Thesis

on

The Health of Armies

by

George Wood

Schneller, Solingen, 1840.

Aberchirder, 1840.
Good use made of Ballogallo, Marshall and Co. The whole on the new recruits not heard there offered much improvement.
Examination of Recruits

All are agreed that a judicious selection of recruits for our Army is a subject of the greatest importance towards our national welfare. To collect together the most suitable men, we must know in what part of our Kingdom to find them, and also to be able to select those whose constitutions are best fitted for the arduous duties of a military life.

Age should certainly not be overlooked in the construction of a body of men intended to undergo those exertions, which necessarily attend an army, more especially when engaged in active service, which often in military history, have been marked by calamities, having taken thousands of men, descendent to the erroneous age, at which the recruits were permitted to join; Many thought you could scarcely enlist men...
too young, grounded. Naturally on the idea, that the younger a person enters upon these branches he is subsequently to follow, the more easily will he become trained to the peculiarities of his new occupation. However true this may be in other matters certainly it does not hold good in reference to military recruits.

Sir George Ballingall has specified the most eligible periods of life for enlistment, to be from twenty to twenty-five years of age, and as this agrees with the opinion of most authors who have written on the subject, it is probably correct.

All loudly protest against the use of light men or younger forming part of an army, knowing that these are the ones who crowd the hospitals, in the time of war. Bonaparte was well aware of this, for on one occasion he said, "I demand a heavy levy of 300,000 men, for I must have grown men; boys come.
only to encumber the hospitals, and
the road sides."

In selecting recruits, we should do well
to attend to the former occupation of
the men, for beyond doubt, it has an
important bearing upon their efficiency
as soldiers: agricultural and out-door
labourers are acknowledged to make
better soldiers than the manufacturer;
and those accustomed to sedentary
labourists, the former are much less affected
in the time of war, by severe manual
labour, & are much better able to
withstand the vicissitudes of weather.

Further, they not unfrequently possess
a knowledge of the management of
arrows and crossbows, which renders them
still more eligible, especially for the
Cavalry and Artillery branch of service.

The physical conformation of recruits
ought always to be carefully looked to;
by the Longeons, before they are enrolled.

The generally associate the idea of an efficient army, with the excessive tallness and sturdiness of the men, who compose its ranks, but it has been again and again observed that these are the men who often give way soonest, when exposed to privations.

Those to be preferred, are middle sized, stout, active, and muscular men, such are found to succumb less easily to disease, and to bear up best against hardships of every sort. Besides there is a wide difference in our day, in the mode of fighting, from what prevailed formerly. Men seldom now come in close contact with each other, and surely a man of ordinary stature can manage and discharge a musket equally well with a taller one.

It is part of the Longeons' duty to
examine the recruits for the purpose of ascertaining whether or no he suffered from any organic disease, which may incapacitate him for actual service. To give a detailed account of the method generally followed for this purpose, would be very lengthy and uninteresting, as would also an enumeration of the different defects, which might prevent a man from enlisting. It ought to be the pride of every military surgeon, that his regiment be as efficient as possible, and for this end he should take especial care, not to overlook any important defect in the recruit. As a guide for him the Medical Department supply each regiment with printed papers, detailing the diseases, deformities &c., which disqualify a man for service, as well
as the method of conducting the necessary examination.

The Surgeon should also possess a knowledge of the diseases假装ed by Soldiers, and the means of ascertaining the truth, or falsehood of their statements. The motives which induce both recruits, and also those already in the ranks, to simulate disease, are very various, as are also the different diseases, and deformities themselves, which are假装ed.

It would be foreign to my subject to enter more fully into the consideration of simulated diseases, although a matter of vast importance to the Military Surgeon.
Clothing

In the eye of the Military Surgeon, who has the health, and comfort, of his regiment at heart, the subject of clothing will certainly claim a considerable amount of his attention, and study, and perhaps there are few matters connected with the hygiene of troops (as far as concerns the duties of the Surgeon) which stands more in need of speedy reformation, as the lamentable statements which were everywhere to be found filling our public journals, during the recent campaigns, will abundantly testify.

