

# Physician

## Includes:

- Doctor of Medicine (MD)
- Doctor of Osteopathic Medicine (DO)

**Note:** There are two types of physicians: MD—Doctor of Medicine—and DO—Doctor of Osteopathic Medicine. MDs also are known as allopathic physicians. Both MDs and DOs may legally use all accepted methods of treatment, including drugs and surgery, but DOs place special emphasis on the body's musculoskeletal system, preventive medicine, and holistic patient care, as well as practicing osteopathic manipulative treatment (OMT), the use of manual physical examination techniques to diagnose illness and injury and to encourage the body's natural tendency toward good health. DOs are more likely than MDs to be primary care specialists, although they can practice in all specialties; approximately 63% of practicing osteopathic physicians specialize in primary care areas, such as pediatrics, family medicine, obstetrics and gynecology, and internal medicine.



## Career Description

Physicians, often referred to as doctors, serve a fundamental role in our society and have an effect upon all our lives. They diagnose illnesses and prescribe and administer treatment for people suffering from injury or disease. Physicians examine patients; obtain medical histories; and order, perform, and interpret diagnostic tests. They counsel patients on diet, hygiene, and preventive health care.

About one third of the nation's physicians are generalists—"primary care" doctors who provide lifelong medical services. These include internists, family physicians, and pediatricians. Generalists provide a wide range of services children and adults need. When patients' specific health needs require further treatment, generalist physicians send them to see a specialist physician.

Specialist physicians, such as neurologists, cardiologists, and ophthalmologists, differ from generalists in that they focus on treating a particular system or part of the body. They collaborate with generalist physicians to ensure that patients receive treatment for specific medical problems as well as complete and comprehensive care throughout life.

The ten largest specialties are:

- Internal medicine (155,705)
- Family medicine (82,866)
- Pediatrics (73,208)
- Obstetrics-gynecology (42,333)
- Psychiatry (41,385)
- Anesthesiology (41,193)
- Surgery (37,556)
- Emergency medicine (29,987)
- Orthopedic surgery (24,296)
- Diagnostic radiology (24,624)

(Source: AMA's *Physician Characteristics and Distribution in the US*, 2008 edition)



## Employment Characteristics

Many physicians—primarily general and family practitioners, general internists, pediatricians, ob/gyns, and psychiatrists—work in private offices or clinics, often assisted by a small staff of nurses and other administrative or clinical personnel. Increasingly, all specialties of physicians are practicing in groups or health care settings, including hospitals, that

provide backup coverage and allow for more time off. These physicians often work as part of a team coordinating care for a population of patients.

Other physicians work in research, academic settings, or with health maintenance organizations, pharmaceutical companies, medical device manufacturers, health insurance companies, or in corporations directing health and safety programs.

Many physicians work long, irregular hours. Over one third of full-time physicians worked 60 hours or more a week in 2006. Only 8 percent of all physicians worked part-time, compared with 16 percent for all occupations. Physicians must travel frequently between office and hospital to care for their patients. Those who are on call deal with many patients' concerns over the phone and may make emergency visits to hospitals or nursing homes at all hours of the day or night.



## Salary

An article in the July 14, 2008 edition of *Modern Healthcare* details the findings of the publication's 2008 Physician Compensation Survey:

Anesthesiology	Ranges from \$311,600 to \$446,994
Cardiology (invasive)	Ranges from \$389,000 to \$561,875
Cardiology (noninvasive)	Ranges from \$332,900 to \$439,233
Dermatology	Ranges from \$287,832 to \$385,953
Emergency Medicine	Ranges from \$216,800 to \$300,000
Family Medicine	Ranges from \$150,763 to \$204,370
Gastroenterology	Ranges from \$330,000 to \$498,762
General Surgery	Ranges from \$271,000 to \$356,938
Hospitalist	Ranges from \$174,100 to \$217,052
Internal Medicine	Ranges from \$175,200 to \$209,845
Neurology	Ranges from \$203,200 to \$298,503
Obstetrics/Gynecology	Ranges from \$231,514 to \$304,689
Oncology (including hematology)	Ranges from \$296,500 to \$410,000
Orthopedic Surgery	Ranges from \$372,400 to \$512,500
Pathology	Ranges from \$239,000 to \$331,842
Pediatrics	Ranges from \$140,000 to \$202,547
Plastic Surgery	Ranges from \$300,000 to \$791,510
Psychiatry	Ranges from \$173,800 to \$248,198

**Radiation Oncology**

Ranges from \$357,000 to \$463,293

**Radiology**

Ranges from \$386,755 to \$600,000

**Urology**

Ranges from \$325,200 to \$426,000

For more information, refer to [www.ama-assn.org/go/hpsalary](http://www.ama-assn.org/go/hpsalary).**Employment Outlook**

Employment of physicians is projected to grow faster than average for all occupations through the year 2016 due to continued expansion of health care industries.

