

Chapter 1

The Chiropractic Profession

As one of health care's fastest growing professions on a global basis, chiropractic has earned recognition for its remarkable effectiveness and its use of natural, nonsurgical, and drugless methods of treatment. As of this writing, there are more than 70,000 active chiropractic licenses in the United States alone, and the numbers of chiropractors are increasing rapidly in many countries throughout the world.

In the United States

Chiropractic is the nation's third largest primary healthcare profession, surpassed in numbers only by practitioners of medicine and dentistry. It is the largest, most regulated, and best recognized of the complementary and alternative professions. All 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands officially recognize chiropractic as a primary healthcare profession distinct from medicine. Primary care is accessible, first-contact health care without the necessity of a referral. In 2002, approximately 7.4% of Americans consulted a doctor of chiropractic for treatment (Tindle, Davis, Phillips, & Eisenberg, 2005).

Outside the United States

The chiropractic profession is now established in over 70 countries, and there are more chiropractic colleges (many within university systems) outside the United States (26) than there are within (18). The World Health Organization (WHO, 2005), the authority on health matters in the United Nations system, has recently published its "Guidelines on Basic Training and Safety in Chiropractic" in an attempt to standardize education and regulation of the profession among member nations. The following list of countries in which national health authorities recognize chiropractic has been compiled from the current records of the World Federation of Chiropractic (WFC). Countries are listed according to the seven world regions adopted by the WFC. In most other countries there are no chiropractors in practice, and national health authorities have not considered recognition or lack of recognition (Table 1.1).

African Region		Saudi Arabia	
Botswana		<i>Syria</i>	
Ethiopia		<i>Turkey</i>	
Ghana		United Arab Emirates	
Kenya		European Region	
Lesotho		Belgium	
Mauritius		Croatia	
Namibia		Denmark	
Nigeria		Finland	
South Africa		France	
Swaziland		Germany	
Zimbabwe		<i>Greece</i>	
Asian Region		<i>Hungary</i>	
<i>China</i>		Iceland	
Hong Kong-SAR China		Ireland	
<i>Indonesia</i>		Italy	
Japan		Liechtenstein	
Malaysia		Netherlands	
Philippines		Norway	
Singapore		Portugal	
<i>Taiwan</i>		Russian Federation	
Thailand		Serbia	
<i>Vietnam</i>		Slovakia	
Eastern Mediterranean Region		<i>Spain</i>	
Cyprus		Sweden	
Egypt		Switzerland	
Iran		United Kingdom	
Israel		Latin American Region	
Jordan		Argentina	
Lebanon		Bolivia	
Libya		Brazil	
<i>Morocco</i>		Chile	
Qatar		Columbia	

Table 1.1 Countries in Which Chiropractic is Recognized as a Health Profession

Latin American Region, continued	
Costa Rica	
Ecuador	
Guatemala	
Honduras	
Mexico	
Panama	
Peru	
Venezuela	
North American Region	
Bahamas	
Barbados	
Belize	
Bermuda	
British Virgin Islands	
Canada	
Cayman Islands	
Jamaica	
Leeward Islands	
Puerto Rico	
Trinidad and Tobago	
United States	
U.S. Virgin Islands	
Pacific Region	
Australia	
Fiji	
Guam	
New Caledonia	
New Zealand	
Papua New Guinea	
Tahiti	

Legend:
recognized pursuant to legislation
 recognized pursuant to general law
de facto recognition

Table 1.1 Countries in Which Chiropractic is Recognized as a Health Profession, continued

Principles of Chiropractic

Chiropractic is a natural, conservative, medication-free, and nonsurgical form of health care concerned primarily with the diagnosis, treatment, and prevention of disorders of the musculoskeletal system, and the effects of these disorders on the nervous system and general health. The writings of Hippocrates (460-370 BCE), Galen (130-200 BCE), and even ancient manuscripts of the Egyptians, Hindus, and Chinese reveal many principles common to chiropractic. Its place in modern health care is largely attributed to Dr. Daniel David Palmer who founded the first chiropractic college in Davenport, Iowa in 1897.

The tenets of chiropractic include the principles that an individual's nervous system is very important to health, and that interference with this system impairs normal body functions and lowers the body's resistance to disease. The study of chiropractic includes the various mechanisms by which the nervous system may be irritated or otherwise impeded, thereby resulting in aberrant responses. Chiropractic practice incorporates techniques for the correction of these irritated and/or impeded mechanisms. Doctors of chiropractic refer patients to and receive referrals from many healthcare professionals (Chapter 7); in many instances, chiropractic can

provide safe and effective treatment without drugs and surgery. Chiropractic principles are applicable to a wide range of health conditions.

