



## Medicine

Medicine (Latin *medicus*, "physician"), the science and art of diagnosing, treating, and preventing disease and injury. Its goals are to help people live longer, happier, more active lives with less suffering and disability. Medicine goes beyond the bedside of patients. Medical scientists engage in a constant search for new drugs, effective treatments, and more advanced technology. In addition, medicine is a business. It is part of the health care industry, one of the largest industries in the United States, and among the leading employers in most communities.

Disease has been one of humanity's greatest enemies. Only during the last 100 years has medicine developed weapons to fight disease effectively. Vaccines, better drugs and surgical procedures, new instruments, and understanding of sanitation and nutrition have had a huge impact on human well-being. Like detectives, physicians and other health care professionals use clues to identify, or diagnose, a specific disease or injury. They check the patient's medical history for past symptoms or diseases, perform a physical examination, and check the results of various tests. After making a diagnosis, physicians pick the best treatment. Some treatments cure a disease. Others are palliative—that is, they relieve symptoms but do not reverse the underlying disease. Sometimes no treatment is needed because the disease will get better by itself.

While diagnosing disease and choosing the best treatment certainly require scientific knowledge and technical skills, health care professionals must apply these abilities in imaginative ways. The same disease may present very different symptoms in two patients, and a treatment that cures one patient may not work on another.

At the turn of the 20th century, many men and women were feeble by age 40. The average American born in 1900 had a life expectancy of 47.3 years. Effective treatments for disease were so scarce that doctors could carry all their drugs and instruments in a small black bag. By the end of the 20th century, medical advances had caused life expectancy to increase to 76 years. Modern health care practitioners can prevent, control, or cure hundreds of diseases. People today remain independent and physically active into their 80s and 90s. The fastest-growing age group in the population now consists of people aged 85 and over.

This medical progress has been expensive. In 1998 Americans spent \$1.1 trillion on health care, an average of \$4,094 per person. In the same year, health care accounted for about 13.5 percent of the gross domestic product (GDP), about one-seventh of the country's total output. Spending has grown rapidly from earlier in the century. In 1940, for instance, the United States spent \$4 billion on health care.