The growing and aging population will drive overall growth in the demand for physician services, as consumers continue to demand high levels of care using the latest technologies, diagnostic tests, and therapies. In addition to employment growth, job openings will result from the need to replace physicians who retire over the 2006-16 period.

Demand for physicians' services is highly sensitive to changes in consumer preferences, health care reimbursement policies, and legislation. For example, if changes to health coverage result in consumers facing higher out-of-pocket costs, they may demand fewer physician services. Demand for physician services may also be tempered by patients relying more on other health care providers—such as physician assistants, nurse practitioners, optometrists, and nurse anesthetists—for some health care services. In contrast, expansion of coverage to the uninsured or underinsured may result in increased demand for physician services. In addition, new technologies will increase physician productivity and may drive increased specialization. Telemedicine will allow physicians to treat patients or consult with other providers remotely. Increasing use of electronic medical records, test and prescription orders, billing, and scheduling may also improve physician productivity.

Opportunities for individuals interested in becoming physicians are expected to be very good. Reports of shortages in some specialties or geographic areas should attract new entrants, encouraging schools to expand programs. Because physician training is so lengthy, however, employment change happens gradually. In the short term, to meet increased demand, experienced physicians may work longer hours, delay retirement, or take measures to increase productivity, such as using more support staff to provide services. Opportunities should be particularly good in rural and low-income areas, because some physicians find these areas unattractive due to less control over work hours, isolation from medical colleagues, or other reasons.

Unlike their predecessors, newly trained physicians face radically different choices of where and how to practice. New physicians are much less likely to enter solo practice and more likely to take salaried jobs in group medical practices, clinics, and health networks.

**Educational Programs**

**Award, Length.** After completing a bachelor's degree, allopathic physicians complete 4 years of medical school in the US, graduating with a doctor of medicine degree (MD); osteopathic physicians earn a doctor of osteopathic medicine degree (DO). (Some medical schools offer combined undergraduate and medical school programs that last 7 rather than the customary 8 years.) Next, allopathic physicians complete a residency program of 3 to 5 years or longer in their chosen specialty (eg, neurology, surgery, internal medicine); some also

complete an additional fellowship of 1 to 3 years in a subspecialty, such as cardiology, pain medicine, or neonatal-perinatal medicine.

Following graduation, osteopathic graduates complete an approved 12-month internship, which serves as the link between predoctoral and postdoctoral clinical training and provides a year of maturation of clinical decision-making skills as a generalist physician. The internship exposes graduates to core disciplines including internal medicine, family medicine, general surgery, obstetrics/gynecology, pediatrics and emergency medicine. Many graduates then choose to complete a residency program in a specialty area.

**Prerequisites.** Premedical students typically must complete undergraduate work in physics, biology, mathematics, English, and inorganic and organic chemistry. Students also take courses in the humanities and the social sciences. Some students volunteer at local hospitals or clinics to gain practical experience in the health professions. The minimum educational requirement for entry into a medical school is 3 years of college; most applicants, however, have at least a bachelor's degree, and many have advanced degrees. In addition, the Medical College Admission Test (MCAT) is required by most US medical schools.

The pathway is substantially similar for osteopathic physicians. Osteopathic medical school applicants typically have a bachelor's degree, with undergraduate studies that include 1 year each of English, biological sciences, physics, general chemistry, and organic chemistry. Other requirements may include genetics, mathematics, and psychology. Most prospective DO students major in sciences with an emphasis in biology or chemistry; however, applicants may major in any discipline as long as they meet the minimum course and grade requirements. Applicants must also take the MCAT.