The specific focus of chiropractic practice is known as the *chiropractic subluxation* or *joint dysfunction*. A subluxation is a health concern that manifests in the skeletal joints, and, through complex anatomical and physiological relationships, affects the nervous system and may lead to reduced function, disability, or illness. Typically, the clinical evidence of a subluxation includes one or more of the following: pain and tenderness; asymmetry of posture, movement, or alignment; range of motion abnormalities; or tone, texture and/or temperature abnormalities of the adjacent soft tissues. A doctor of chiropractic may detect subluxations through standard physical examination procedures, specific chiropractic assessments, or special tests (Peterson & Bergmann, 2002). This process is much more complex than stated; this simplification is presented so that those not familiar with the chiropractic profession will have a basic understanding and awareness of what is meant by chiropractic subluxation. For a more complete description and further discussion of chiropractic subluxations, see, among others, Gatterman, (2005), Leach, (2004); and Peterson & Bergmann, (2002).

Chiropractic is also based on the premise that the body is capable of achieving and maintaining health through its own natural recuperative powers, provided it receives the necessary health maintenance components, including proper food, water, adequate rest, exercise, clean air, adequate nutrition, and a properly functioning nervous system. To clarify the model of chiropractic care and to illustrate its roles within the American healthcare system, the Association of Chiropractic Colleges has prepared formal position statements on the chiropractic paradigm and on chiropractic scope and practice, which are included as Appendix A.

Chiropractic Case Management

Doctors of chiropractic address various physiological and biomechanical aspects of their patients, including structural, spinal, musculoskeletal, neurological, vascular, nutritional, emotional, somatic, and environmental relationships. Case management of problems in any of these areas may include, but is not limited to, such procedures as adjustment and manipulation of the articulations and adjacent tissues of the human body, particularly the spinal column. In many cases, spinal radiographs and other diagnostic procedures — such as physical examination and questions concerning medical history, diet, and lifestyle — are used to identify the source of a patient's complaint.

Central to chiropractic is the corrective structural adjustment or manipulation of subluxations, i.e., vertebral or pelvic segments that are displaced and/or have restricted movement

— in some cases with signs of neurological and/or vascular involvement. The causes of these subluxations (whether static or dynamic) include various types of stresses as well as congenital anomalies.

By manually manipulating vertebrae into better physiological relationships, chiropractic practitioners relieve interference in the nervous system along with accompanying symptoms. This correction of joint dysfunction improves patient mobility and comfort. A chiropractic corrective adjustment requires specially-acquired palpation and manipulation skills so that a precise, delicate maneuver can be delivered to achieve the pre-determined goals.

Some studies indicate that — in addition to orthopedic conditions such as back pain, headache, and whiplash — conditions that involve organs and internal glands of the body may also respond to chiropractic adjustments (see Chapter 2). To supplement chiropractic spinal adjustments, modern chiropractic care may include a variety of extremity joint adjustments as well as certain physiotherapeutic modalities and acupuncture. Additionally, doctors of chiropractic believe that their patients must assume responsibility for their health and well-being; so they frequently provide exercise recommendations, dietary guidance, health risk avoidance advice, and wellness counseling. They also often become involved in public health efforts to improve the health and well-being of the residents in their local community.

Chiropractic Requisites

By law, licensed chiropractors are entitled to use the titles “Doctor of Chiropractic,” “D.C.,” or “Chiropractic Physician.” The chiropractic physician is engaged in the treatment and prevention of disease as well as in the promotion of public health and welfare. As such, doctors of chiropractic must meet stringent educational and competency standards before being granted a license to practice. While there is still considerable variation globally, the procedures required for obtaining licensure in the United States, Canada, and England have become standardized.

Currently, an individual must complete four major steps to become a practitioner of chiropractic (Figure 1.1). Completion of these same four steps formed the qualifications for most respondents to the 2009 NBCE Survey of Chiropractic Practice.

An individual chiropractic practitioner must generally have 1) successfully completed a minimum of 90 semester hours of pre-professional college education, 2) graduated from an accredited chiropractic college, 3) passed the National Board or other examinations – such as ethics and jurisprudence examinations – required by the state in which he/she intends to practice, and 4) met individual state chiropractic licensing requirements.

