



The American Orthopaedic
Society for Sports Medicine



PATHWAYS TO A
Career in
Sports Medicine



PATHWAYS TO A Career in Sports Medicine

What is sports medicine?

Sports medicine is not a single career, but instead a widely varied group of professionals all concerned with the health and well being of the athlete. The term “athlete” also encompasses youth, high school, collegiate, and professional athletes, as well as individuals who exercise for health or recreation. Even some workplace injuries are treated by sports medicine professionals - because of their similarity to sports injuries. People of all ages, and different activity levels look to a sports medicine provider for guidance regarding training techniques, injury prevention, and diagnosis and treatment of sports-related problems.

What types of career paths can I take to become involved in sports medicine?

The sports medicine specialist is the leader of the team of professionals involved in the health and safety of athletic individuals. This team is comprised of a number of healthcare professionals, including the team physician, athletic trainer, physical therapist, biomedical engineer, nutritionist and psychologist. The following descriptions are intended as general guidelines toward a career in sports medicine. As requirements change, further information should be sought from guidance counselors, local libraries or the internet.

www.sportsmed.org



Physician Pathways to Sports Medicine

Team Physician

Team physicians play a central role in coordinating the medical care of athletes. The team physician does not act alone, but instead acts as the “captain of the ship” overseeing the overall care of the athlete. Working closely with athletic trainers, physical therapists, nutritionists, and other health professionals, it is the physician’s job to be the patient’s advocate in all health-related matters. Sports medicine physicians fall into two main categories: orthopaedic surgeons and primary care physicians. These two groups are not competitors, but rather compliment each other and usually work closely together to treat common athletic problems, including:

- Acute injuries such as fractures, ligament tears, and cartilage damage to the knee, shoulder, elbow and ankle
- Chronic overuse conditions such as tendonitis, stress fractures, and bursitis of the upper and lower extremities
- Mild traumatic brain injury (concussion)
- Injuries to the spine

Injury prevention is the primary goal, but when injuries occur, the team physician evaluates the athlete to determine the proper diagnosis and treatment. Special tests are often required to obtain an accurate diagnosis. Once this is achieved, proper treatment can then be initiated. This may in the form of activity modification and physical therapy or surgical intervention. Occasionally, referral to another physician may be necessary depending on the particular condition.

Team physicians are responsible for the medical care of both amateur as well as professional sports teams at the local and national levels. Their duties include, but are not limited to the following responsibilities:

- Pre-participation physical examinations
- Injury assessment and management
- “Return to play” decisions for the injured athlete during the season
- Medical coverage of athletic events
- Injury prevention
- Strength training and conditioning
- Substance abuse
- Special populations (i.e. youth, elderly, disabled)
- Educating and counseling coaches, administrators and family members on sports-related medical issues

The team physician at times must rely on the expertise of other medical consultants, including cardiologists, ophthalmologists, dentists/oral surgeons and podiatrists. These other medical professionals often have an interest in sports medicine, as it pertains to their area of specialization. It is imperative that they work together under the coordination of the team physician to complete the athlete’s medical team.

Orthopaedic Surgeon

Orthopaedic surgeons are physicians specially trained to diagnose and treat musculoskeletal problems. In spite of the label “surgeon” orthopaedists devote much of their efforts to helping athletes recover with non-surgical measures. After carefully examining the injured athlete, the orthopaedist may order and interpret tests such as x-rays, bone scans, or MRI’s. Treatment may involve medication, physical therapy, or in some cases, surgery. Major advances in sports medicine throughout the past two decades have enabled orthopaedists to treat many musculoskeletal problems without hospitalization. Postoperative rehabilitation has also been improved through the combined efforts of surgeons, athletic trainers, and physical therapists. All orthopaedic surgeons have completed an undergraduate degree, four years of medical school, and a five-year residency. In addition, many team orthopaedists have completed an additional year of training known as a “fellowship” for in-depth education devoted specifically to the practice of sports medicine.

