

Medicine

*Chiropractor, Emergency Medicine Technician/Paramedic,
Physician Assistant, Physician, Podiatrist, Surgical Technologist*



Chiropractor

Chiropractor

JOB DESCRIPTION

Chiropractors, or Doctors of Chiropractic (DC), diagnose and treat patients whose health problems are associated with the body's muscular, nervous, and skeletal systems, especially the spine. They provide natural, drugless, nonsurgical health treatments and rely on the body's inherent recuperative abilities. The chiropractor typically conducts patient consults, case histories, physical exams (orthopedic, neurological), laboratory analyses, and X-ray examinations. To assist in patient treatment, chiropractors can use exercise, water, light, ultrasound, electric, and heat therapy. They also counsel on wellness concepts such as nutrition, lifestyle changes, and stress management.

AREAS OF SPECIALIZATION

Orthopedics – specializing in problems with skeletal system, muscles, joints, and ligaments.

Neurology – specializing in disorders of nervous system.

Sports Injuries – specializing in treatment of sports related injuries.

Occupational Health – practicing or teaching in business or industry environment.

Nutrition – specializing in nutrition.

Radiology – specializing in using radiologic technology.

Thermography – specializing in using infrared technology to measure temperature variations on the surface of the body, which produces images of abnormal tissue growth.

WORK ENVIRONMENT

The majority of chiropractors choose to work in a solo practice; however, others work in group practice, research positions, teaching jobs, hospitals, and health maintenance organizations (HMOs). Usually, chiropractors work over 40 hours a week; a solo practitioner must also manage the administrative duties of running a business.

ANNUAL WAGES

National	\$65,978
New York State	\$67,226

National and New York State median annual earnings for 2003. U.S. Department of Labor, Bureau of Labor Statistics.

ACADEMIC REQUIREMENTS

A minimum of 60 semester hours of college credit, (this is equivalent to two years of college) at an accredited college is required. However, most students have earned at least a bachelor's degree prior to admission to chiropractic college. Some states require a bachelor's degree prior to entering a chiropractic college in order to be eligible for licensure. A Doctor of Chiropractic degree is awarded upon successful completion of the required academic courses and clinical internship (approximately four academic years). All states require licensure of chiropractors to practice. To become a licensed chiropractor in New York State, individuals must meet New York State licensing requirements. Detailed information for New York State licensing requirements can be found online at: www.labor.state.ny.us/business_ny/employer_responsibilities/olcnymenu.htm.

PROFESSIONAL ORGANIZATIONS

American Chiropractic Association
Federation of Chiropractic Licensing Boards
National Board of Chiropractic Examiners
New York Chiropractic Council
New York State Chiropractic Association
World Federation of Chiropractic

For a professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

For a listing of educational programs in New York State for Medicine see page 38.

Emergency Medical Technician and Paramedic, Physician Assistant

Emergency Medical Technician and Paramedic

JOB DESCRIPTION

Emergency medical technicians (EMTs) and paramedics are usually the first members of the health care team to respond to an accident, fire, heart attack, drowning, or other medical emergencies. The responsibility of making life and death decisions, then taking action based on those decisions, is part of the everyday job. EMTs and paramedics work under physical and emotional stress, using special training to assess and care for the immediate medical needs of emergency patients and transport them safely to the hospital.

They communicate with physicians at an appropriate hospital for instructions about treatment, approval of procedures and arrangements for receiving the patient. During transport, EMTs and paramedics will transmit vital signs and other information about the injured and receive medical instructions from a hospital-based physician. Depending on the level of training and certification, the EMT and paramedic perform functions which range from basic life support, such as

cardiopulmonary resuscitation (CPR), to active life support including administration of drugs; placing patients on stretchers and lifting them into and out of the ambulance; observing, recording and reporting the patient's condition; and keeping detailed records about the treatment of patients while in their care. Maintaining the ambulance equipment and participating in first aid education programs are also included in their duties.

WORK ENVIRONMENT

EMTs and paramedics may be employed by ambulance, rescue or aeromedical services, in hospitals, private industry, educational institutions, and government agencies. On ambulances, EMTs and paramedics usually work in teams of two. They work closely with police and fire departments.

ANNUAL WAGES

National	\$24,440
New York State	\$31,158

National and New York State median annual earnings for 2003. U.S. Department of Labor, Bureau of Labor Statistics.

ACADEMIC REQUIREMENT

A high school diploma or equivalent is required.

