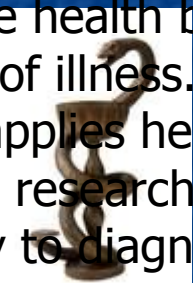


MEDICINE

Medicine is the art and science of healing. It encompasses a range of health care practices evolved to maintain and restore health by the prevention and treatment of illness. Contemporary medicine applies health science, biomedical research, and medical technology to diagnose and treat injury and disease, typically through medication, surgery, or some other form of therapy.



The word medicine is derived from the Latin *ars medicina*, meaning the art of healing.



History of medicine

Prehistoric medicine incorporated plants (herbalism), animal parts and minerals. In many cases these materials were used ritually as magical substances by priests, shamans, or medicine men.

Early records on medicine have been discovered from early Ayurvedic medicine in the Indian subcontinent, ancient Egyptian medicine, traditional Chinese medicine, the Americas, and ancient Greek medicine. Early Grecian doctors Hippocrates, who is also called the Father of Modern Medicine and Galen laid a foundation for later development in a rational approach to medicine.

Islamic medicine and medieval medicine collided during the crusades, with Islamic doctors receiving mixed impressions. As the medieval ages ended, important early figures in medicine emerged in Europe, including Gabriele Falloppio and William Harvey.



SURGERY

The earliest operations on the pericardium (the sac that surrounds the heart) took place in the 19th century and were performed by, among others, Francisco Romero, Dominique Jean Larrey, Henry Dalton, and Daniel Hale Williams.

Surgical specialties employ operative treatment. In addition, surgeons must decide when an operation is necessary, and also treat many non-surgical issues.



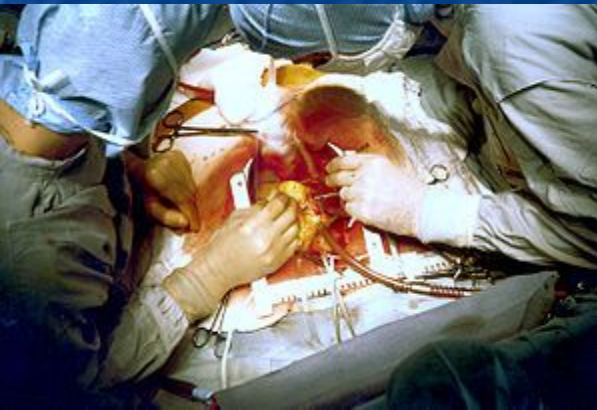
Surgery has many subspecialties, e.g.
general surgery, trauma surgery,
cardiovascular surgery, neurosurgery,
maxillofacial surgery, orthopedic surgery,
otolaryngology, plastic surgery, oncologic
surgery, vascular surgery, and pediatric
surgery.

Cardiac surgery

Cardiac surgery is surgery on the heart and/or great vessels performed by a cardiac surgeon. Frequently, it is done to treat complications of ischemic heart disease correct congenital heart disease, or treat valvular heart disease created by various causes including endocarditis. It also includes heart transplantation.

Open heart surgery

This is a surgery in which the patient chest is opened and surgery is performed on the heart. The term "open" refers to the chest, not to the heart itself. The heart may or may not be opened depending on the particular type of surgery.



A new form of heart surgery that has grown in popularity is robot-assisted heart surgery. This is where a machine is used to perform surgery while being controlled by the heart surgeon.

The main advantages to this are the size of the incision made in the patient and recovery time.

Neurosurgery

Neurosurgery is the surgical discipline focused on treating those central, peripheral nervous system and spinal column diseases amenable to surgical intervention.



Modern neurosurgery has benefited greatly from advances in computer assisted imaging and the development of stereotactic surgery.



There are many risks to neurosurgery. Any operation dealing with the brain or spinal cord can cause paralysis, brain damage, infection, psychosis, or even death.

Orthopedic surgery

Orthopedic surgery or orthopedics is the branch of surgery concerned with injuries to, or conditions involving, the musculoskeletal system. Orthopedic surgeons address most muscle injuries that require surgery, and some are also skilled at dealing with congenital conditions that result in orthopedic deformities.



Nicholas Andry coined the word "orthopaedics", derived from Greek words for orthos ("correct", "straight") and paideia ("rearing" (usually of child)), in 1741, when at the age of 81 he published *Orthopaedia: or the Art of Correcting and Preventing Deformities in Children*.

Pediatric surgery

Pediatric surgery is a subspecialty of surgery involving the surgery of fetuses, infants, children, adolescents, and young adults.



Pediatric surgery arose in the middle of the 20th century as the surgical care of birth defects required novel techniques and methods and became more commonly based at children's hospitals. One of the sites of this innovation was Children's Hospital of Philadelphia.

Beginning in the 1940s under the surgical leadership of C. Everett Koop, newer techniques for endotracheal anesthesia of infants allowed surgical repair of previously untreatable birth defects. By the late 1970s, the infant death rate from several major congenital malformation syndroms had been reduced to near zero.



Organ transplant



An **organ transplant** is the moving of a whole or partial organ from one body to another (or from a donor site on the patient's own body), for the purpose of replacing the recipient's damaged or failing organ with a working one from the donor site. Organ donors can be *living* or *deceased* (previously referred to as cadaveric).

Organs that can be transplanted are the heart, kidneys, liver, lungs, pancreas, penis and intestine. Tissues include bones, tendons, cornea, heart valves, veins, arms, and skin.

Vascular surgery

Vascular surgery is a specialty of surgery in which diseases of the vascular system, or arteries and veins, are managed by medical therapy, minimally-invasive catheter procedures, and surgical reconstruction. The specialty evolved from general and cardiac surgery. Edwin Wylie of San Francisco was one of the early pioneers in the specialty who developed and fostered advanced training in vascular surgery and pushed for its recognition as a specialty in the United States in the 1960's and 1970's.



The vascular surgeon is trained in the diagnosis and management of diseases affecting all parts of the vascular system except that of the heart and brain. Cardiothoracic surgeons manage surgical disease of the heart and its vessels. Neurosurgeons manage surgical disease of the vessels in the brain.

Cosmetic surgery

Cosmetic Surgery defined as a subspecialty of surgery that uniquely restricts itself to the enhancement of appearance through surgical and medical techniques.



The term "cosmetic surgery" however, refers to surgery that is designed to improve cosmetics alone. Many other surgical specialists are also required to learn certain cosmetic procedures during their training programs.



Many other surgical specialists are also required to learn certain cosmetic procedures during their training programs. Contributing disciplines include dermatology, general surgery, plastic surgery, otolaryngology, etc.

