

**A letter to the officers of the Army under orders for, or that may hereafter be sent, to the West Indies, on the means of preserving health, and preventing that fatal disease the Yellow Fever / by Stewart Henderson.**

**Contributors**

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A  
LETTER

TO THE

*Officers of the Army*

UNDER ORDERS FOR, OR THAT MAY HEREAFTER BE SENT,

TO THE

*West Indies,*

ON THE

MEANS OF PRESERVING HEALTH,

AND

PREVENTING THAT FATAL DISEASE

THE

*YELLOW FEVER.*

---

BY STEWART HENDERSON,

SURGEON OF HIS MAJESTY'S 40th REG. OF FOOT; AND  
MANY YEARS A SURGEON IN THE ROYAL NAVY.

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Entered at Stationers Hall.

# LETTER

TO THE

Officers of the Army

OFFICERS OF THE ARMY

UNDER ORDERS FOR THE

WEST INDIES

ON THE

## MEANS OF PRESERVING HEALTH.

### PREVENTING THAT FATAL DISEASE

FROM THE repeated melancholy accounts re-  
ceived of the late General, it is not only of the

importance of the subject, but also of the

urgency of the subject, that the officers have no doubt im-  
pressed on their minds with ideas of the country and some of its

features, and of the late General's death, and the

may have been rendered by making you infer

that this fatal disease, which has proved to be

so destructive to the health of the army, is

not so easily prevented, and that it is

Entered at Stationers Hall.



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TO THE  
OFFICERS OF THE ARMY  
UNDER ORDERS FOR THE  
*WEST INDIES.*

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GENTLEMEN,

FROM the repeated melancholy accounts received for the last twelve months from that part of the world you are now destined to, not only of the great mortality which has happened among the privates, but the officers, have no doubt impressed your mind with ideas of the country and your situation, not of the most pleasant nature; but this may have one good effect, by making you listen more attentively to the means pointed out for preventing this fatal disease, which has proved so destructive to so many of our brave countrymen, and at the same time induce you to be more inclined not to neglect prevention, which I am convinced is greatly within your power. It is true, those islands have been emphatically, and often too



justly, stiled the grave of the British army; but I believe at no period since their discovery has this been so strongly verified as of late. Few among us but have to regret the loss of a friend or an acquaintance; but it is to be hoped ere this the cause which produced it has in a great degree subsided, and of course the effect ceased; but as the West Indies have ever proved unsalutary to the young military, particularly the British, who from habits and manner of living suffer more from emigration to southern climates than any other nation—some instructions relative to the cause and prevention of disease may at this time be necessary; and I hope it will not be deemed improper in being offered by one, who, though he cannot claim high rank in the service, yet has had opportunities of becoming acquainted with the present subject, from having been eight years among the West India islands, English and French, employed with large fleets and armies during the last war, and since the peace; and he wishes to assure you that his only motive for writing it is the hope that it may prove useful.

There are periods where great salubrity has been experienced in the West Indies, especially on board of our ships of war; as an instance I shall beg leave to relate, that during the last three years I was at Jamaica, then surgeon of a thirty-two gun frigate, (the *Astræa*) we suffered less from disease than I am sure had we been in any harbour in England; nor do I think any village in

great



Great Britain containing the same number of inhabitants suffers so little from disease: not a man died on board, and only eight at the hospital, four of those were from accidents, so that four can only be said to have died from diseases of the climate; this may be known by the ship's books at the navy office. The rest of the fleet were, I believe, equally healthy, but in this ship I can speak more confidently, that every precaution was made use of to prevent disease by the judicious orders of the Captain and attention of the First Lieutenant, without which all our medical efforts would have availed but little.

As the future health of the men and exemption from diseases of the country will in a great measure depend on the state they arrive in, and as their services may be immediately wanted, it is of the utmost consequence that they arrive healthy, otherwise the purposes of government in sending them out must be defeated; for health, when once lost, is not soon recovered in that country. Besides, when sickness prevails in a ship there is no one secure from it; officers will, therefore, consider of what importance it is to employ every salutary means which by experience have been found useful; and the satisfaction they will have in landing with men in health and spirits fit for any enterprise, will compensate for the trouble they had in attending to them while on board; besides, it is a duty we owe to our country, and the service we have engaged in.



Before the soldiers are embarked, which should not take place if possible until a few days before they sail, a strict inspection should be taken by the surgeon to prevent any man from being sent where there is reason to suspect latent seeds of infectious disease are lurking about him, which may be judged from his unsalutary appearance visible to every medical observer, and from a knowledge that he had been lately in prison, or any other confined place where that insidious disorder the gaol fever never fails to reign, and often remains dormant for a considerable time until brought into action by some exciting cause ; therefore too great care cannot be taken to prevent its introduction on board, or being generated there, which has happened several times of late from the ships being too much crowded, and neglect of cleanliness and ventilation ; but it is to be hoped will now seldom make its appearance, since the transports which I understand are all fitted up agreeable to Sir Jerome Fitzpatrick's plan, which was sometime ago adopted by government, as well as the plan I recommended at Chatham for preventing its introduction into that garrison, and spreading its baneful influence to other parts of the army.

