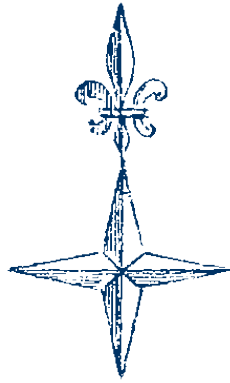


Health & Medicine



‘Batavia is certainly a place that Europeans need not covet to go.. they will do to make their stay as short as possible otherwise they will soon feel the effects of the unwholesom air of Batavia which I believe is the death of more Europeans than any other place upon the whole Globe..’

James Cook, Dec 26th, 1770

Scurvy of a most malignant character ..This disease arising from a source of causes, such as an inactivity and want of clear circulation of air, laying on a bare damp deck, turning into their hammocks with damp clothes, a long use of salted provisions & cooks slush, a want of greens & vegetables..’

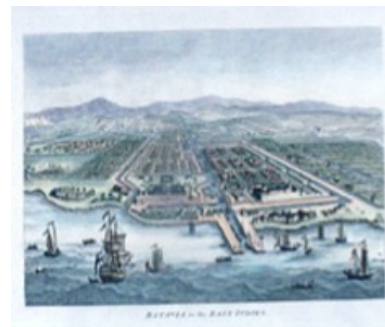
Comment by a ship's surgeon, 1803.

By the late 18th century physicians suspected that scurvy was due to a dirty environment or foul air, from dampness, or by eating a sailor's favourite pudding made of 'slush' - the fat skimmed off the water in which salted beef was boiled.

They did not know that it is mainly caused by a deficiency of ascorbic – the essential nutrient, vitamin C. Ascorbic literally means 'anti-scurvy'. Many ships carried twice the number of crew, in order to have replacements for those men lost to scurvy. The Navy was trialling antiscorbutic remedies: sauerkraut (pickled cabbage); portable soup made from meat products; saloup (a jelly-like food made from orchid roots); malt and rob (a concentrate of oranges and lemons). Some of these were used on the Endeavour but the boiling process limited the vitamin content of the rob, and the sauerkraut was at first unpopular with the sailors. Cook's Journal for 13 April, 1769 tells how he persuaded the men to eat it. 'The Moment they see their Superiors set a value upon it, it becomes the finest stuff in the World.' Only three cases of scurvy appeared during the Endeavour's first voyage to the Pacific and all survived. Cook's insistence on keeping the men and ship clean, providing 'spruce beer' instead of grog and taking on fresh food and water at every opportunity, became standard practice in the Navy. A supply of fresh lemons and limes became standard on British ships after 1795. As far back as Roman times, ships carried surgeons. Originally Barber-Surgeons, they were apprenticed for seven years but the prime qualification was to be able to stand the sight of blood. It was commonly believed that a bloody apron was a sign of experience and therefore respect. In 1747 the Society of Naval

Surgeons was formed, attracting young men with medical degrees. Surgeons and their Mates prepared for amputations of limbs by stretching canvas or sailcloth across a makeshift trestle table. Instruments were laid out for easy reach. They placed buckets filled with sand nearby to catch and soak up the blood and to hold the amputated stumps. The advice given for amputating a leg was to cut quickly - less than two minutes - with a 'crooked' (serrated) knife. Originally, wounds were sealed with a hot iron or pitch. Later, ligatures were used to reduce bleeding and the stump was covered with the remaining skin.

Toothache was also dealt with by the Surgeon. Sailors' poor diet and tough or stale meat and ship's biscuit meant this was a common problem on board ship. Bad breath and rotting teeth were early symptoms of scurvy. The treatment was to dull the nerve with arsenic or pull the tooth out with a Tooth key. The officers and gentlemen may have used a tooth stick, boar-bristle brush or tooth powder made from brick dust, charcoal, salt or crushed shell which provided an abrasive to clean but did nothing for the health of their gums.



Batavia (now Jakarta, Indonesia) Published in London 1793. Artist unknown. ANMM collection.