Primary Care Physicians

Primary care physicians evaluate and treat the non-operative medical problems of athletes. These are the physicians with residency training in family practice, internal medicine, emergency medicine, physical medicine, rehabilitation and pediatrics, who choose to obtain additional training in sports medicine. These physicians specialize solely in the non-operative care of athletes. Heat illness, exercise-induced asthma, concussion, minor ligament sprains, muscle strains and eating disorders are examples of conditions that a primary care physician is trained to treat. While primary care sports medicine physicians are not surgeons, most have special training in the diagnosis of sports-related musculoskeletal problems. These professionals have completed an undergraduate degree, four years of medical school, and at least three years of residency. In addition, many have obtained additional experience through a one-to-two-year fellowship in sports medicine.

Allied Healthcare Pathways to Sports Medicine

Other types of healthcare practitioners are often called on to participate in the care of athletes. These individuals are not physicians but, rather, have specialized training and interest in various facets of healthcare that involve active individuals from young athletes to professionals.

Physician Assistant

A career in sports medicine can also be pursued as a certified physician assistant. This pathway typically requires an undergraduate baccalaureate degree with proven competence in scientific coursework and direct patient care experience, such as working as an emergency medical technician or patient care technician.

The full-time curriculum, which typically lasts 2-3 years, consists of a rigorous course of classroom (preclinical) work in the areas of basic medical sciences.

This is followed by a number of clinical rotations in all areas of medicine under the guidance of a physician preceptor. Following this formal curriculum, certification is required as a prerequisite to practice in the individual’s chosen field of medicine. Those physician assistants who want to pursue a career in sports medicine typically work with a physician or surgeon specializing in this field. Certified physician assistants must demonstrate continued competency via mandatory continuing education every two years and recertification every six years.

Physical Therapist

Physical therapists are involved with the rehabilitation of patients recovering from injuries or medical illnesses that result from neuro-musculoskeletal disabilities. They work in hospitals, clinics, outpatient departments, private offices, and home-care programs, usually under the direction of a physician. Many athletic teams employ physical therapists on their staff. Some physical therapy programs offer four-year undergraduate degrees, while others require an undergraduate degree followed by a master's degree in physical therapy. An internship is generally part of the education program.

Certified Athletic Trainer

The certified athletic trainer plays a key role in the care of the athlete. He or she is often the first person the athlete turns to following an injury. Athletic trainers are intimately involved with injury prevention through the implementation of strength and conditioning programs. They also have expertise in brace and orthotic use to either prevent injury or to allow the athlete to safely compete with an injury. Athletic trainers also administer rehabilitation exercise regimens and apply therapeutic modalities, such as ultrasound, electrical stimulation, and phonophoresis in order to enhance the healing process. To become a certified athletic trainer typically requires a four-year bachelor or master's degree with significant additional time spent covering athletic events to gain practical experience.

Nutritionist

The importance of nutrition is critical to an athlete's optimum performance. A nutritionist can assist an athlete with preparing a diet that can help with weight loss or weight gain, depending on the particular sport's requirements. Nutritionists may also serve the athletic community as consultants and lecturers, and may work as nutritional advisors to the non-athletic population. The nutritionist usually completes a four-year undergraduate curriculum in the field of food sciences, though advanced degrees are also available.

Sports Psychologist

There has been an increasing interest in the psychological aspects of athletic performance. The impact of psychosocial issues on sports participation at all levels of competition from the little league level to the professional athlete is currently being explored more in-depth. The sports psychologist is often instrumental in helping athletes cope with sports injuries, and in some cases, the need to discontinue participation due to health-related issues. As the sports psychologist's role is becoming better defined and appreciated, many professional teams are beginning to enlist their services. The person entering this field will generally complete an undergraduate degree in psychology and progress to a master's degree, and ultimately a doctorate in psychology with specialized training in sports psychology.