The tubes for conveying air into the births should be kept constantly open in the day ; the hammocks and bedding to be frequently brought upon deck, to be opened and well aired ; the deck below should be kept perfectly clean and dry, and no washing permitted but when fires can with safety be made



made in kettles to dry it. Washing the births now and then with hot vinegar will be useful—the men to be kept as much as possible upon deck, as confinement is unnatural to a soldier, tending to despondency and to produce disease. Exercising them often at their arms when it can be done. Amusements and innocent diversions of every kind should be encouraged by the officers. When arrived in the warm latitudes, the cold bath should be used, by making them every morning throw buckets of water over each other, which will be useful in not only keeping their bodies clean, but prevent too great relaxation.

The next thing to be considered is their diet. Soldiers on board of transports have but two thirds allowance; perhaps of salted meat this may be sufficient: but I think it would be useful if the other part was made up of flour, or any other vegetable aliment. And if I am well informed, and recollect right, there is one thing which in my opinion would tend to the good of the soldier and the service if done away; that is, putting them under stopages while they remain on board: it is true, they have no use for money while at sea, but that money if properly laid out for them before they failed, in purchasing a few necessaries, such as tea, sugar, onions, mustard, potatoes, and pepper, would assist greatly in preventing a scorbutic tendency in their habits, which living on a salted diet for several months never fails to produce, and renders



ders them more liable to be attacked with the disorders of the country.

A supply of necessaries for those who may fall sick (and several there will be in spite of every exertion) should be provided out of the regimental hospital fund, to be under the care and direction of the surgeon; and where there is none, some careful person appointed by the commanding officer: those necessaries to consist of tea, sugar, rice, portable soup, sago or tapioca, lemon juice, not forgetting the best of all remedies, some good wine.

There is one part of their diet which I would recommend to be altered---instead of bourgon, made of oatmeal, three times a week, to give them watergruel every morning for breakfast, as is done in most of our men of war. I need not add how much will depend on the officers that those things are strictly attended to, and the officer of the day, who visits the deck below, paying great attention to that part of duty. You are in no danger of being seized with disease so long as the men continue healthy, by having plenty of room, air, and being provided with good wine, and proper necessaries for the voyage; but it will be prudent to live temperately, to prepare the constitution for the change it must undergo from the transition of climate; and the effect of heat, combined with other causes, tending to bring on febrile complaints. In young, healthy, and plethoric habits, bleeding may be freely and safely made use of, and a few doses of purging physic may be taken; these are the only things



things which appear to me necessary for you while you remain on board. When disembarked, some farther directions will be necessary to guard you against those diseases which Europeans are so subject to on their first arrival.

The yellow fever, as it is called, which has made such dreadful havoc in the West Indies, is supposed by many to have been brought from Africa or America; but, in my opinion, it is a disorder which prevails more or less at all times in those islands, and other hot climates; but from a certain state of the air at times become more general, and having lately a greater number of subjects to act upon. Those who have kept a Metereological Register, no doubt, can account for its prevalence; there has been a great deal of phlogiston, or inflammatory matter, in the air, occasioned by a want of the usual rains, and squalls which prevail in that country, and which will be removed when the natural seasons return. To prevent the attack of this fever, all stimulating powers must be carefully avoided, such as violent exercise in the sun; to eat sparingly of animal food, and drink moderately of wine, not exceeding a pint of Madeira in the day, and no ardent spirits; if possible, avoid being exposed to the night air: but when duty obliges you, take care to be warm cloathed; a glass of tincture of bark, and smoaking a segar, will be useful on these occasions, likewise a fire near you when it can be done: but the great and best preventive will be, *temperance and regularity of living.* Unfortunately



nately in that country there are not many inducements to quit the fascinating bottle, unless you possess great resolution, and are well convinced of its baneful effects; for there are few amusements, no operas, plays, and little society, except among yourselves; it therefore behoves commanding officers, who have experience and judgment, to discourage drinking, by authority, example, and precept. I do not mean by this, that officers drink to excess; but I may venture to say, frequently indulge too far in a country which cannot be done with impunity. Among the privates, the immoderate use of ardent spirits has been always considered the leading cause of the sickness and mortallity which has happened among them; and I have remarked, that sickness prevailed in proportion to the opportunities they had of committing irregularities: as a proof of this I must observe, that when I was in India, and in the Coimbatore country, with the army commanded by Colonel Fullarton, there was for several weeks no arrack for the troops, during which time the sick list considerably decreased, although the duty of fatigue was great, and the season unfavourable; the days being excessive hot, the evenings and mornings chilly and damp. It is true, the men's spirits were kept up and animated with the success which attended the military operations of that army, and their minds were filled with the golden prospect of getting immense treasure in Tippoo's Capital; these circumstances, we might suppose, would have had

