

PUBLISHER'S NOTE

Careers in Sports Medicine & Training contains twenty-four alphabetically arranged chapters describing specific occupations for those with a desire to work in the fields of sports medicine and training: the various areas of medical specialization that athletes depend upon to stay fit and competitive; sports and athletic training and conditioning, including personal trainers, instructors, and coaches; and therapy, including sport psychology, diet and nutrition and health education. Merging scholarship with occupational development, this single comprehensive guidebook provides students passionate about finding a career in sports medicine and training with the necessary insight into the wide array of options open, from acupuncture to yoga. The book's twenty-four profiles offer guidance regarding what job seekers can expect in terms of training, advancement, earnings, job prospects, working conditions, relevant associations, and more. *Careers in Sports Medicine & Training* is specifically designed for a high school and undergraduate audience and is edited to align with secondary or high school curriculum standards.

Scope of Coverage

Understanding the wide scope of jobs for those interested in sports medicine and training is important for anyone preparing for a career that involves both traditional careers in medicine, therapy, and training like cardiologist, podiatrist, and surgeon; massage therapist, personal trainer; rehabilitation counselors; and acupuncturists and massage therapists. *Careers in Sports Medicine & Training* offer lengthy chapters on a broad range of occupations including jobs such as Cardiologist, Chiropractor, Exercise Physiologist, Health Coach, Neuropsychologist, and Sport Psychologist. This excellent reference presents possible career paths and occupations within high-growth and emerging fields in this industry.

Careers in Sports Medicine & Training is enhanced with numerous charts and tables, including projections from the US Bureau of Labor Statistics, and median annual salaries or wages for those occupations profiled. Each chapter also notes those skills that can be applied across broad occupation categories. Interesting enhancements, like **Fun Facts**, **Famous Firsts**, and dozens of photos, add depth to the discussion. Additional highlights in the book include **Conversation With**—a two-page interview with a professional working in a related job—that offer insight into specific areas of sports medicine and training, such as biomedical engineer, sports coach/instructor, fitness trainer and educator, orthotist and prosthetist, and podiatrist. The respondents share their personal career paths, detail potential for career advancement, offer advice for students, and include a “try this” for those interested in embarking on a career in their profession.

Essay Length and Format

Each chapter ranges in length from 3,500 to 4,500 words and begins with a Snapshot of the occupation that includes career clusters, interests, earnings, and employment outlook. This is followed by these major categories:

- **Overview** includes detailed discussions on: Sphere of Work; Work Environment; Occupation Interest; A Day in the Life. Also included here is a Profile that outlines working conditions, educational needs, and physical abilities. You will also find the occupation's Holland Interest Score, which matches up character and personality traits with specific jobs.
- **Occupational Specialties** lists specific jobs that are related in some way, like Corrective Exercise Specialist, Sports Nutritionist, or Strength and Conditioning Coach. Duties and Responsibilities are also included.
- **Work Environment** details the physical, human, and technological environment of the occupation profiled.
- **Education, Training, and Advancement** outlines how to prepare for this field while in high school, and what college courses to take, including licenses and certifications needed. A section is devoted to the Adult Job Seeker, and there is a list of skills and abilities needed to succeed in the job profiled.
- **Earnings and Advancements** offers specific salary ranges, and includes a chart of metropolitan areas that have the highest concentration of the profession.
- **Employment and Outlook** discusses employment trends, and projects growth to 2026. This section also lists related occupations.
- **Selected Schools** list those prominent learning institutions that offer specific courses in the profiles occupations.
- **More Information** includes associations that the reader can contact for more information.

Special Features

Several features continue to distinguish this reference series from other career-oriented reference works. The back matter includes:

- Appendix A: Guide to Holland Code. This discusses John Holland's theory that people and work environments can be classified into six different groups: Realistic; Investigative; Artistic; Social; Enterprising; and Conventional. See if the job you want is right for you!
- Appendix B: General Bibliography. This is a collection of suggested readings, organized into major categories.
- Subject Index: Includes people, concepts, technologies, terms, principles, and all specific occupations discussed in the occupational profile chapters.

Acknowledgments

Thanks are due to Allison Blake, who took the lead in developing "Conversations With," with help from Vanessa Parks, and to the professionals who communicated their work experience through interview questionnaires. Their frank and honest responses provide immeasurable value to *Careers in Sports Medicine & Training*. The contributions of all are gratefully acknowledged.