As far back as Roman times, ships carried surgeons. Originally Barber-Surgeons, they were apprenticed for seven years but the prime qualification was to be able to stand the sight of blood. It was commonly believed that a bloody apron was a sign of experience and therefore respect. In 1747 the Society of Naval Surgeons was formed, attracting young men with medical degrees. Surgeons and their Mates prepared for amputations of limbs by stretching canvas or sailcloth across a makeshift trestle table. Instruments were laid out for easy reach. They placed buckets filled with sand nearby to catch and soak up the blood and to hold the amputated stumps. The advice given for amputating a leg was to cut quickly - less than two minutes- with

a 'crooked' (serrated) knife. Originally, wounds were sealed with a hot iron or pitch. Later, ligatures were used to reduce bleeding and the stump was covered with the remaining skin. Toothache was also dealt with by the Surgeon. Sailors' poor diet and tough or stale meat and ship's biscuit meant this was a common problem on board ship. Bad breath and rotting teeth were early symptoms of scurvy. The treatment was to dull the nerve with arsenic or pull the tooth out with a Tooth key. The officers and gentlemen may have used a tooth stick, boar-bristle brush or tooth powder made from brick dust, charcoal, salt or crushed shell which provided an abrasive to clean but did nothing for the health of their gums.

Anaesthesia

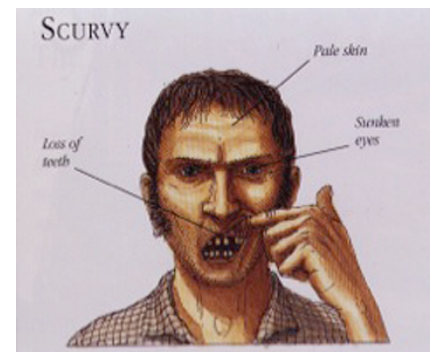
It was considered better to operate while the patient was fully conscious – pain was considered a normal part of life – and sedate them with opium-based laudanum or grog during the healing process. Although the use of ether had been known for centuries, its effects were unpredictable. Things changed in 1846 with the use of general anaesthesia and again in 1867 when antiseptics were widely used to control infection.

Bleeding was used to treat fevers, cholera and rheumatism. There were several methods: *scarification*, *cupping* and *bleeding*. Dr John Coverdale's bleeding kit circa 1830-1870 (ANMM collection) consists of one brass scarifier (cutter), five glass cups, one brown leather tourniquet, one glass spirit bottle and a brass taper.

Haemophagic leeches were also used by attaching them to the body. They remained there until they became full, at which point they fell off to digest the blood. Leech saliva contains chemicals that prevent blood clotting, so a wound might bleed for hours after the leech was removed.

Naval Surgeons were expected to be physician, surgeon and apothecary. At the time of Cook's voyage, they were paid very little and expected to provide their own instruments and a medicine chest. Many of the drugs used in the 18th century would be considered dangerous or illegal today.

Although Cook claimed that he had not lost a man to scurvy on Endeavour's three year journey, he did in fact lose almost a third of the 94 men and boys on board to the 'bloody flux' and malaria. The Endeavour limped into Batavia in October 1770. The Dutch had been using the town as a centre for trading spices since the early 1600's. Tall houses on long canals were designed to resemble life in Holland but the swampy water and tropical climate meant outbreaks of disease killed many ships' crews. Despite this, Batavia was the only site equipped to do the major repairs necessary to get the Endeavour back to England. Over a twelve week period, all but 10 of the ship's crew sickened with malaria and dysentery – the 'bloody flux'. Cook was forced to take on extra men to replace the sick and dying. The Endeavour weighed anchor on 26th December, 1770 and sailed into clear breezes, leaving the 'unwholesom climate' of Batavia behind. Disease had claimed seven men including the surgeon, Mr Monkhouse and the Tahitian priest, Tupaia and his servant, Taiata. Over the next three months, Sporing, Green, Parkinson and 20 other crew died and were buried at sea as the ship sailed for England and home.

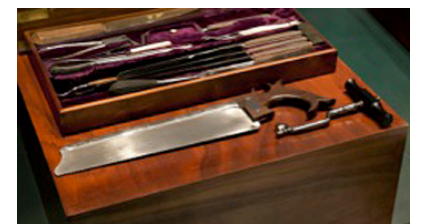


Symptoms of Scurvy

1. Loss of strength, depression. Skin and tongue break out in ulcers.
2. Yellowish skin, sunken eyes and sore muscles. Bad breath. Gums swell, bleed and go black.
3. Teeth fall out and large bruises appear without cause.
4. Eyesight begins to fail in some cases.
5. Exhaustion, diarrhoea, heart and kidney problems.
6. Death.



Mr. Tilbrook's family medicine chest c 1880. ANMM collection.



Amputation saw, Tooth key. Dr Coverdale's Surgeon's case 1830s ANMM collection



HMB ENDEAVOUR



AUSTRALIAN NATIONAL MARITIME MUSEUM