There are several levels of Emergency Medical Technicians ranging from First Responder to Paramedic. All EMTs must have state certification, which requires completion of a 109-hour state-approved training course in emergency medical technology and emergency vehicle operation. After one year of experience on an approved emergency medical unit, a basic EMT with a valid certificate may begin training to be a paramedic. This requires a minimum of 788 hours of lab, clinical and internship training. Documentation of satisfactory completion of an approved internship is also required. To become a licensed EMT and paramedic in New York State, individuals must meet New York State licensing requirements. Detailed information for New York State licensing requirements can be found online at: www.labor.state.ny.us/business_ny/employer_responsibilities/olcny/menu.htm.

PROFESSIONAL ORGANIZATIONS

National Association of Emergency Medical Technicians

For professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

For a listing of educational programs in New York State for Medicine see page 38.

Physician Assistant

JOB DESCRIPTION

Physician assistants (PAs) work under a physician's supervision and perform many patient care tasks, which were traditionally conducted by doctors. PAs perform complete physical examinations, diagnose illness, give treatments, order and review laboratory tests and X-rays, and counsel patients on their health problems. New York State, like most other states, allows its PAs to prescribe medication. PAs can work in any specialty of medicine. Their scope of practice is determined by their supervising physician. The extent of supervision depends upon the work setting.

AREAS OF SPECIALIZATION

There are many fields in which to specialize as a physician assistant, including emergency medicine, family practice, general internal medicine, general and thoracic surgery, geriatrics, neonatology, obstetrics and gynecology, orthopedics, and pediatric medicine.

WORK ENVIRONMENT

Because physician assistants work so closely with physicians, their work schedules may vary. Certain

work settings, clinics especially, may guarantee a 40-hour workweek. Physicians' offices employ the largest number of physician assistants, followed by health clinics, health maintenance organizations (HMOs), federal government agencies, hospitals, nursing homes and correctional facilities. It is common for a physician assistant to work in areas where physicians may be in short supply.

ANNUAL WAGES

National	\$65,666
New York State	\$68,058

National and New York State median annual earnings for 2003. U.S. Department of Labor, Bureau of Labor Statistics.

ACADEMIC REQUIREMENTS

To become licensed as a physician assistant, individuals must complete a course of study, which has been approved and accredited by the Accreditation Review Committee on Education for the Physician Assistant. Two-year programs generally follow two or three years of undergraduate preparation or a bachelor's degree. Four-year programs are combined with a bachelor's degree program. Individuals must pass the

Physician Assistant National Certifying Examination that is prepared by the National Commission for Certification of Physician Assistants. To become licensed as a physician assistant in New York State, individuals must meet New York State licensing requirements. Detailed information for New York State licensing requirements can be found online at: www.labor.state.ny.us/business_ny/employer_responsibilities/olcny/menu.htm.

PROFESSIONAL ORGANIZATIONS

American Academy of Physician Assistants
American Association of Surgeon Assistants
Association of Physician Assistant Programs
National Commission on Certification of Physician Assistants
New York State Society of Physician Assistant

For professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

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Physician

Physician

JOB DESCRIPTION

Physicians diagnose, treat, and try to prevent human illness, disease, or injury. They perform many functions, including: analysis of patient histories, physical examinations, and interpretation of diagnostic tests. Physicians stress preventive care and often counsel their patients on better healthcare practices. Physicians use accepted methods of treatment, including pharmaceutical agents and surgical procedures. There are two types of physicians: allopathic physicians, better known as the MD (Medical Doctor) and osteopathic physicians, better known as the DO (Doctor of Osteopathic Medicine). MDs and DOs are fully trained and licensed physicians who specialize in a particular area of medicine. Although both MDs and DOs are physicians who may specialize, prescribe medication, and perform surgery, they differ in their health care philosophy and attend separate training schools. DOs have additional training in Osteopathic Manipulative Treatment (OMT), a hands-on treatment tool that focuses on the body's structure and function, and its ability to help heal itself.

AREAS OF SPECIALIZATION

Anesthesiology – anesthetics for surgical procedures and pain control.

Emergency Medicine – emergency illness.

Family Practice – general, comprehensive health care for patients of all ages and genders.

General Internal Medicine – diagnosis and treatment (non-surgical) of diseases of adults.

Obstetrics and Gynecology – female reproductive health and childbirth.

Pediatrics – diagnosis and treatment of injuries, illnesses and diseases of infants and children.