Careers with an Exercise Science Degree

What this degree is helpful however, is for providing a knowledge base and foundation that can be directly or indirectly applied to the following occupations and career fields:

Recreation and Leisure

- Activity Specialist
- Camp Director
- Recreation and Leisure Supervisor
- Recreation and Sports Director
- Recreation Therapist
- Community Program Director

Fitness

- Aerobics Instructor
- Fitness Coach
- Fitness Consultant
- Gym Manager
- Personal Trainer
- Spa Manager
- Sports Facility Manager

Sports Medicine

- Anatomist
- Cardiac Rehabilitation Specialist
- Chiropractor
- Ergonomist
- Osteopathic Physician
- Physiologist
- Physiotherapist
- Registered Nurse
- Sports Medicine Physician

Athletics

- Athletic Director
- Athletic Scout
- Athletic Therapist
- Sports Agent
- Sports Coach
- Strength and Conditioning Coach

Acupuncturist

OVERVIEW

Sphere of Work

Acupuncture and other types of Oriental medicine are ancient and empirical systems of medicine based on the concept of *qi* (pronounced “chee”), which is usually translated as energy. Practitioners identify a pattern of energetic imbalance within a patient and the seek to improve the energy balance by means of acupuncture needling, cupping, acupressure, exercises such a *tai ji quan* and *qi gong*, as well as Chinese herbal preparations. Patients considered from a holistic perspective that takes into account physical, mental, and emotional health. Practitioners work to assist their patients by working collaboratively with their patients to determine the best course of action. This type of treatment is almost completely free from side effects and can be a relatively inexpensive form of treatment. Its reputations as an effective, safe, and affordable option to other treatments has led to a growth in public awareness and increased demand for practitioners capable of offering these types of treatment.

A career as an acupuncturist can offer several important advantages. Of course, there is the reward of working in a field where you can help others overcome challenges, but you can also expect to earn a good salary and have the opportunity to create a flexible work schedules that benefit both the practitioner and the client.



Work Environment

Acupuncturists work in a variety of settings, including multi-disciplinary clinics with other health care professionals, hospitals, or in private practice.

Other career options include teaching, translating, publishing, research, or working with an herb or acupuncture supply company.

Acupuncture is one modality among several others in what is known as complementary and alternative medicine (CAM). Both the World Health Organization (WHO) and a 1997 National Institutes of Health (NIH) Consensus Statement have recognized acupuncture as effective in treating a wide variety of health conditions.

Earnings

There are approximately 30,000 AOM licensees in the United States. A recent estimate of the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) indicates that the median annual income for AOM licensees is \$52,000 and has been increasing. Some practitioners may earn in excess of this amount, with reported income in some instances exceeding \$100,000. Variables affecting income may include the nature of your practice, geographic location, and personal factors such as your ability to relate well to patients, professional demeanor, and marketing savvy.

Famous First

The 5,000-year-old mummified body of Ötzi the Iceman was found with 15 groups of tattoos, and many were positioned at points where pain relief treatments similar to acupressure or acupuncture might have been applied. Ötzi's bones showed "age-conditioned or strain-induced degeneration" in the lumbar spine and wear-and-tear degeneration in the knee and ankle joints. This finding has been cited as evidence that practices similar to acupuncture may have been used in Europe 5 millennia ago, some 2,000 years before their earliest use in China.



Education

While there are no requirements for any particular level of education, many acupuncturists do attend schools, while others opt to follow an “apprenticeship” approach to learning the skills and techniques required by acupuncture. However, most states require a license in order to practice as an acupuncturist; education is a key component in meeting the necessary standards. To satisfy the education requirements for licensure as an acupuncturist, you may be required to present evidence of the satisfactory completion of at least sixty semester hours at an accredited college or university, including nine semester hours in the biosciences. Biosciences are defined as biological sciences and do not include chemistry or physics.

You should also be able to show the satisfactory completion of an approved professional acupuncture program registered by the education department as licensure qualifying or accredited by the Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) or another accrediting agency, or the equivalent. Schools should offer their students either pre-accreditation (candidacy) or full accreditation status with the Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM).

