

James Lind's *Treatise of the Scurvy*

On the 20th of May, 1747, I took twelve patients in the scurvy, on board the *Salisbury* at sea. Their cases were as similar as I could have them. They all in general had rotten gums, the spots and tiredness, with weakness of their knees. They lay together in the same place, a proper apartment for the sick in the fore-hold;

Everyone ate the same food:

- porridge sweetened with sugar in the morning;
- fresh mutton-broth often times for dinner;
- at other times puddings, boiled biscuit with sugar;
- for supper, barley and raisins, rice and currants, sago and wine, or the like.

Of these 12 patients:

- ✓ Two of these were ordered each a litre of cider a-day.
- ✓ Two others took twenty-five drops of *elixir vitriol* three times a-day, upon an empty stomach;
- ✓ Two others took two spoonfuls of vinegar three times a-day, upon an empty stomach; It was also added to their other food.
- ✓ Two of the worst patients, with rigid tendons in the thigh, (a symptom none of the rest had), were put under a course of sea-water. Of this they drank half a pint every day,
- ✓ Two others had each two oranges and one lemon given them every day. These they ate with greediness, at different times, upon an empty stomach. They continued just six days under this course, having eaten all the fruit that could be spared.
- ✓ The two remaining patients took a nutmeg-sized pill, made of garlic, mustard-seed, *rad. Raphan.* balsam of *Peru*, and gum myrrh; They drank, barley-water with boiled tamarind fruit added;

The Results

The result was, that the most sudden and visible good effects were seen from the use of the oranges and lemons; one of those who had taken them was after just six days fit for duty. The spots were not indeed at that time quite gone, nor his gums completely sound; but without any other medicine, than a gargle of *elixir vitriol*, he became quite healthy before we came into *Plymouth*, which was on the 16th of *June*. The other was the best recovered of any in his condition; because he seemed almost better, he was appointed nurse to the rest of the sick.

Next to the oranges I thought the cider had the best effects. It was indeed not very sound, as it was a little sour. However, those who had taken it were in a fairer way of recovery than the others at the end of the fortnight. The rotten gums, but especially their tiredness and weakness, were somewhat improved, and their appetite increased by it.

As to the *elixir of vitriol*, I observed that the mouths of those who had gargled it, were in a much cleaner and better condition than many of the rest, especially those who used the vinegar; but noticed otherwise no good effects from its internal use upon the other symptoms. I indeed never had a great opinion of the efficacy of this medicine in the scurvy,

There was no real difference in those who took the large pill, the seawater, or vinegar, upon comparing their condition, at the end of the fortnight, with others who had taken nothing but a little laxative to stop them becoming constipated.

As I shall have occasion elsewhere to take notice of the effects of other medicines in this disease, I shall here only observe, that the result of all my experiments was, that oranges and lemons were the most effective remedies for this disease at sea. I think oranges preferable to lemons, though perhaps both given together would be best.