Psychiatry – diagnosis, treatment and prevention of mental and emotional disorders.

Surgery – using manual or surgical instruments to treat injuries, illnesses, and conditions of the human body.

There are many other areas of specialization, including, but not limited to: allergy and immunology, cardiology, dermatology, forensic pathology, geriatrics, neonatology, nephrology, neurology, nuclear medicine, ophthalmology, orthopedics, otolaryngology, pathology, physical medicine and rehabilitation, preventive medicine, radiology, and urology.

WORK ENVIRONMENT

Physicians work in a variety of settings including private offices, hospitals, clinics, research facilities, laboratories, government agencies, public health or home health care agencies, colleges or universities. A physician's work can be challenging and rewarding, but also emotionally and physically demanding. Physicians have the opportunity to help heal patients but also face the stress of caring for and treating patients in life or death situations. They usually work 60 hours a week or more. Their hours are often irregular, and sometimes include evenings and weekends.

ANNUAL WAGES

National	
General Internal Medicine	\$144,000
Family Practitioners	\$135,000
Pediatricians	\$125,000

Physician Socioeconomic Statistics, 2003 Edition.
American Medical Association.

ACADEMIC REQUIREMENTS

Premedical students should complete undergraduate coursework in physics, biology, mathematics, English and chemistry. Courses in humanities and social sciences are also recommended. After obtaining an undergraduate degree, students apply for medical school. Medical school acceptance is competitive. Students must submit transcripts, scores from MCAT (Medical College Admission test), and letters of recommendation. Medical school includes classes in anatomy, biochemistry, physiology, pharmacology, psychology, medical ethics and related courses. Medical students work with patients under the

supervision of physicians, and do rotations in various specialties including family practice, general internal medicine, gynecology, pediatrics, psychiatry and surgery. Following medical school, almost all MDs enter a residency program and apply for a license. This may vary depending upon an individual's area of specialization. To become a licensed physician in New York State, individuals must meet New York State licensing requirements. Detailed information for New York State licensing requirements can be found online at: www.labor.state.ny.us/business_ny/employer_responsibilities/olcny/menu.htm.

PROFESSIONAL ORGANIZATIONS

American Association of Colleges of Osteopathic Medicine
American Medical Association
American Osteopathic Association
Association of American Medical Colleges
Section for Student Services
Medical Society of the State of New York
National Board of Medical Examiners
National Board of Osteopathic Medical Examiners
New York State Osteopathic Medical Society
US Medical Licensing Exam

For professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

For a listing of educational programs in New York State for Medicine see page 38.

Podiatrist, Surgical Technologist

Podiatrist

JOB DESCRIPTION

Podiatrists, also known as Doctors of Podiatric Medicine (DPMs), prevent, diagnose, and treat disorders of the foot and ankle. They utilize medical, surgical, mechanical, or physical means to treat deformities, injuries, and growths of the foot. They also design casts and orthotics to treat injuries and improve posture and walking style. Podiatrists also counsel and refer patients to other medical doctors if serious symptoms are present. Often, podiatrists are the first healthcare providers to recognize symptoms of heart disease, diabetes, or arthritis.

AREAS OF SPECIALIZATION

Orthopedic Podiatrist – treats bone, muscle and joint ailments.

Podiatric Sports Medicine – treats foot and ankle sports related injuries.

Podiatric Surgeon – performs foot surgeries.

Podogeriatrics – treats foot disorders of the elderly.

Podopediatrician – specializes in foot disease in children.

WORK ENVIRONMENT

The typical podiatrist has a private independent

practice, although partnerships and expanded practices appear to be gaining popularity. The majority of practices exist in states that also have a college of podiatric medicine. Other employment opportunities exist in hospitals, nursing homes, health maintenance organizations (HMOs), and federal government agencies. The number of hours worked by a podiatrist varies by work setting; self-employed doctors often have weekend or evening hours to best accommodate their patients, while other settings are more conducive to 40-hour workweeks.

ANNUAL WAGES

Average Net Income\$134,414

APMA 2002 Podiatric Practice Survey. American Podiatric Medical Association.