A program that is “equivalent” to one taught in a qualifying school should meet the following standard: The program must consist of a minimum of 4,050 hours of classroom instruction, supervised clinical experience, and out-of-classroom or out-of-clinic study assignments. As part of the 4,050 hours, the program must include:

- at least 200 classroom instructional hours in the biosciences including anatomy, physiology and pathology;
- at least 600 classroom instructional hours in acupuncture including acupuncture principles; acupuncture channel and point theory; acupuncture physiology; acupuncture pathology; acupuncture clinical examination and diagnosis; acupuncture techniques; acupuncture treatment principles; and sterilization and precautions; and
- at least 650 hours of supervised clinical acupuncture experience in general health problems to include acupuncture diagnosis; therapeutic treatment planning; acupuncture needling technique; moxibustion; electroacupuncture; pre- and post-treatment

instruction; contraindications and precautions; treatment of emergencies; when to refer to appropriate health professionals; and acupuncture hygiene.

The length of training at most schools is about three years for acupuncture and four years for Oriental medicine programs. The study of Oriental medicine includes both acupuncture and Chinese herbal medicine.

A professional acupuncture curriculum must consist of at least 47 semester credits (705 hours) in Oriental medical theory, diagnosis and treatment techniques in acupuncture and related studies; 22 semester credits (660 hours) in clinical training; 30 semester credits (450 hours) in biomedical clinical sciences; and 6 semester credits (90 hours) in counseling, communication, ethics, and practice management.

A professional Oriental medicine curriculum must consist of at least 47 semester credits (705 hours) in Oriental medical theory, diagnosis and treatment techniques in acupuncture and related studies; 30 semester credits (450 hours) in didactic Oriental herbal studies; 29 semester credits (870 hours) in integrated acupuncture and herbal clinical training; 34 semester credits (510 hours) in biomedical clinical sciences; and 6 semester credits (90 hours) in counseling, communication, ethics, and practice management.

Examination Requirements

You must successfully complete the National Certification Commission for Acupuncture and Oriental Medicine's (NCCAOM) Acupuncture with Point Location exam and Foundations of Oriental Medicine exam. For information regarding the examinations and course, including costs, dates of administration, and content, contact:

National Certification Commission for Acupuncture and Oriental Medicine

76 South Laura Street, Suite 1290

Jacksonville, FL 32202

Phone 904-598-1005

Fax 904-598-5001

E-mail info@nccaom.org

Web www.nccaom.org External Link Icon

Certification

Passage of NCCAOM's national certification examinations is strongly recommended for the following reasons: (1) passage of one or more of these examinations is generally required or accepted as a condition of licensure in most states that regulate the practice of AOM by statute; (2) AOM licensees who wish to practice in more than one state may enhance the interstate portability of their license; and (3) the examinations of NCCAOM are generally regarded as a reliable measure of entry-level competency within the AOM profession.

Persons who pass the Commission's certification exams in Oriental Medicine, acupuncture, and Chinese herbology are awarded the designation "Diplomate" as follows: Dipl OM, Dipl Ac, and Dipl CH.

Licensure

Some 45 states and the District of Columbia currently provide for the licensure (or a comparable form of practice authorization) for AOM practitioners. The law of each state should be consulted for specific education, training, examination, and application requirements. In most states, one or more of NCCAOM's examination modules is required or accepted as a route of licensure. Graduation from an ACAOM accredited or candidate school is required to take NCCAOM's national certifying examinations. The website of NCCAOM (<http://www.nccaom.org/regulatory-affairs/state-licensure-map>) provides licensure information for states that recognize its national examinations.

In most states, practitioners are designated "Licensed Acupuncturists (LAc)," but in some states they may be designated "Acupuncture Physicians" or "Doctors of Oriental Medicine." These doctoral designations, however, are licensure titles conferred by the state and do not reflect earned academic degrees at the doctoral level.

Currently, interstate reciprocity within the AOM profession is not uniform and the law of each state determines the extent to which that state will recognize an AOM license conferred by another state. Persons who desire to practice in more than one state should contact the AOM licensing boards in states of interest to identify specific requirements. As passage of one or more of NCCAOM's national certifying examinations is generally required or accepted in most states that regulate the practice of AOM by statute (but not California), persons who wish to practice in more than one state would

be well advised to pass one or more of NCCAOM's examinations to enhance the interstate portability of their license.

