**BBC: Ancient History In Depth**

**Health Hazards and Cures in Ancient Egypt**

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**The environment**

Many accounts of ancient Egypt begin by stressing the influence of the environment, and particularly the great River Nile, on the everyday life of its people. It is a good place to start in considering the health of the Egyptians, as the Nile was the life- and health-giving source of water for drinking, cooking and washing. It also, however, harboured parasites and other creatures that were less beneficial.

As people waded through standing water, particularly in the agricultural irrigation channels, parasites such as the Schistosoma worm could enter the human host, via the feet or legs, to lay eggs in the bloodstream. These worms caused a lot of damage as they travelled through various internal organs, making sufferers weak and susceptible to other diseases.

Sometimes ancient Egyptians took in guinea worms in their drinking water. The female guinea worm would travel to its preferred site - the host's legs - in order to lay her eggs, again causing ill health.

Despite the fairly wide range of foodstuffs, cereals, fruits, vegetables, milk and meat produced by the ancient Egyptians, not everybody would have had adequate nutrition. There is evidence from the bodies of ancient Egyptians, retrieved from their graves, that some people suffered nutritional deficiencies.

As in other societies, ancient Egyptians also suffered from more everyday types of sickness. Records reveal that some tomb builders complained of headaches, others were too drunk to go to work, and some had emotional worries. Although it is difficult to gain information from mummies and skeletons about eye complaints, some artwork suggests that such problems were not uncommon. Flies, dirt and sand particles would have caused infections in the eyes and lungs. Many Egyptians wore eye paint, which may have been an attempt to ward off eye infections - it is now known that the green eye paint containing malachite had medicinal properties.

**Life Stages**

Life expectancy in ancient Egypt and Nubia was lower than in many modern populations. Whilst some ancient Egyptians undoubtedly enjoyed longevity, most were unlikely to live beyond about 40 years of age. This may seem young by today's standards, but it is important to view age within the context of a particular society. Thus, today people are shocked at the death of King Tutankhamun at the age of about 18 years, yet in his own society he was already 'mature' in terms of family and kingly responsibility.

Many women died as young adults, and childbirth and associated complications may well have been the cause. Although Egyptians 'experimented' with contraception - using a diverse range of substances such as crocodile dung, honey and oil - ideally they wanted large families. Children were needed to help with family affairs and to look after their parents in their old age. This would have led to women having numerous children, and for some women these successive pregnancies would have been fatal. Even after giving birth successfully, women could still die from complications such as puerperal fever. It was not until the 20th century that improved standards of hygiene during childbirth started to prevent such deaths.

People are open to the greatest health risks during infancy and early childhood, and in Egypt and Nubia there was a high infant mortality rate. During the breastfeeding period the baby is protected from infections by ingesting mother's milk, but once weaned onto solid foods the chances of infection are high. Consequently many infants would have died of diarrhea and similar disorders caused by food contaminated by bacteria or even intestinal parasites. In some ancient Egyptian and Nubian cemeteries at least a third of all burials are those of children, but such illnesses rarely leave telltale markers on the skeleton, so it is hard to know the exact numbers affected.

**Evidence on Bones**

Some conditions do leave evidence of their existence on bones. Anaemia, often a consequence of iron deficiency during childhood, leaves markers on the roofs of the eye sockets or on the top of skulls in the form of small holes, and these are frequently seen on Egyptian skulls.

In ancient Egypt, iron deficiency could have been caused by infestation of bloodsucking parasites, such as hookworms, or by people living on a largely cereal diet, with relatively little iron content. Even the wealthier classes, who had access to meat, may not have consumed it on a regular basis. An examination of the great king Ramesses II, however, revealed he suffered from hardening of the arteries - and this was possibly as a consequence of rich living. Whilst anaemia was not a direct cause of death, it would have made sufferers weak and vulnerable to other diseases.

Arthritis and dental problems are features of many ancient societies, and ancient Egypt was no exception. Although arthritis can set in after an accident or infection, generally it is a consequence of the ageing process. As joints wear down through usage the cartilage wears away, leaving the bones rubbing together and causing the ends of the bones to develop lipping at the edges - leaving proof of the sufferer's condition for posterity.

Worn teeth and cavities testify to the poor dental health of some Egyptians. The quantity of sand particles in their bread has been suggested as the cause of the often serious amount of wear on ancient Egyptian teeth. Many Egyptian dentitions present a round drainage hole, suggesting the presence of an abscess, where infection has forced an exit through the bone. This may have solved the problem, but there may also have been many deaths caused by un-drained dental abscesses in ancient times.

Evidence for serious conditions such as tuberculosis, leprosy, tumours, polio, and cleft palate has also been noted in exhumed Egyptian and Nubian bodies.

**Injury**

Accidents, intentional violence and surgical intervention are all episodes of traumatic injury, and there is plenty of evidence for trauma from ancient Egyptian and Nubian sources.

A fracture, which is a break in the structure of a bone, can occur in any bone in the skeleton, and the site of the fracture may give a clue as to how that injury was caused. Injuries to the head are particularly interesting as, whilst they may be accidentally caused, they are often the result of intentional violence.

As in other ancient cultures, head injuries in Nile Valley populations tended to be sustained by more men than women, because men engaged in the manual work and military action that could lead to such injuries. For example, the bodies of about 60 male archers from the early Middle Kingdom period were found in a tomb at Deir el-Bahri, clearly showing head injuries caused by fighting: axe wounds, spear piercings and arrow lacerations.

Long bone injuries are frequently seen in ancient Egyptian bodies and are more likely to be the result of an accident. Injuries to the femur (upper leg bone) occurred quite commonly; whilst the relatively lower number of tibia (shin bone) fractures is thought to be caused by going barefoot, especially among agricultural workers. Fractures to the arms are interesting, as they may be the result of an accidental fall or, as has been suggested for some Nubian injuries, may be the result of using the arms defensively to ward off violent blows to the head.

**Treatment**

What help was there for ancient Egyptians when they were still alive? Herodotus, writing during the fifth century BC, stated that the Egyptians had doctors who specialised in particular areas of the body, and indeed Egyptian physicians appear to have been famed in other parts of the ancient world.

Ancient Egypt is justly famed for its literary output, and a certain class of texts - called magical-medical texts - gives us some indication of the doctors' treatments. As the name implies, the treatments involve elements of religious incantations, and medications concocted from a variety of substances so noxious as to drive away the demons that the Egyptians believed had brought the illness to the sufferer.

We have no direct information about treatment for diseases such as tuberculosis, polio or arthritis but no doubt, to judge from the variety of recipes in medical texts, any medication would involve fairly revolting ingredients. Dung from various animals, fat from cats, fly droppings and even cooked mice are just a small selection of the range of remedies the Egyptian doctor could recommend as treatment.

Perhaps the most informative medical text from ancient Egypt is that called the Edwin Smith Surgical Papyrus. Named after its modern owner, the document describes 48 cases of injury to the face, head, neck and upper spine. In each case a prognosis is given and, if this is favourable, suitable treatment is recommended.

One case, number 11, describes the management of a broken nose, and the treatment, involving rolls of lint within the nostrils and external bandaging, can hardly be bettered even by modern doctors. As might be expected, no treatment is recommended for patients deemed fatally injured. The wise ancient Egyptian physician knew when a patient was beyond help.