ACADEMIC REQUIREMENTS

Prerequisites for admission to a college of podiatric medicine include the completion of at least 90 semester hours of undergraduate study, an acceptable grade point average, and suitable scores on the Medical College Admission Test (some colleges also may accept the Dental Admission Test or the Graduate Record Exam). All of the colleges require eight semester hours each of biology, inorganic chemistry, organic chemistry, and physics, as well as six hours of English. The science

courses should be those designed for premedical students. More than 90 percent of podiatric students have at least a bachelor's degree. Colleges of podiatric medicine offer a four-year program that includes classroom instruction in anatomy, chemistry, pathology and pharmacology as well as clinical rotations in hospitals and clinics. Graduates receive a Doctor of Podiatric Medicine degree and go on to complete a one to three year residency depending on specializations. Graduates must complete at least one year of post-graduate training and pass a written and oral exam to receive a license. To become a licensed podiatrist in New York State, individuals must meet New York State licensing requirements. Detailed information for New York State licensing requirements can be found online at: www.labor.state.ny.us/business_ny/employer_responsibilities/olcny/menu.htm.

PROFESSIONAL ORGANIZATIONS

American Podiatric Medical Association
American Colleges of Podiatric Medicine
New York State Podiatric Medical Association

For professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

For a listing of educational programs in New York State for Medicine see page 38.

Surgical Technologist

JOB DESCRIPTION

Surgical technologists, sometimes referred to as scrubs and operating room technicians, assist the surgical team by preparing a patient for surgery, placing equipment and supplies in the operating room, and arranging instruments. During surgery, technologists pass instruments to the surgeon and surgeon assistants and observe the patient's vital signs and check chart. They also prepare, care for, and dispose of specimens taken for laboratory analysis and help apply dressings. After an operation, they may help transfer patients to the recovery room and clean and restock the operating room.

WORK ENVIRONMENT

Surgical technologists are typically employed in hospital operating rooms but may also be stationed

in delivery rooms, emergency rooms, and in central supply departments. They may also work in clinics, outpatient surgical centers, physician offices, and in other facilities. Most surgical technologists will work a 40-hour week, but may need to be available on weekends, evenings, and holidays.

ANNUAL WAGES

National\$32,136

New York State\$32,365

National and New York State median annual earnings for 2003. U.S. Department of Labor, Bureau of Labor Statistics.

ACADEMIC REQUIREMENTS

A high school diploma or equivalent is required for entry into training programs. Individuals receive training at accredited community and junior colleges, vocational and technical institutes, or hospitals. Formal post secondary programs last

nine months to two years and lead to a certificate, diploma, or associate's degree. Students who have successfully completed a formal training program may earn certification as a Certified Surgical Technologist after passing a national certification exam.

PROFESSIONAL ORGANIZATIONS

Association of Surgical Technologists

For professional organization address and phone information see Appendix B.

EDUCATIONAL INSTITUTIONS

For a listing of educational programs in New York State for Medicine see page 38.

*New York State Educational Institutions***NEW YORK STATE EDUCATIONAL INSTITUTIONS WITH PROGRAMS IN MEDICINE***(For New York State educational institution address and phone information, see Appendix A.)*

Albany Medical College
 Broome Community College
 Columbia University in the City of New York
 Cornell University Medical College
 Corning Community College
 City University of New York City College
 City University of New York College of Staten Island
 Daemen College
 D'Youville College
 Erie Community College-South Campus
 Finger Lakes Community College
 Herkimer County Community College
 Hudson Valley Community College
 Jefferson Community College
 Long Island University-Brooklyn Campus
 Monroe Community College
 Mount Sinai School of Medicine
 Nassau Community College
 Nazareth College of Rochester
 New York Chiropractic College
 New York College of Podiatric Medicine
 New York Institute of Technology-Manhattan Campus
 New York Institute of Technology-Old Westbury
 New York Medical College
 New York University
 New York University Medical Center Allied Health Education

Niagara County Community College
 Onondaga Community College
 Rensselaer Polytechnic Institute
 Rochester Educational Opportunity Center-State
 University of New York Brockport
 Rochester Institute of Technology
 Rockland Community College
 St Francis College
 St John's University-New York
 St Vincent's Catholic Medical Centers of New York
 State University of New York at Buffalo
 State University of New York at Stony Brook
 State University of New York College at Brockport
 State University of New York Health Science Center at Brooklyn
 State University of New York Health Science Center at Syracuse
 State University of New York Westchester Community College
 Touro College
 Trocaire College
 University of Rochester
 Wagner College
 Western Suffolk BOCES
 Yeshiva University

Source: U.S. Department of Education – Integrated Postsecondary Education Data System (www.nces.ed.gov/ipeds/) and the New York State Area Health Education Center System Data Resource Center, September 2003.