

Life At Sea: Sores, Scabs, and Scurvy Health Measures On Board

On an extended voyage, shipboard life, uncomfortable at best, could become a nightmare. Boredom destroyed men's spirits. Foul water and rotting food sapped their strength. Cramped quarters made tempers flare. To fight the monotony, off-duty hours were whiled away in the time-honored practice of swapping sea tales. Captains often tried to limit the number of veteran sailors, preferring to take new men who would not retell the same familiar stories to distraction. But a number of old salts were needed, literally to teach the new men the ropes.

Experienced sailors, with a penchant for second-guessing the captain's orders, also increased the possibility of mutiny. The terrors of sailing unknown seas, combined with the discomforts of life aboard ship, made discipline hard to maintain. Obedience to orders was not automatic, and a captain had to work hard to enforce his control over an unruly crew. As a result, drastic punishment was sometimes needed. Examples of punishment, could be a sailor being repeatedly dunked from a platform at the stem, a second is being keel-hauled (dragged on ropes beneath the ship's hull), and a third sailor's hand is pinned to the mast with a knife.

The crew was a rough-and-ready lot, drawn from the lowest ranks of society. (They could also be of diverse nationalities. On Magellan's ships for example, there were Italians, Frenchmen, Germans, blacks, and one Englishman, in addition to the Spanish and Portuguese.) They were divided into rotating watches of four hours each. (The completion of eight half-hour sand clocks marked a full watch. The ship's bell of the cabin boy's calls marked the turning of the glass. The ship's bells of modern times originated in this custom.) Their tasks while on watch included setting sails, swabbing decks, and handling rigging. At the end of their watch, the men bedded down on the hard planks of the deck, with neither mattresses nor hammocks to sleep on. Only officers had cabins with bunks. Wooden cages suspended over the rails, known as jardines or gardens, a reminder of the usual 16th-century location of the privy, served as latrines. In rough seas, however, the men used the bilges at the bottom of the ship. As a result, the ship constantly reeked of noxious odors even though the bilge was cleaned and scrubbed several times during a voyage.

The crew ate only one hot meal a day, usually around noon. Because there were as yet no galleys aboard ships, meals were cooked over a fire kindled in a box of sand on the open deck. When it rained, food was eaten cold, but hot or cold, a - sailor's diet was monotonous. It consisted of salted pork, a bit of cheese, some beans, onions, and the staple of all nautical diets, ship biscuit.

To wash down their unappetizing meals, the crew had water and wine, both of which quickly spoiled in their wooden casks. The wine turned to rancid vinegar. The water became so foul and smelly that sailors held their noses while drinking it.

Disease was part of life aboard ship. It was common for sailors to come on board with diseases such as chicken pox or measles; these rapidly spread to others in the tight quarters. Diseases were contracted in ports while the crew was on shore leave. Dysentery, and typhus fever could be traced to contact on shore. Still other ailments came from the food. Food poisoning was common, as was scurvy. Many sailors returned from a voyage suffering from malnutrition. Malaria would be contracted from mosquitoes in tropical climates. Any diseases involving vomiting and diarrhea was called the flux.

The lack of fruit and vegetables led to violent outbreaks of scurvy, caused by the absence of vitamin C in the sailors' diet. Scurvy, in fact, killed more sailors than all other maritime disasters combined. The disease caused gums to blacken and swell, teeth to fall out, and joints to become so weak that it was impossible to stand. A 16th century sufferer described the ravages of the disease: "Many of our people died of it every day, and we saw bodies thrown into the sea constantly, three or four at a time. For the most part they died with no aid given them, expiring behind some case or chest, their eyes, and the soles of their feet gnawed away by rats."

Officers, whose personal supplies often included some dried fruit, suffered less often from scurvy than the men. Captains knew that fruit and vegetables maintained the crew's health, but in the 16th century there was no way to keep fresh foods from spoiling aboard ship. The appalling suffering scurvy created was not relieved until 1795 when British sailors were ordered to drink a daily ration of lime juice. The juice not only remedied the vitamin C deficiency but also gave British sailors the nickname Limeys, by which they are still known today.

Most ships' captains did very little to assist the sick sailors; many sailors would die at sea. Doctors did travel on board, but their remedies of purging (giving something that made you vomit) and bleeding probably harmed more than they helped. Techniques like scrubbing the ships with vinegar helped control the bed smells (it really killed germs). Most sailors were left to survive on willpower and a hope to get home soon.

The shipboard health conditions were so poor that books and papers were written on the subject. Captain Cook adopted a set of health measures after many trials on his voyages. The following are measures he suggested and the ones he decided to adopt on a regular basis.

Health Measures a Captain should Suggest

1. Personal hygiene: cold bathing, skin friction (rubbing your skin), exercise on board, clean dry clothes, hammocks, bedding, and uniforms.
2. Ship hygiene: cleanliness. Ventilation, fumigation (killing fungus, mold), piped warm air and heating system.
3. Medical hygiene: spacious sick bay. Segregation of contagions (people who are contagious), surgical discipline.
4. Anti-fever measures: prophylactic quinine (used for malaria)
5. Water: distillation, purification, sterilization

6. Food: baked wheat bread, cultivated greens, bottled fruits, salted anti-scorbutic (anti-scurvy) vegetables, fresh meat, salt meat.
7. Reduced spirits: wine, cider, fruit drinks in lieu (instead of)
8. Proven anti-scorbutic: oranges, lemons.

Health Measures that Captain Cook Used

1. Personal hygiene: cold bathing, exercise on shore, clean dry clothes, hammocks, bedding
2. Ship hygiene: cleanliness, ventilation, fumigation
3. Galley hygiene: scoured ship's coppers (clean cooking pots)
4. Water: abundant and fresh water intake
5. Food: reduced salt meat, prohibition of meat fat; fresh meat, vegetables, sugar in lieu of oil, wheat in lieu of oatmeal
6. Empirical anti-scorbutic

The following are some common diseases that sailors had during sea voyages.

Dysentery - chronic diseases of the large intestines from an amoeba.

symptoms - diarrhea with blood and severe abdominal cramps.

Malaria - fever from a parasite transmitted by mosquitoes.

symptoms - fever, chills, and sweating. Untreated the attacks continue to recur. Treatment was quinine, which was toxic to the protozoan that caused the malaria.

Malnutrition - the lack of proper vitamins in diet.

symptoms - Lack of energy, sleepiness, vulnerability to colds and flu. Can be fatal.

Scurvy - disease from a deficiency of vitamin C.

symptoms - weakness, spongy and inflamed gums, loose teeth, and ruptured blood vessels. If not reversed will eventually result in death.

Sea Sickness - being off balance on board ship.

symptoms - Upset stomach, vomiting, and headache. Can cause dehydration. Usually goes away after a few weeks at sea.

Typhus - contracted from body lice.

symptoms - 10 days after being bitten: high fever, pain in the muscles, headaches. After 5 days a dark-red rash appears, the second week the victim becomes delirious and dies. If the victim survives the first 2 weeks, he or she will recover.