confi-



considerable influence in retarding disease, but they were not sufficient to counteract the baneful effects of that destructive poison; for a few days after receiving a supply of arrack from Calicut, the sick list again returned to its usual standard; but I must say, it is the great and only failing I know in a British soldier—too great a propensity to liquor, which no punishment, or even certain destruction, can prevent. In the West Indies, where it is so plentiful and easily procured, officers will have great merit if they can prevent the men from the abuse of it. Exposure to the night air, by obstructing perspiration, when the body has been overheated, either by violent exercise in the sun, or the use of stimulating liquors, seldom or ever fails in newcomers to produce this fatal disease the yellow fever.

The constitutions of our soldiers from climate and manner of living are naturally robust, therefore more liable to be seized with fever, attended with that violent re-action which increases the tendency to putrefaction, and it is remarked that the strongest men in a regiment, the grenadiers, are the first to suffer. It commences its attack with all the symptoms of inflammatory fever, great heat, and universal pains, thirst increased, tongue parched and dry, pulse full and hard, the face flushed, and eyes appear inflamed, strong pulsation of the carotid arteries, and evident increased impetus and determination of blood to the head; considerable heat and pain is felt about the region of the stomach



mach with great irritability of that organ which rejects every thing taken into it—if these symptoms are not arrested on their first onset, from their violence and rapidity in twenty-four or thirty hours, the second stage or fatal termination commences, with great debility, with evident derangement of the brain and dissolution of the small vessels about the head and stomach, which increases in spite of every medical effort to stop their progress, and generally proves fatal on the third or fourth day; not one in a hundred I believe recovers after the second stage has commenced, and the remedies in the first have been neglected. We should, therefore, in the beginning employ the most powerful and effectual remedies, which are large and copious bleeding, not only from the arm, but opening the temporal artery would be adviseable; and to assist in taking off the determination of blood to the brain, the fore part of the head should be shaved, and cloths frequently applied wet in vinegar wherein sal ammoniac has been dissolved; cool air to be admitted, and no unnecessary attendants to be permitted in the room; after plentiful bleeding has been made use of, a blister should be applied to the region of the stomach, and a lenient purge given to carry off any acrid matter; if this cannot be retained, which is frequently the case, a glyster should be administered; and if the pain and irritability of the stomach is relieved by the blister, and evacuations have been procured, a dose of James's

pow-



powder should be given and repeated until a plentiful perspiration is brought on, which should be encouraged by drinking of balm, sage tea, or chicken broth; these remedies, when employed in time seldom fail to bring on a remission of the fever, and a favourable termination of the disease, requiring afterwards some bark and wine to remove the debility which the violence of the symptoms and remedies employed have occasioned. Though I believe few recover when the putrid stage, I may say, has commenced, yet no means in our power ought to be neglected as in some constitutions the symptoms cannot be so violent, and may, therefore, yield to the remedies recommended by authors.

The other diseases which the troops are more particularly exposed to, are the remittent or marsh fever, and dysentery; the former prevails most after the rainy season. Those who are obliged to be in the vicinity of marshes exposed to the effluvia arising from corrupted vegetable matter, run every risk of being seized with this fever: if you have choice of situation take care to be to windward of it, and when tents are to be pitched, either for the healthy or sick, this precaution should not be overlooked: but as your duty on service will frequently put it out of your power to attend to those circumstances; to guard against the effect of this bad air, what I recommended in a former part of this letter will be useful. A fire near your tent, smoaking a segar and a glass of tincture of bark,

or



or any warm aromatic, especially in the morning, when this air has most influence.

The dysentery is the constant attendant on camps, and frequently the scourge of an army; but it has not been so common or destructive to our troops in the West Indies since the soldiers have been obliged to wear flannel waistcoats next their skin during the rainy season and for some time after: care should be taken that every man is provided with two of these; it will likewise be proper for the officers to wear them during the wet months.

As you will be frequently exposed to the intense rays of the sun, which occasion sometimes violent headach, and danger of a *coup de soleil*, I have found this relieved and prevented by only wearing a few folds of linen under the fore part of the hat wet with vinegar, which is both cool and pleasant.

Such are the precautions and means I would advise for preserving health and preventing that fatal disease, the yellow fever, among officers and soldiers in the West Indies; and I have no doubt, if strictly followed, will be attended with every salutary effect, which is my sincere wish.

I am,

GENTLEMEN,

Your most obedient humble Servant,

STEWART HENDERSON.

Surgeon 40th Reg.

No. 8, Howard Street, Strand,

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