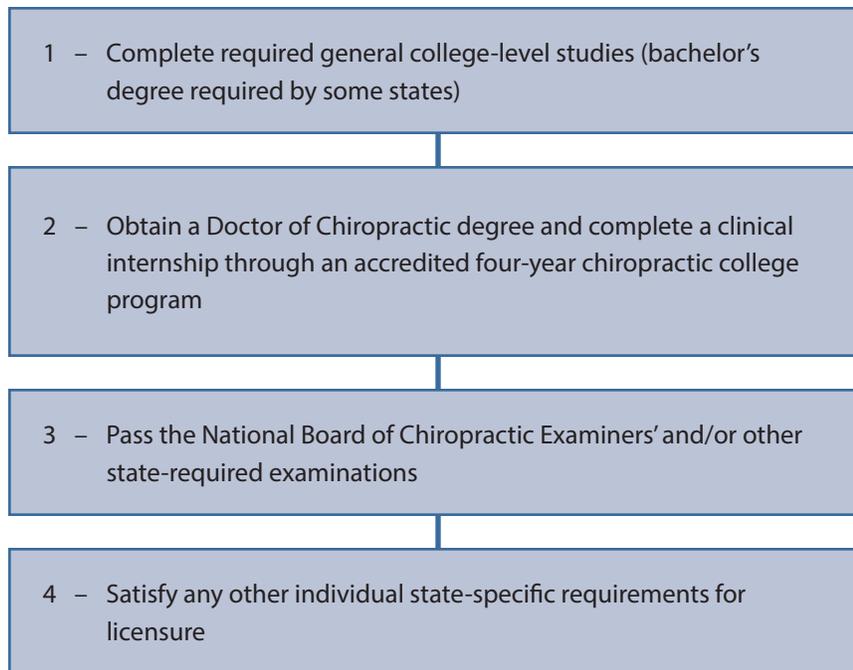


Figure 1.1 Steps Leading to Chiropractic Practice

Education

Government inquiries, as well as independent investigations by medical practitioners, have affirmed that today's chiropractic training is of equivalent standard to medical training in all pre-clinical subjects (Chapman-Smith, 1988). A doctor of chiropractic's training generally requires a minimum of 7 academic years of college study and a clinical rotation before entering private practice.

In the United States, the Council on Chiropractic Education (CCE) is granted authority by the U.S. Department of Education to accredit chiropractic programs and institutions. Currently, 18 chiropractic training programs in the United States are accredited by the CCE. Twelve programs outside of the United States are accredited through affiliated chiropractic education councils: Australia (3), Canada (2), Denmark, France, Japan, New Zealand, South Africa, and the United Kingdom (2). Chiropractic educational programs in Japan, South Korea, and Spain are currently pursuing accreditation, while others — Brazil (2), Malaysia, Mexico (2), South Africa, and Switzerland — operate within locally-accredited university systems. Recent announcements of additional campuses for current programs as well as plans for new programs indicate that chiropractic education is continuing to expand globally.

To ensure that high standards in education are maintained, all accredited chiropractic colleges must meet stringent requirements. Among other goals, criteria address an on-going system of evaluation and planning, incorporation, governance, administration, faculty and

staff, learning resources, finance, student services, and doctor of chiropractic degree program curricula. Each program’s curriculum must be comprised of a minimum of 4,200 instructional hours of course credits; course offerings must address subjects specified by the CCE (2007).

In addition, incoming students must furnish proof of having acquired at least 90 semester hours, or the equivalent, of college credit leading to a baccalaureate degree at an institution(s) accredited at the college level by an accrediting body that has been nationally recognized by the U.S. Department of Education. Applicants must have a cumulative grade point average of at least 2.50 on a 4.00 scale. No grade below 2.00 on a 4.00 scale is acceptable in the chemistry, physics, and biology courses required for admission. Only grades earned in a course and its corresponding laboratory may be averaged. Following are the required minimum prerequisites:

Biological Sciences with Laboratory.....	6 semester hours
English Language Skills.....	6 semester hours
General or Inorganic Chemistry with Laboratory.....	6 semester hours
Organic Chemistry with Laboratory.....	6 semester hours
Physics with Laboratory.....	6 semester hours
Psychology.....	3 semester hours
Social Sciences or Humanities.....	15 semester hours

Once accepted into an accredited program, the chiropractic student typically follows a curriculum that consists of either 4 or 5 academic years. In a typical trimester-based chiropractic program, a first-year chiropractic student can expect to study the following courses:

General Anatomy	Human Biochemistry
Histology	Clinical Chiropractic
Chiropractic Principles	Neuroanatomy and Neurophysiology
Palpation	Normal Radiographic Anatomy
Human Physiology	Fundamentals of Nutrition
Chiropractic Procedures	Functional Anatomy/Biomechanics
Embryology	Spinal Anatomy
Introduction to Physical Examination	