When we hear of our Guards actually becoming hurried under the heavy burden of their shakos, during the heat of the burning sun, Surely we have the fact brought vividly before our eyes, that it is high time for
Appearance to be sacrificed for
comfort and efficiency.
How widely different is the subject
of clothing bestowed upon in our Army
from that of other countries, say for
example our Allies and late enemies.
With as appearance and display is
the chief object, with them comfort
and usefulness is the all important
consideration, and yet the neatness
and uniformity of costume is seldom
if ever interfered with.

In order to render clothing efficient,
particular regard should be paid
to lightness, and durability, and the
evasions of soldiers and sailors,
demand that it should be to Con-
structed as to give them the full
use possible of their limbs, while at
the same time it should protect
them against the atmospheric sic.
vicissitudes, which their occupations necessarily, often exposes them to. The small jackets of our soldiers are particularly ill constructed, in as much as they leave unprotected the loins and hip joints; they are also often made so tight as to impede motion very considerably? The present cumbersome head-dresses, with some of our men bear, although sufficiently objectionable ornamental, are particularly objectionable, and point out very strikingly, how little attention is paid to comfort. A proper head-dress should combine the qualities of lightness and protection both against the weather, and against the blows of the enemy. The best kind of under-clothing is undoubtedly flannel, in as much as it is particularly useful, both in hot
and cold climates, in the former it guards against the severity of the weather, and in the latter it is believed by all, to be of great benefit, in preventing the evil effects of malarious exhalations, and infectious diseases. Sir John Pingle stated that he had seen the distribution of flannel, among the men, when they were suffering from fever, act as a remedial agent of great magnitude, in checking the onward progress of the fever. The only drawback to the use of flannel, is that unless care is taken, that they are often changed, and sufficient regard paid to cleanliness, injurious results are apt to accrue.

Personal cleanliness of the men, should also be attended to, by the Surgeon, for some of them, when left to themselves, either from laziness or carelessness, not un-
-infrequently, neglect this most im-
portant branch of military hygiene.
It has been observed that those men
who are most cleanly in their persons,
are always the first, to suffer from
disease.
It not infrequently happens, that
soldiers are compelled to make a
lengthy march on dusty and dusty
roads; and therefore, cannot fail
to have their bodies more or less be-
come soiled with obnoxious matter, and if
this be allowed to be repeated, day after
day without removal, before any great
length of time, must prove injurious
to the health; the best means to be
recommended is perfect ablution, the-
\ever of course such a method is practic-
able. Indulgent bathing should at
all times be encouraged, as it would be
help if each man could be taught to swim.
Exercise to.

As to the community at large, so to the Soldier: nothing can be more conducive to health and well-being, than a sufficiency of good exercise. An unthinking Observer might at first sight claim: Surely the poor Soldier has enough exercise, any other more than is beneficial to him. Is he not drilled often enough? Are not his marching and his manoeuvres sufficient exercise for him? He would reply, to a certain extent such exercise may come as exercise, but we maintain that it alone is insufficient. Exercise in the sense we mean here, in order to impart new vigour to the body, and infuse new cheerfulness into the mind, must have some interest, and some amusement combined in it; and certainly mere mechanical drill is
is not the proper means for that end. In many cases the soldier returning a lively recollection of the drilling of his first essay in the canton, and still remembering the drill sergeant, and the days when

"his awkward gait, his introverted face, Bent knees, round shoulders, depleted vital,

Procured him many a curse" ... at last gets to regard drill, almost as a punishment, or at least as a necessary drudge rather than a pleasant exercise, hence when it is fair to draw the inference, that this alone will not suffice for exercise, for the soldier; he must have come/pleasure in it, some stimulus to urge him to bodily exertion, some effort, in fact after destination, lay in some game, for instance, so as to bring the muscles into lively
activity at the same time, that the mind is fully interested in the effort.
In order to obtain this end, a piece of ground should, if possible, be set aside in every camp, for manly exercise. Not only this, but the men should be encouraged to mingle in the exercise, by the officers, for instance, setting them the example, and every now and then, mingling with the men in a game. From this no bad result of familiarity, or disrespect need be expected to accrue; on the contrary, the soldiers would feel a pride in distinguishing themselves in such manly exercise, under the immediate eye of their officers, whilst the more close intimacy, then established, would lead to a better understanding between officer and man.
and perhaps in the latter, too, the least of the least incentive to true obedience, love, and esteem, for their superior Officers.