Practicing as an Acupuncturist

The law of each state determines what is permitted as part of actual practice. The practice of acupuncture is often defined as the stimulation of certain points on or near the surface of the human body by the inserting of needles to prevent or modify the perception of pain, to normalize physiological functions, or to treat certain diseases or dysfunctions of the body. A number of state statutes noting acupuncture as being useful in controlling and regulating the flow and balance of energy in the body or normalizing energetic physiological function. Other state statutes define acupuncture as traditional or modern Chinese or Oriental medical concepts or to modern techniques of diagnostic evaluation.

State laws may also authorize acupuncture licensees to use additional therapies such as moxibustion, cupping, dietary guidelines, Oriental or therapeutic massage, therapeutic exercise, electroacupuncture, acupressure, herbal therapy, injection and laser therapy, homeopathy, ion cord devices, ordering of western diagnostic tests, magnets, or qi gong. Some states may also permit acupuncturists to treat animals.

Fun Fact

Acupuncture needles are really thin, about as wide as just two hairs. But the original needles? They were made of stone, bamboo, and bone. Ouch!

Source: www.mayfloweracupuncture.com

Conversation With . . .
CHAD BONG, MS, L.OM
L.MT, CSCS

Acupuncturist
Philadelphia Sports Acupuncture
Philadelphia, PA
Acupuncture, 9 years

1. What was your individual career path in terms of education/training, entry-level job, or other significant opportunity?

Originally I planned on becoming a strength and conditioning coach, so I did a master's in exercise science at Northern Michigan University. During my second year of graduate school, I went to massage school on the weekends. That's where I was introduced to acupuncture. After graduation, I started my first business, as an in-home personal trainer and massage therapist. It was very successful, but after watching my wife use acupuncture to recover from a broken back, I decided to move from Philadelphia to Colorado to go to Southwest Acupuncture School in Boulder. (Acupuncture school ranges from 3 to 4 years, depending on if you study Chinese herbal medicine as well.)

While I was in acupuncture school, I had the opportunity to study with one of the leaders in the field of sports acupuncture, Whitfield Reaves. After finishing his apprenticeship program, he asked me to help him write his book, "The Acupuncture Handbook of Sports Injuries and Pain." I also assisted him in teaching, to develop skills and learn from him.

After graduating, I moved back to Philadelphia and started Philadelphia Sports Acupuncture. Part of my business was working as an independent contractor with the University of Pennsylvania Student Health Department, providing acupuncture to patients.

I've now been working in the field for nine years. Besides running my practice, I'm the CEO and founder of the Sports Acupuncture Alliance, which is focused on creating a stronger community amongst acupuncturists who specialize in sports acupuncture. We put together an annual conference. I also teach at both the Won Institute in Philadelphia and Tri-state College of Acupuncture in New York, mostly classes focused on sports injuries.

And I host the Pinpoint Performance Podcast. That may be a good resource for students interested in the path of an acupuncturist who specializes in sports injuries, as I've interviewed many of the leaders in the field. I've asked all of them about the path they took to get where they are.

2. What are the most important skills and/or qualities for someone in your profession?

The most important quality is to truly care about and have compassion for your patients. Another important skill is an understanding of how injuries are viewed in the medical community. Being able to communicate with doctors and physical therapists in their language has given me a huge advantage and is the reason I had the opportunity to work at the University of Pennsylvania.

Developing your palpation skills and mastering needle techniques is extremely important. Mastering palpation skills is all about focused practice. I have students try to find 1- to 2-inch piece of thread under a stack of paper, then keep adding more paper. I like my students to be able to feel the thread under 50 sheets of paper. If you can do over 75, you're doing pretty good; over 100 is exceptional.

3. What do you wish you had known going into this profession?

Understanding that you will likely have to run a business—as well as be an acupuncturist—is very important. Many people underestimate this challenge. One of the best ways to learn how to run a practice is to work for multiple successful practices, so that you can learn a variety of things that work and don't work. This could be a part-time job during college. You should also think about what you would consider a successful practice, so you can decide how to get there. What types of patients do you want to treat? Will you accept insurance? Do you want a small one-person practice or a large office with multiple practitioners and a front desk staff? Understanding the basics of accounting would be a great idea. At least learn how to use QuickBooks or similar software.

4. Are there many job opportunities in your profession? In what specific areas?

The opportunity to be hired as an employee in acupuncture is growing as more insurance plans cover acupuncture. And as acupuncture becomes more accepted, sports teams and hospitals are hiring acupuncturists. But at this time, most acupuncturists still have to run their own businesses.