Second-year coursework typically includes the following:

Pharmatoxicology	Clinical Microbiology
Pathology	Chiropractic Principles
Chiropractic Procedures	Physics of Clinical Imaging
Clinical Orthopedics and Neurology	Nutritional Assessment
Community and Public Health	Physiological Therapeutics
Clinical Nutrition	Research Methods
Practice Management	Imaging Interpretation
Differential Diagnosis	Applied Clinical Chiropractic
Emergency Care	

Third-year coursework typically includes the following:

Integrated Chiropractic Clinical Application	Original Research Project
Chiropractic Principles	Physiological Therapeutics
Radiological Positioning and Technique	Practice Management
Clinical Application of Manual Procedures	Diagnostic Imaging Interpretation
Clinical Internship	Differential Diagnosis
Clinical Psychology	Dermatology
Pediatrics	Obstetrics and Gynecology
Clinical Laboratory Clerkship	Geriatrics
	Ethics and Jurisprudence

The fourth year often consists of a clinical internship. In addition to treating patients under the supervision of an experienced chiropractor, many students experience a clinical rotation through an integrated healthcare facility such as a hospital or veterans clinic. The Doctor of Chiropractic (D.C.) degree is awarded upon graduation, signifying successful completion of the required program.

Specialization

Postdoctoral training is available in a variety of clinical disciplines and specialties. Accredited U.S. chiropractic colleges offer specialty training through part-time postgraduate education programs or full-time residency programs. Specialty training programs are available in the following areas:

Family Practice	Applied Chiropractic Sciences
Clinical Neurology	Orthopedics
Forensics	Pediatrics
Clinical Nutrition	Physical Fitness & Rehabilitation
Occupational Health	Diagnostic Imaging
Acupuncture	Internal Disorders
Sports Chiropractic	

Postgraduate and residency programs lead to eligibility to sit for competency examinations offered by specialty boards recognized by the American Chiropractic Association, the International Chiropractors Association, and the American Board of Chiropractic Specialties. Specialty boards may confer “Diplomate” status in a given area of focus upon successful examination. The most common specialty certifications are chiropractic orthopedics and sports chiropractic.

National Board Exams

In addition to holding a D.C. degree, a chiropractic practitioner is generally required to pass Parts I, II, III, and IV of the National Board of Chiropractic Examiners (NBCE) examinations before applying to a U.S. jurisdiction for a license to practice. Candidates typically take all of the required examinations before graduation from a chiropractic college.

The National Board of Chiropractic Examiners is the international testing agency for the chiropractic profession. NBCE examinations are administered at 25 chiropractic college test sites in the United States, Canada, England, France, Australia, and South Korea. Since 2002, the NBCE has been expanding its standardized testing services globally through the International Board of Chiropractic Examiners (IBCE). The NBCE develops, administers, and scores standardized examinations that assess knowledge and higher-level cognitive abilities and problem-solving in various basic science and clinical science subjects. Scores from NBCE examinations are made available to licensing authorities within and outside the United States.

The NBCE examinations required for licensure currently consist of the following:

PART I	Six basic science areas (general anatomy, spinal anatomy, physiology, chemistry, pathology, and microbiology & public health)
PART II	Six clinical science areas (general diagnosis, neuromusculoskeletal diagnosis, diagnostic imaging, principles of chiropractic, chiropractic practice, and associated clinical sciences)

PHYSIOTHERAPY	An elective examination
ACUPUNCTURE	An elective examination
PART III	Nine clinical competency areas (case history, physical examination, neuromusculoskeletal examination, diagnostic imaging, clinical laboratory and special studies examination, diagnosis or clinical impression, chiropractic techniques, supportive techniques, and case management)
PART IV	An objective structured clinical examination (OSCE) which tests interpretation of diagnostic imaging, chiropractic technique, and case management (including patient-centered skills, clinical judgment, and patient care)
SPEC	An examination designed for currently licensed or previously licensed individuals and frequently used for reciprocity/endorsement; also used to assess individuals with revoked or suspended licenses or any special circumstances requiring an objective assessment of clinical knowledge
E & B	An examination designed to assess licensed or previously licensed chiropractors regarding professional ethics and boundaries, including ethical misconduct, sexual misconduct, and sexual harassment

State or National Licensure/Registration

State licensing authorities regulate approximately 800 occupations in the United States. Legislation regulating the practice of chiropractic is established in the United States and in over 70 nations worldwide.