As to the games which ought to be recommended to the Soldier, as conducive to his health, and amusement, the oldest and truly English game of Biscuit, we think in its proper season, holds the first place, and indeed stands unrivalled. What can be more exhilarating on a fine summer-day, or what more calculated to add new vigour to the stately muscle, that has been characterized by the lion of England, than wielding again and again of the heavy bat, or the hurling with wonderful speed, the bounding ball. It may be thought that I am here wandering from my subject, and am
making a thesis on cricket, but the reason I dwell so much on this point is, because I am so fully convinced of its utility, and because I think it has not received the attention and encouragement it merits. Cricket exercises both hand and leg, and thus excels as a more exercise, many other games; but it does more than this, it calls several of the faculties of the mind, into considerable play. Each cricketer requires forethought, to have all his shots about him, in taking to make up his mind in a second, what course is to be followed, and the best means of doing so, with safety. In fielding to be on the alert, and ready at his post, avoiding the enemy "the ball," and prepared to intercept him instantly. Cricket teaches habits to constant attention and watchfulness, and is therefore peculiarly
suited to the habits of the Soldier. The various other games with ball, may according to station, or season be recommended. In cold weather foot-ball is perhaps best suited for an out door exercise.

By those who prefer it, the foot race, leaping, and other such athletic sports, may with advantage be practised.

By such a happy combination, of exercises, with amusement, the Soldier will invariably, be much the better man; for in addition to the various bodily ills, a life of inactivity leads to, the idle man is proverbially a discontented one, and thus the early, and insidious seeds, may be sown of that spirit, so fatal to military discipline, insubordination.

Why is not leisure employed?
Diet.

There can be no doubt that diet exercises a most important influence on the health, and efficiency, of armies, and its proper regulation requires more attention than it has hitherto received. The chief object to be attended to, should be to obtain a cheap and highly nutritious fare, which would be easily cooked, and the time of war easily conquered, perhaps the easiest mode in which these desiderata may be best combined, is by issuing a diet of good strong bread or broth, along with a sufficient quantity of food, indeed this plan has been proved by experience, to be most advantageous in practice.

The ordinary way of issuing rations of meat, which the soldier, without the soldier prepared according to his own taste, labours under disadvantage, the meat...
which is intended to be divided, and
ought to serve for two, or more meals,
is generally cooked altogether, and eat-
en at once, the soldier seldom having
the self denial to reserve part of it,
for a future occasion; the result is
obvious, more food is consumed at
a single meal, than is either necessary,
or wholesome, and when the appetite re-
turns at a later period, the soldier has
no means of gratifying it, and as might reasonably be expected,
from such irregularity, in the times of
eating, as well as in the quantity taken,
a confirmed state of dyspepsia, is
often established.

The best way of remedying this, we think
would be, to divide the men into a
number of small messes, & to com-
semble each individual, to contribute
his rations to the common store.
Part of the food thus collected, should be formed into broth, with the addition of some common vegetables. The new would thus have a most wholesome, and nutritious meal, consisting of boiled meat and soup, the remainder might be treated in a similar way, for a second meal.

As to the number of meals, which the men ought to have, there appears to be some difference of opinion, some are persuaded, that they ought to have three daily; viz. one in the morning, one in the afternoon, and one in the evening. Some object to the morning meal, as being superfluous, this however we find a necessary portion. The better soldiers are fed, the more efficient they will be. Percorbo remarks on this subject, "I have seen the proportion of victuails, in a corps greatly and suddenly diminished, ..."
by the establishment of breakfast meals, which should be as regularly con-
ducted, as the dinner dressed.
It is difficult to say, what the best
materials for breakfast are, but probably
butter, bread, and milk, are as
good as anything; being cheap, agreeable,
and at the same time nutritious.

Tea and coffee, are it is true, not
nutritious, still they are useful beverages,
and it has been thought, they possess
the power of anesthetizing the progress of
fever.

The subject of intemperance, in con-
nection with our Army, is one of very
great importance. For probably in our
Army, more than in any other, are the
men addicted to this vice.

and any suggestion, that might lead
to happy results, in this particular, will
indeed be a boon, of immense mag-

intoxicate, both to the army, as well as to the nation at large. Intemperance is a habit, which continually leads the men, into excesses of every description, and tends much to subvert the necessary habits of discipline.