Coach

Coaches aren't often thought to be involved in athletic medicine, however, they teach and direct activities in which the athlete participates, whether on the professional or little league level. It is the coach who teaches the athlete how to compete using appropriate technique to not only improve performance, but also prevent injury. In the younger age group, the coach is frequently the trainer, as well as the person responsible for first aid, protective devices, and equipment. Coaches of scholastic and collegiate teams are college graduates, and many with advanced degrees. Many – but by no means all – majored in physical education. Most will have taken courses in first aid and injury prevention, while also having a good deal of practical experience in the care of injuries related to their sport. Coaches of collegiate and professional teams have had long apprenticeships in their field. The number of years that it takes to arrive at this level varies widely.

Research Focused Pathways to Sports Medicine

There are many other professionals involved in the behind the scenes care of an athlete—whose primary role is in research and not direct care of the athlete. Their research is done in the laboratory or on the field.

Exercise Physiologist

The relatively new specialty of exercise science is closely related to athletic medicine. Physiology is the study of functions of the human body. Exercise science is the study of the way physiological systems respond to exercise. Research projects in exercise science have been used to improve athletic performance and to protect an athlete's health. The person who enters this field will generally complete an undergraduate degree (bachelor's of arts or a bachelor's of science) in either biological or biochemical sciences or in physical education. From there a person may progress to a masters degree or even a Ph.D. in exercise science.

Biomechanical Engineer

The biomedical engineer also plays a role on the sports medicine team. The engineer can be involved in designing safer, more functional equipment and playing surfaces or through the study of kinetics (human movement) they may design joint braces to enable athletic performance while preventing injury during the rehabilitation process. Biomechanical engineers may also work to devise surgical instruments and implants to aid orthopaedic surgeons in the treatment of musculoskeletal injuries. The biomedical engineer completes a four-year undergraduate degree and may proceed to a master's degree or a Ph.D.

Epidemiologist

The epidemiologist studies the incidence, prevalence and control of disease or injury in populations. Through the use of mathematical models and computational statistics, the epidemiologist works hand-in-hand with other physicians or researchers on clinical or biological studies to track disease or injury trends. The epidemiologist plays a key role in formulating and implementing public health policy. The epidemiologist completes a four-year undergraduate degree and typically a master's degree or a Ph.D.

How Can I Explore My Interest in Sports Medicine?

There are many pathways to a career in sports medicine. Caring for an athlete requires a team effort from many individuals with a wide range of expertise and backgrounds. If you are interested in pursuing a sports medicine career the following steps might help make your decision easier, especially during high school and college:

- Take classes in first aid, anatomy and physiology
- Participate as a student trainer for the school's athletic department
- Seek out sports medicine professionals in your area and spend time "shadowing"
- Participate in sports medicine research in an area you are interested in
- Attend sports medicine related conferences or symposia
- Volunteer to assist with coverage of local athletic events
- Visit www.sportsmed.org to learn more

What is the American Orthopaedic Society for Sports Medicine?

The American Orthopaedic Society for Sports Medicine (AOSSM) was organized in 1974 by a group of dedicated orthopaedic surgeons who recognized a need for a medical subspecialty devoted to the operative and non-operative care of the injured athlete. The goals of the Society are to promote the care of active individuals, foster sports medicine education and advance research of athletic-related musculoskeletal conditions. The AOSSM works with other sports organizations to create consensus statements on specific athletic medical conditions and sponsor team physician educational courses.

The AOSSM also hosts an annual meeting where sports medicine specialists from around the world gather to review, discuss and debate the latest developments in research and athlete care. This meeting also fosters collegial relationships between healthcare specialists with similar intellectual interests.

To learn more about AOSSM and what it has to offer you, please visit www.sportsmed.org or contact the Society directly at:



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This information contained herein does not purport to encompass all aspects of a career in sports medicine, nor is it designed to include all pathways.

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