The chiropractic regulatory agency that exists in each state (and in some nations) has a regulatory board on which doctors of chiropractic, consumer members, and other healing arts professionals serve. In accordance with the statutory practice acts, the chiropractic regulatory boards are charged with the protection of the public. This is accomplished through the adoption and application of regulations and policies including appropriate sanctions of those who have violated the practice act.

To assist the various regulatory boards in assessing candidates for licensure, NBCE's pre-licensure examinations are administered semi-annually according to a published schedule. Individuals who are in a chiropractic education system or who have completed a chiropractic education program take these NBCE examinations. NBCE postgraduate examinations are also used by regulatory authorities to assess those who are subject to certain disciplinary processes or who have been away from active practice.

The chiropractic profession has been regulated in the United States for well over a century. By 1926, the agencies that license and regulate doctors of chiropractic developed the forerunner to the Federation of Chiropractic Licensing Boards (FCLB). The FCLB provides a forum in which licensing board members meet to address common areas of interest and concern with respect to chiropractic regulatory law. Boards also use certain common services provided through the FCLB's central offices, including:

- **CIN-BAD – Chiropractic Information Network/Board Action Databank:** Online, password-protected databank of public actions taken by FCLB member boards. These involve individual licensees where violations of the chiropractic practice act have been determined through an adjudicated process. Sanctions and reinstatements of chiropractors by the U.S. Department of Health and Human Services are also included, as is the licensed status of doctors of chiropractic with no records of sanctions.
- **PACE – Providers of Approved Continuing Education for Chiropractic:** Similar to the service provided by federations in other professions, PACE ensures that a uniform assessment process is followed for continuing education for re-licensure purposes.
- **Official Directory:** FCLB compiles the requirements to obtain and maintain licensed status in the United States and its territories, Canada, and Australia.

Reimbursement for Chiropractic Services

Chiropractic care is covered by private insurance plans and most automobile insurance policies. Medicare, Medicaid, and various managed care programs including preferred provider organizations (PPOs) and health maintenance organizations (HMOs) also offer chiropractic benefits. Most state workers' compensation systems include chiropractic care. The federal workers' compensation system, the Longshore Harbor Workers' Act, and other federal employees' health benefits programs cover chiropractic care.

Active duty military service members (including activated National Guard and Reserve members) can receive chiropractic care at more than 60 Army, Navy, and Air Force bases including two in Germany and one in Japan. This Department of Defense program is administered through the TRICARE component of the Military Health System. Currently, more than

30 Veterans Administration sites provide chiropractic services to veterans through the Veterans Health Administration (VHA); more sites are being planned. Through the TRICARE system, the VHA program endorses full integration of doctors of chiropractic as partners in healthcare teams, includes chiropractic care in research funding, partners with chiropractic colleges in clinical training of students, and helps ensure continuation of care for veterans who previously received chiropractic services. Both active duty and veterans chiropractic clinics are staffed by doctors of chiropractic who are hired as federal employees or as contractors, depending on each site's needs and structure.

Sports Chiropractic

Chiropractic is receiving a growing amount of support from athletes in many sports all around the world. Every team in the National Football League offers chiropractic services to their players and personnel to manage and prevent injuries and to improve on-the-field performance. Many top athletes give much credit to their doctor of chiropractic for their ability to compete in spite of the heavy biomechanical stresses placed upon their bodies. Runners, cyclists, martial artists, dancers, skaters, and many sports teams frequently have a chiropractor available to help treat their athletic injuries and to keep them at the top of their competitive abilities.

The International Federation of Sports Chiropractic (FICS), housed in Lausanne, Switzerland organizes chiropractic coverage for the many games and competitions that take place in multiple sports around the world. At the 2010 Winter Olympic Games in Vancouver, Canada, chiropractic sports physicians were included for the first time inside the Olympic Village Polyclinic, the multi-disciplinary facility that offers health care and medical services to Olympic athletes, officials, and staff. Currently, both the Medical Director for Team USA and the Director of Sports Medicine Clinics are doctors of chiropractic who have specialized in sports chiropractic and now work with the United States Olympic Committee.

Conclusions

The chiropractic profession and its conservative approach to health care continues to expand globally. The extent of chiropractic health care acceptance, use, and efficacy is illustrated by the following statement:

As a profession that over the past generation has made great strides into the American healthcare mainstream — with widespread utilization and patient satisfaction; a strong research base; inclusion in most private insurance plans, worker's compensation insurance, Medicare, military, and veterans health care; and full recognition in Olympic and sports medicine — chiropractic now has the hallmarks of an essential health service (Redwood, 2009, p. 2).