Putting out of view, the bad effect on the constitution or morals, it will be found, that a drunken regiment is almost always a bad and disordered one. The evil example once set, is but too soon followed, and it requires the strictest Government, to moderate the vice.

To remedy this evil, two plans widely different in their nature, have been suggested. The first, advocates the plan, of paying the soldiers their allowances daily, instead of permitting them, to accumulate for weeks or months at a time.

The second, recommends the -
establishment of Saving Banks, to as to afford an inducement to the men, to lay up any spare money, they may have at their disposal; for we do not pretend to say, which of the two methods specified, would be the preferable plan, nor is the one more beneficial. The practice of permitting the balances to accumulate for a length of time, has a most prejudicial effect, on the morals of the troops, for in this way, a large sum of money comes into their possession, at a time, and after they have been long without any, at their disposal, and the temptations to spend it, in intemperate living, generally prove too strong to be resisted, as a result it invariably happens, that after each semi-annual payment, a round of dissatisfaction is begun, that is most injurious to the soldiers in every way?
We think it would not be difficult, to alter this system, for the better. If the men's pay was issued daily, these pecuniary excesses would be avoided, and the general intemperance decreased.

The institution of savings banks, would have much the same effect. The men might, without much difficulty, be encouraged and advised, to lay by any surplus, they might have, and in this way besides the advantage of preventing them, having loose money at their command, a sum would gradually be collected, which would be of the greatest value, to them when retiring from the service.
- Toads in Camp, Bullets, & Bananas.

In selecting a site for a Camp, the Surgeon has many and important matters to bear in mind, in fact, there are few duties which he has to perform that require greater acumen and attention. Above all things, he should carefully avoid a marshy district, especially if the station is likely to be a permanent one. If however necessity compels him to encamp in such districts, trains should be made as soon as possible, and in fact every means should be used to render the place as little insidious as possible.

If circumstances permit, a choice of ground for encampment, a gentle declivity is a most desirable feature, but of course, it is essential that a sufficient, and easily accessible quantity of water, can be secured. In spite
of every precaution. Camps are apt to become dirty, and unhealthy, and ex-
perience has sufficiently shown, that in such cases, the best plan is to re-
move the tents from time to time, in-
stead of ineffectually attempting to remove the nuisance from the Camps. The system of tenting, is anything but a desirable mode of accommoda-
ting troops, since it gives the men too
great opportunities of indulgence, and
withdraw them from the immediate
eye of the Officers; but it sometimes
happens, that it is the only plan of
accommodation, that can be adopt-
ed, and in such cases, the Medical
Officers ought to use every endeavour
in his power, to mitigate its evils.
The ought as far as possible, to have
the men bivouacked in healthy localities, and
in proper apartments; the billets should
be visited and reported on by the Surgeon, before the Men are permitted to use them, and everything that is possible, ought to be done, to promote the comfort of the Men in each situation, and an especial watch should be kept over them, in order to prevent them, coming into any kind of excess.

Sanadis are universally admitted to be, by far, the most advantageous accommodation, in every way, for Troops in Home service, the general health of the Men, their morale and the strict Military discipline, which is so necessary, for the efficiency of troops, can be more easily, and better attended to, when the Men are collected together in this way.

It is a matter of regret, that a general plan, does not exist, after which all Sanadis might be constructed, subject
of course to modifications, arising from situation, and other circumstances. Dr. Duarte, many years ago, first suggested a general plan for the erection of brandw, which unfortunately has never yet been adopted, although it has once and again been brought before the authorities for consideration.

Much useless expenditure is incurred through the present system, and in consequence, if the erection of the building being entrusted entirely to architects, sufficient regard is seldom or never paid to that most important consideration, ventilation; and many other points, essential to the health of the men. Which might have been obviated, had the plans been submitted to the approval of intelligent medical men, are altogether neglected.

He thinks a committee, consisting partly
of medical officers, and partly of engineers, might easily arrange, some good general plan.

It would of course be necessary, to have different plans, for different climates, in which we have occasion to construct barracks, as it is evident, that a building exceedingly well adapted for this country, might be very inappropriate for a hotter climate.