5. How do you see your profession changing in the next five years as it relates to fitness and/or sports injuries, how will technology impact that change, and what skills will be required?

I think in the next five years acupuncture will be covered by more insurance companies, which will allow more hospitals to hire acupuncturists. We will continue to grow in the sports world, with more acupuncturists on staff with teams.

I'm not sure how technology will change acupuncture in the next few years. The basis of the profession is very old, and I don't expect the acupuncture needle to change significantly. However, as technology for practice management changes, hopefully it will streamline the process of taking treatment notes and running a clinic.

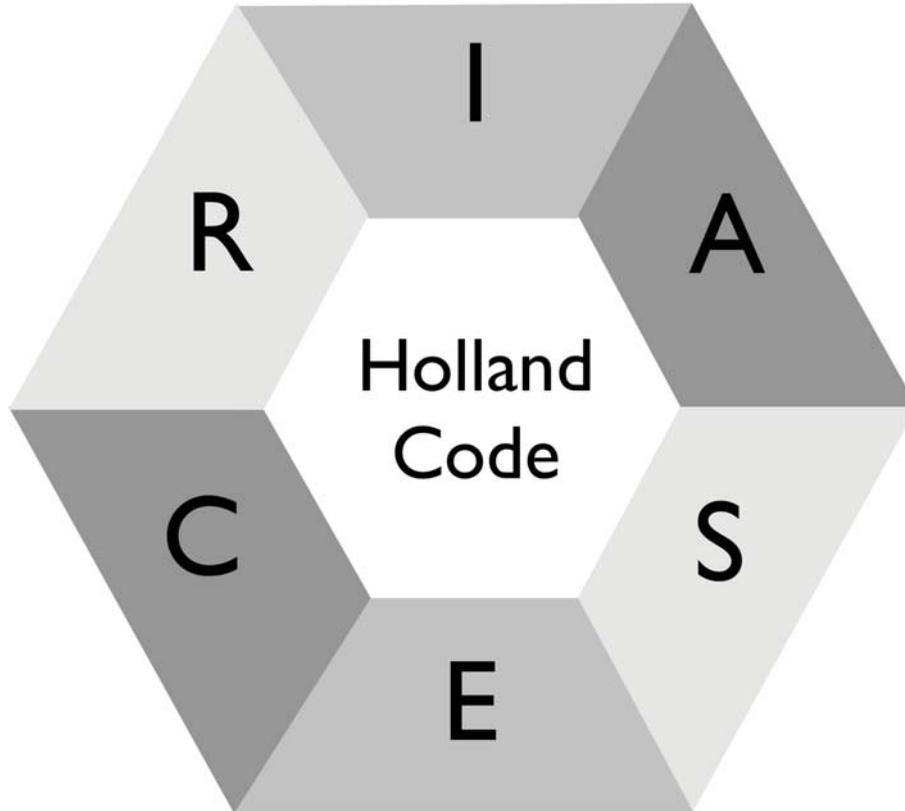
6. What do you enjoy most about your job? What do you enjoy least about your job?

What I enjoy most is that I get to spend every day helping people get healthy or stay healthy and continue to work towards their fitness and athletic goals. What I like least is, by far, the paperwork.

7. Can you suggest a valuable “try this” for students considering a career in your profession?

Get some acupuncture treatments. It's important that you've had experience with acupuncture before choosing it as a career. I would also suggest interviewing or shadowing an acupuncturist who specializes in sports acupuncture.

What Are Your Career Interests?



This is based on Dr. John Holland's theory that people and work environments can be loosely classified into six different groups. Each of the letters above corresponds to one of the six groups described in the following pages.

Different people's personalities may find different environments more to their liking. While you may have some interests in and similarities to several of the six groups, you may be attracted primarily to two or three of the areas. These two or three letters are your "Holland Code." For example, with a code of "RES" you would most resemble the Realistic type, somewhat less resemble the Enterprising type, and resemble the Social type even less. The types that are not in your code are the types

you resemble least of all.

Most people, and most jobs, are best represented by some combination of two or three of the Holland interest areas. In addition, most people are most satisfied if there is some degree of fit between their personality and their work environment.

The rest of the pages in this booklet further explain each type and provide some examples of career possibilities, areas of study at MU, and co-curricular activities for each code. To take a more in-depth look at your Holland Code, take a self-assessment such as the SDS, Discover, or a card sort at the MU Career Center with a Career Specialist.