

HEREDITY AND DEVELOPMENT

Directions: Throughout time, people have struggled to deal with new scientific theories. Sometimes change has come about when young people have questioned accepted theories. They have had to prove the worth of new theories in the face of strong resistance from the establishment. One such scientist was the young Greek Hippocrates. Read the following passage about his work from the book *Scientists Who Changed the World* by Lynn and Gray Poole (Dodd, Mead & Company, New York, 1960). Then discuss the questions that follow with your class.

It seems incredible that in the same country where active bodies were so perfectly trained and conditioned, sick people received very inferior treatment. The Greek man or woman who became ill sent for a priest-physician from one of the temples. The priests had little knowledge of disease, so they practiced a primitive kind of mumbo jumbo. Some patients recovered in spite of the lack of proper care. Ignorant treatment caused the untimely death of many patients, others unnecessarily became chronic invalids.

Priest and patient accepted without question that illness itself was caused by some offense to one of the many Greek gods. The god had cast an evil spell on the offender, who became sick. Everyone believed that an evil spell was the cause of disease and that cure could be effected only by making a sacrifice to the angry god. Sometimes food and flowers were placed on the altar of the god. Frequently a pig or a sheep was sacrificed in a temple. Often the priest would examine the insides of the slaughtered beast and would find in the gory entrails an omen, good or bad, for the sick person.

After the sacrifice had been made, the priest-physician would mix herbs for the patient to take. He gave other treatments: placed charms on the body of a sick person; rattled amulets over the sickbed; or intoned incantations designed to placate the angry god. A few priest-doctors even consulted the stars to try to find out the will of the god.

The repeated rites were primitive but priest-physicians did learn from experience that certain herbs and drugs helped patients. All secrets of care and cure were jealously guarded, however, because the temple-doctors wanted to hold on to the profitable business of treating the sick. With such tight control in the hands of a very few men, it is hardly surprising that progress was slow in the priestly practice of medicine.

Revolt against soothsayers and temple-doctors started in a modest way on the Greek island of Cos off the coast of Asia Minor in the fifth century, B.C. The successful change in medical thinking and patient care, which showed the way right to the doors of our twentieth-century medical schools and hospitals, was led by a man called Hippocrates.

A native of Cos, Hippocrates went to train as a priest-physician at his island's Temple of Aesculapius, the mythological god supposed to have been the world's first doctor. The priest-physicians of the Temple accepted Hippocrates for training in the rituals of healing people made sick by angry gods.

In a very short time, Hippocrates discovered that other young men in training shared his dissatisfaction with existing methods for curing patients. The group met in secret and

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Hippocrates, its leader, said that he was sure that illness came from earthly causes. The trainees, working on the side of Hippocrates, proceeded cautiously because the established temple-doctors were too powerful to defy openly in the beginning.

Hippocrates and his friends quietly treated patients who came to the Temple of Aesculapius. Under the new leadership, a theory of medical practice evolved and gained favor on Cos. By the time the ruling class of temple-doctors realized what the young physicians were doing, the fame of Hippocrates and his colleagues had spread. Medical progress could not be stopped completely but the soothsaying physicians bitterly resisted it.

The methods that Hippocrates put into practice 2,300 years ago were the first to separate medicine from superstition, the first to give a scientific approach to medicine.

Hippocrates based his work and teaching on the firm beliefs that disease was caused by “some earthly force entering the body,” or by a “breakdown of the internal organs of the body.” He was convinced, too, that a doctor had to find out what caused illness before a patient could be treated.

His theories and ideas seem today to be so obvious and naïve that the simple statement of them may make us smile. But in his day the ideas were astounding and subversive. Older physicians warned that the gods would certainly punish both the believers and their patients. But the group of young medical pioneers continued to work successfully with an ever-increasing number of patients.

Gradually a new school of medical thought was established and expanded. Hippocrates developed and taught methods of patient-study and care that must have seemed strange to people who previously had been treated with chanting and strange potions. In the new system the doctor found out as much as possible about the physical state of the patient when he was well. Conditions of the skin, eyes, and even fingernails were checked. The doctor felt the patient’s heart-beat and with ear to patient’s chest listened to internal sounds.

The physical examination included questions similar to those asked by doctors today. The patient was asked about his symptoms, his feelings at the beginning of the illness and as it progressed. He was questioned about the normal diet of food and drink and about what he had eaten, what liquid he had swallowed just before he was taken sick.

In short, Hippocrates instructed his followers to take complete histories on patients, and to note down every fact as they progressed toward the diagnosis of illness.

For Discussion

1. What were the accepted views on illness in early Greece?
2. What “new” approaches to patient care were promoted by Hippocrates?
3. How do people respond to those who have new and different ideas?
4. What qualities in a person allow him or her to stand by convictions?
5. How can you evaluate the ideas of those people who think differently from the rest?