A good barracks should be large and commodious, all unnecessary ornaments should be strictly avoided, not only for the sake of economy, but also, as has often been witnessed, lest the comfort of the men should be interfered with, by the means adopted, for securing the beauty of the building.

Ventilation, should of course be efficient, and for this end, many and widely dif-
Plans have been proposed, so many in fact, that it is difficult to select the most preferable one.

In Sir Geo. Ballingall's work, there is detailed an excellent plan, one which possesses several obvious advantages, which over many of the more complicated plans. It is simple, and economical, and not liable to get out of order, and may very easily be applied to existing buildings, where proper means of ventilation, have not been attended to.

The chief features of this plan are, that the heated air, shall be constantly leaving the apartments by apertures, on a level with the cornices of the building, while pure air is at the same time entering below to supply its place. The apertures ought to communicate, (of the situation of the apartment allow of such an arrangement) directly with
the external atmosphere, or if not, both
lobbies, which are constantly supplied
with fresh air.
This plan possesses also a great ad-
vantagé, in not being under the con-
trol of the Soldiers, it may also be
easily arranged, so as to allow the
Medical Officer to admit more or less
air, as he thinks fit.
The old surgical wards of the Edin-
burgh Infirmary, are constructed more
or less, after the above plan, and every
one who has been privileged, to study
in this University, are aware how much
wholly well ventilated, those wards are,
and perhaps more are few, so generally
healthy as they.
The great fault of most systems of
ventilation is the want of attention to
scientific principles, the natural tendency
of heated air is to rise, but most moder-
plans attempt, by contrivance and expensiveness, to introduce the fresh air from above, and force out the respired air, below a direction, directly opposite to that, which it would naturally follow.

In barracks, where a number of men are collected, often crowded together, it is of the greatest importance, to give due attention to cleanliness: the walls should be whitewashed frequently, and the floors ought to be scrubbed. For this purpose, some dry material should be preferred to soap and water, which are apt to be injurious, from the moisture they produce.

Perhaps, it would be advisable, to have more rooms than what are absolutely necessary, for the accommodation of the troops, so that when a room requires a thorough whitewashing or cleaning, the men
might be removed, to one of the vacant apartments, and in this manner, avoid the want they would have otherwise have to undergo, by sleeping in a damp room.

Of course, it is of great importance, when about to erect barracks, that a proper and healthy locality be selected, for the building, it should if possible, be a situation that has a good exposure, is well sheltered from the severity of the weather, and if possible, in a place which has been proved by experience, to be healthy.

**Accommodation of Troops in the time of war.**

When men are defending the rights of their Country, at the risk of their lives, surely, an especial care should be taken, to make their abode as comfortable, as existing circumstances will permit. Until lately, when an Army was actively
Engaged, the usual mode of lodging the men in tents, was generally adopted, and indeed, this was considered the best temporary, and movable, habitation. During the late Campaign, however, a much superior means in every respect, was suggested, by our gallant Allies, the French. We refer to the plan of lodging the troops in portable tents.

The success of this new method, was undoubtedly immense, as was most strikingly proved, by an immediate improvement in the health of our  British heroes, when the tents arrived, and replaced the tents, in which they had formerly been lodged. These tents hitherto unused, by our Army, have been formed of wood, but probably, it would be cheaper, and better in every way, if they were constructed of Iron or Zinc.

The French in their the late Campaign,
arranged their huts, in the form of a village, regular streets were formed, and in this way, they were able to arrange the different divisions, so methodically, that no difficulty was experienced in finding at once the locality where any particular corps of men were stationed.

Of course in this case, as in the building of a castle, proper regard should be paid, to the locality to be selected for the site. If possible it would be advantageous, to have the huts near a running stream, not only for the purpose of affording drink for the men and cattle, but also as rendering means for maintaining the huts themselves, in a state of cleanliness, which it would be otherwise difficult to do.

The near vicinity of wood for fuel, is a matter also to be attended to. It is not infrequently happens, in the time
If we, that we do not possess the choice of situation, but are compelled to pitch our Camp, in a place we know from analogy, must be unhealthy. In such cases, it becomes our duty to be redoubled in our attention, to general sanitary regulations, and to attempt to compensate for the unfavorable situation, in which the exigency of war has placed us.

George Wood.