hands before partaking of any food. If you sit down to meals with dirty hands you are sure to infect and pollute the food that you touch, and which will make you ill by eating it.”

The washing of hands before meals is a very important matter, but not generally performed. I think much may be done to encourage soldiers to carry out this rule.

“(11) Do not omit to throw a scoop of dry earth into the pans after use in the latrine; it acts as a deodorant and purifier, and keeps the latrine clean and without smell, and prevents flies from settling in the pan. Flies are liable to convey filth to food and drink.”

This rule, I regret to say, is not observed as strictly as it should be. Flies are consequently attracted to the pans, and convey infective material therefrom to articles of food and drink, thereby causing serious illness, such as dysentery, cholera, and enteric fever. Every man should be instructed to sprinkle the dry earth into the pan, and on no account to use a latrine pan that has previously been used, and especially if dry earth has been omitted. A duplicate supply of pans should be provided in all latrines, so that as soon as a pan has been used it can be removed and cleaned, and the duplicate pan placed under the seat. The supply of latrine paper to all latrines is a sanitary measure of the greatest importance; the cost would not be prohibitive, and it should be provided.

“(12) Do not soil the ground around the urine tubs.”

With a little care this could be easily prevented. The decomposition of urine close to the barrack-room is sure to produce illness, and is very offensive. The fouling of the ground around urine tubs is a very serious danger to health. This is frequently due to carelessness. Every man should endeavour to use the tub without soiling the floor around it. The following article has been tried, and found most suitable and serviceable in preventing urine from being passed on to the ground around the urinal. It consists of a tin cover, in the shape of a hip-bath, fitted with a rim and collar to support it on the top of the urine tub; the urine is passed into it from one

direction only, and enters the urinal without any possibility of being voided on the floor around (fig. 1).

“(13) Do not neglect your personal cleanliness. You should bathe every day, and keep your clothing, especially your underclothing, as clean as possible.”

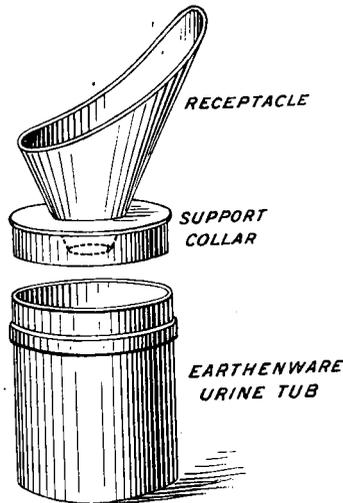


FIG. 1.

Cleanliness is of paramount importance in the maintenance of health. In India men should be encouraged to bathe daily. The use of the tooth-brush and washing of the mouth would not only improve the health of the soldier, but also preserve his teeth, which, unfortunately, otherwise rapidly decay and render him inefficient. Personal cleanliness and cleansing of the person are two of the most important rules to be impressed on the soldier. Clothing that has been worn during the day should not be slept in at night; it should be taken off, dried and aired before being worn again. All men should be supplied with sleeping suits to sleep in; it would add materially to their comfort and health. If every man were able to provide himself with two sleeping suits, the cost and upkeep would not be great, and the advantages obtained would be very great. In this country three bed sheets and two mattress cases are supplied to each soldier. I would prefer to see four bed sheets and one mattress case, so that two bed sheets could be at the wash and two in use. The need for two mattress cases does not appear necessary. If a certain number of mattress cases

were kept in store as a reserve, and calculated at a certain percentage, it would be quite possible to replace temporarily any mattress case that required repairing or washing. One mattress case ought to be enough for one man, and, financially, there would be a saving in issuing four bed sheets and only one mattress case. It often happens that men allow both bed sheets to go to the wash, and sleep on the mattress case covered with one sheet, an unsatisfactory and unsanitary arrangement.

“(14) Men are particularly cautioned not to have any communication whatever with women who loiter about the vicinity of barracks and cantonments for immoral purposes, as these women are prostitutes of the worst class who are very badly diseased.”

This is a matter of very great importance, for obvious reasons. In my opinion, much of the venereal disease contracted in this country is due to promiscuous intercourse with vagrant prostitutes. The great risk that he runs in disregarding this rule should be impressed on the soldier, and above all that the only safeguard from contraction of venereal disease is instant ablution. I consider that the reduction in the number of cases of venereal disease is due to a great extent to the use of the special washing compartments provided in barracks. Much, however, remains to be done in the prevention of wayside prostitution, and the recent orders on the subject will go far in lessening, if not entirely removing, this evil.

“(15) Do not forget that your health and physical condition and life lies, to a great extent, in your own hands.”

Every soldier should be taught to know that by attention to his bodily health, the avoidance of bad habits, and the exercise of reasonable care in his daily life, he need have no fear of the many causes of disease, all more or less preventable, that are met with in his military career.