

# Three Ancient Medical figures

## **Asclepios, Temple Medicine and Its Importance**

Asclepios may never have existed. He was a Greek legendary hero-turned-god. Temples called *Asceplia* were built in quiet places. Here people came to bathe, sleep, meditate and beg Asclepios to cure them. The Greeks believed that while the patients slept they were visited by Asclepios and his daughters, Panacea and Hygea. They put ointments on the affected areas and called in snakes to lick these areas. In the morning the sick were supposed to wake up cured. We know that many people were cured because they left inscribed stones as thanksgiving offerings to the gods. Some patients were not miraculously cured overnight and the temples became health resorts and places of convalescence. Many people whose medical problems were caused by stress or psychological problems were cured in the calm and peaceful surroundings. People continued to visit Asceplia even when other ideas about medicine developed.

## **Hippocrates, Clinical Observation and the Four Humour Theory**

Hippocrates was the most famous of the Greek physicians. He is famous for two ideas

1. The Clinical method of observation
2. The four humour theory

### **Clinical observation**

Hippocrates believed that the physician should try to discover natural explanations for disease by studying their patients. During an illness the patient's symptoms were noted and written down. This meant that doctors could tell patients how their disease would progress. This did not help to cure patients directly but their success in predicting what would happen might have given their patients confidence in the treatments that were prescribed and so speed up natural cures.

### **The Four Humour Theory**

Doctors noticed that when a patient was ill one of the four liquids (blood, phlegm, yellow bile or black bile) was usually present. Hippocrates and his followers wrongly assumed that the liquid was the **CAUSE** of the disease. It was often the **RESULT**.

Each humour, like the four elements (air, water, fire, earth) had its own quality and was either cold, dry, hot or moist. Phlegm, the coldest of the humours, increased in winter and people could be seen sneezing and blowing their noses. In the spring as the weather begins to warm up blood increases and leads to nose bleeding. In the summer yellow bile increases and causes vomiting. In the autumn black bile increases.

## **Galen, His Revival of Hippocrates' Methods and His Historical Importance**

Galen revived the methods used by doctors in Hippocrates' time but were falling into disuse in 2nd Century A.D. Rome. He practised Hippocratic methods of clinical observation - examining his patients carefully and noting their symptoms. He also accepted the theory that disease was the result of an imbalance in the four liquids of the body.

Although he believed, like Hippocrates, in the healing powers of nature, Galen went further than Hippocrates in developing treatments to restore the balance of the 4 humours. He believed in the use of opposites. He would give pepper to bring heat to people whose diseases were thought to be caused by cold.

He dissected many animals to try to find out more about the insides of humans. He did make some mistakes in assuming that human anatomy was similar to that of animals. There may have been religious rules against dissecting humans.

Galen's ideas had enormous influence for over 1200 years. He set out his ideas and those of other doctors so well that later doctors thought he was right about everything. This was not his fault. It was the fault of later doctors. After about 1500 printing could spread new ideas very quickly. Rapid progress in medicine did not come until the 1800s when microscopes were improved enough to show germs and chemicals were found which could make patients unconscious and kill germs on the surface of the body.

## Three Renaissance Medical Heroes

### **Vesalius and Anatomy**

In 1543 Vesalius's book "The Fabric of the Human Body" was printed. In this he pointed out the mistakes that the great Roman doctor Galen had made about the structure of the human body. Galen had gained much of his knowledge by dissecting animals. Vesalius did many dissections and was able to show that Galen had been mistaken in some of his descriptions of anatomy. Vesalius's book did add to the knowledge of doctors but it did very little to help those with illnesses and diseases. He did recommend that doctors should perform their own dissections to increase their knowledge. Corpses being cut open did not struggle, scream or spurt blood; live patients did all three when they were being operated on. Vesalius is also important because he encouraged doctors to find out for themselves. The invention of printing meant that his ideas could be spread quickly and cheaply enough for doctors to buy their own copies of his book.

### **Pare and Surgery**

Pare was a French army doctor who developed new techniques for treating wounds and amputations. In 1575 he published his ideas in his "Works on Surgery". He said that there was no need to pour boiling oil on wounds or to burn the blood vessels of an amputation wound with a hot iron. One day when he ran out of boiling oil he had to use cold oils and was amazed to find the following day that the patients who had received the cold oils were recovering much faster than the ones who had received the usual treatment of boiling oil. He used cooling ointments on wounds and used threads to sew up the severed blood vessels. When he had to amputate limbs he discovered that the best method was to tie a tight ligature (tourniquet) around the limb. This pulled up the flesh so that it could later cover the cut bones, it reduced the flow of blood and it helped to reduce the pain. Once again printing helped to spread his ideas. Pare's method was not fully successful until Lister developed antiseptics 300 years later. Infection, pain and bleeding remained serious problems until the 19th and 20th centuries.

### **Harvey and the Circulation of the Blood**

In 1628 Harvey published his book "On the Motion Of Blood" in which he stated that the blood circulated. Two important observations led Harvey to this conclusion:

1. Valves in the veins would only allow blood to flow towards the heart, while the valves in the arteries would allow blood to flow away from the heart.
2. When he measured the amount of blood passing through the arteries in one hour, he realised that there was too much blood to be made and that the blood being pumped into the arteries must be the same blood which was returning through the veins.

He said that de-oxygenated blood went from one chamber of the heart to the lungs where it was oxygenated and returned to a different chamber from which it was pumped out along the arteries. Other doctors had suspected this but Harvey backed up his theories with experiments. At first Harvey's work could do little to cure illnesses. It was knowledge that would be very useful later on. It should have shown that the practice of bleeding patients was harmful but this practice continued until the nineteenth century.