**Curriculum.** Students spend most of the first 2 years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, physiology, pharmacology, behavioral sciences, neurosciences, immunology, microbiology, pathology, medical ethics, and laws governing medicine. They also learn to take medical histories, examine patients, and diagnose illnesses. During their last 2 years, students work with patients under the supervision of experienced physicians in hospitals and clinics, learning acute, chronic, preventive, and rehabilitative care. Through rotations in internal medicine, family medicine, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in diagnosing and treating illness.

Similarly, osteopathic medical students spend their first 2 years of school in lectures and laboratories, learning a core set of clinical examination skills and taking courses that cover the various systems of the body, including anatomy, physiology, microbiology, histology, osteopathic principles and practices (including osteopathic manipulative medicine), pharmacology, clinical skills, and doctor/patient communication. Many osteopathic colleges have students assigned to work with physicians beginning early in the first year. This process continues throughout the second year in conjunction with the necessary science courses. In the third and fourth years, osteopathic medical students spend time learning about and exploring the major specialties in medicine through clinical clerkships in both in-patient and ambulatory care settings.

**Licensure and Certification**

Licensure, which is required of physicians in all US states and jurisdictions, ensures that practicing physicians have appropriate education and training and that they abide by recognized standards of professional conduct while serving their patients. Candidates for first licensure must

complete a rigorous examination (for MDs, Steps 1, 2, and 3 of the United States Medical Licensing Examination; for DOs, Levels 1, 2 and 3 of the Comprehensive Osteopathic Medical Licensing Examination) designed to assess a physician's ability to apply knowledge, concepts, and principles that are important in health and disease and that constitute the basis of safe and effective patient care. All applicants must submit proof of medical education and training and provide details about their work history. Finally, applicants may have to reveal information regarding past medical history (including the use of habit-forming drugs and emotional or mental illness), arrests, and convictions.

The majority of physicians choose to become board certified, which is an optional, voluntary process, although it is required by many hospitals and managed care organizations. Certification involves testing and assessment of knowledge, skills, and experience to determine whether a physician is qualified to provide quality patient care in a given specialty/subspecialty. Certification in medical specialties and subspecialties is offered to MDs through the 24 member boards of the American Board of Medical Specialties. In the past, physicians were required to recertify every 7 to 10 years, primarily by a written examination; this process is being replaced by Maintenance of Certification, an ongoing rather than periodic process that will require the assessment and improvement of practice performance.

For osteopathic physicians, the Board of Trustees of the American Osteopathic Association (AOA), through the Bureau of Osteopathic Specialists, is the certifying body in osteopathic medicine; there are 19 certifying boards.



## Inquiries

### MD Education, Careers, Resources

American Medical Association  
515 N State Street  
Chicago, IL 60654  
[www.ama-assn.org/go/becominganmd](http://www.ama-assn.org/go/becominganmd)  
E-mail: [becominganmd@ama-assn.org](mailto:becominganmd@ama-assn.org)

Association of American Medical Colleges  
Careers in Medicine  
2450 N Street NW  
Washington, DC 20037-1126  
[www.aamc.org/students/considering/careers.htm](http://www.aamc.org/students/considering/careers.htm)  
E-mail: [careersinmedicine@aamc.org](mailto:careersinmedicine@aamc.org)

### DO Education, Careers, Resources

American Osteopathic Association  
142 E Ontario Street  
Chicago, IL 60611  
800 621-1773 or 312 202-8000  
[www.osteopathic.org](http://www.osteopathic.org)

American Association of Colleges of Osteopathic Medicine  
5550 Friendship Blvd, Suite 310  
Chevy Chase, MD 20815-7231  
[www.aacom.org](http://www.aacom.org)

### MD Program Accreditation

Liaison Committee on Medical Education  
c/o American Medical Association  
515 N State Street  
Chicago, IL 60610  
[www.lcme.org](http://www.lcme.org)

### DO Program Accreditation

Commission on Osteopathic College Accreditation  
American Osteopathic Association  
142 E Ontario Street  
Chicago, IL 60611  
800 621-1773 or 312 202-8000  
[www.aococa.org](http://www.aococa.org)

*Note:* Adapted in part from the Bureau of Labor Statistics, US Department of Labor, *Occupational Outlook Handbook*, 2008-09 Edition, Physicians and Surgeons, on the Internet at [www.bls.gov/oco/ocos074.htm](http://www.bls.gov/oco/ocos074.htm).