HISTORY OF MEDICINE

ISTORIJA MEDICINE

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HISTORY OF SPORTS MEDICINE IN EAST EUROPEAN COUNTRIES

ISTORIJA SPORTSKE MEDICINE U ISTOČNOEVROPSKIM ZEMLJAMA

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Summary

The purpose of this article is to provide a historical background of medicine, science and sports with the focus on the development of modern sports medicine in European countries, with an accent on Eastern European countries that have a long sports medicine tradition. The development of modern sports medicine began at the end of 19th and the beginning of 20th century, and it has been associated with social and cultural changes in the world of medicine, science and sports. Advanced medical knowledge, skills and practices, and the progress of scientific achievements enabled sports people to improve their performance level. Increased popularisation and commercialisation of sports have resulted from urbanization and city lifestyle, leading to the lack of physical activity and increased psychological pressure. In addition, the growing need and interest in sports and successes in professional sports have become a symbol of international recognition and prestige for the nations.

Keywords: History of Medicine; Sports Medicine; Europe, Eastern; History, 19th Century; History, 20th Century; Health Promotion

Introduction

Modern sports medicine may be defined as an organized application of medicine and science in the study of sports and their institutionalization in the form of professional associations, research establishment, scientific conferences and journals [1]. It is primarily based on healthcare of sports professionals and recreationally active individuals in order to diagnose, treat and prevent disease or other damage to the body and mind, as well as to promote health. The development of modern sports medicine began at the end of the 19th and the beginning of the 20th century, and it has been associated with social and cultural changes in medicine, science and sports. Advanced medical knowledge, skills and practices, and the progress of the scientific achievements enabled sportsmen to improve the level of their success. Modern sports medicine has changed and rapidly progressed since the Second World War. Urbanization and city lifestyle have led to the lack of physical activity and increased psychological pressures on the one hand, but have increased the popularization and the commercialization of the sport on the other hand. In addition, the growing need and interest in sports and successes in professional sports have become a symbol of international recognition and prestige.
for the nations. The purpose of this article is to give a historical background of medicine, science and sports with the focus on the development of modern sports medicine in European countries with special emphasis on Eastern European countries with long sports medicine tradition.

**Origins of Link between Sports, Medicine and Science**

The origins of sports medicine can be found in the times of ancient Egyptians, Greeks and Romans. The Egyptian Imhotep described the diagnosis and treatment of 200 diseases in 2600 before Crist (BC). Hippocrates (460–370 BC) is the earliest known physician, recognized as the father of medicine. He dissociated medicine from magic, religion and philosophy, and established medicine as a profession, based the practice of medicine on objective observations and emphasized the physician/patient relationship [2–4]. Today his postulate is more relevant than ever: “All functional parts of the body will do well, stay healthy and age more slowly if moderate demands are made on them. In passivity, however, they age faster and are prone to diseases.” It can also be proved that the contemporary Greek medicine was as closely linked to the training and competitions of ancient athletes as modern sports medicine is to present-day athletes [5]. Galen (Anno Domini 131-201), a Greek physician to gladiators and Roman Emperor Marcus Aurelius, was the first physician who documented his medical observations and is known as the founder of experimental medicine. At the beginning, the physiologists were interested in study of the human organism and its performance, discovering the natural laws that regulate the function of the human body. The scientific insight into the human athletic potential was a source of interesting physiological data. Since Galen’s time, doctors have been treating not only sports injuries, but have also been instructing and preparing athletes [1–4].

It was not before the 17th and 18th centuries that far-sighted doctors and scientists referred to this wealth of ancient knowledge again, which at last became the subject of scientific research [4]. Girolamo Mercuriale (1530-1606) was an Italian physician, being the most famous for his work *De Arte Gymnastica*, which is now considered the first book of sports medicine with the principles of physical therapy. The development of sports in Europe increased the development of physiology, and vice versa. Pierre-Jean-Georges Cabanis (1757-1808), a French doctor and physiologist, provided a systematic description of the human organism and its sources of energy. Jan Evangelista Purkyně (1787-1869), a Czech anatomist and physiologist, presented the idea of favorable effect of body training for human health. Nathan Zuntz (1847-1920), a German physiologist and a pioneer of modern altitude physiology and aviation medicine, published studies in biology of the athlete: metabolism, respiration, circulation, nutrition, muscular work and altitude physiology [1–3].

**Modern Era of Sports Medicine**

In their efforts to promote prevention, therapy and rehabilitation, doctors found permanent allies in the fast developing gymnastics and sports movements after the revival of the Olympic Games starting in 1894 [5]. This was a great incentive for sports medicine, which created a demand for a greater change in the approach to health and sports. August Bier (1861-1949) and Arthur Mallwitz (1880–1968), both German doctors, organized the first lectures in sports medicine at the Berlin University in 1919. Arthur Mallwitz is considered the founder of modern sports medicine. August Bier was also a director of the *Akademie für Sport und Leibeserziehung (Academy for Exercise and Physical Training)* in Berlin, latter called *Hohenlychen Hospital*, which became the first sports medicine clinic in Germany. Its director Karl Gebhardt (1897–1948) became the first professor of sports medicine in Berlin, who expanded Bier’s methods, adopting an academic approach to sports medicine and awarding degrees [1, 2].

At the same time, Arlie V. Bock (1888-1984) was a researcher at the Harvard Medical School, United States of America, and a pioneer in the field of blood research, especially in the relation with exercise physiology. Archibald V. Hill (1886-1977), an English physiologist, won the Nobel Prize in physiology in 1922 for explaining the production of heat and mechanical work in muscles based on high-performance athletics [1, 2].

The First German Congress of the Scientific Investigation of Sports and Physical Education, with 60 participants, was organized in Oberhof, Germany in 1912. The Congress topics were: “The Importance of Physical Education with Hygienic View”, “Woman and Physical Ability”, “The Impact of Regular Exercise on the Cardiovascular System”, etc. At the same time, the German Committee for Scientific Research of Sports and Physical Education was constituted [1, 2]. This was the first national organization of sports medicine in the world. Sports medical organisations were founded in other countries decades later [5]. The expression “sports doctor” was used officially for the first time in Berlin, Germany in 1913, and Arthur Mallwitz was ap-
pointed the first doctor, the specialist in the new area of the medical science called sports medicine. The First World War (1914-1918) interrupted the development of sports medicine in Germany for more than 10 years, and France came with the first post-war sports medicine news [1, 2].

By the end of the 19th century, parallel to the Industrial revolution, which had provided the motive and means for creation of new tools and mechanism that would make life better, specific equipment and support devices started to emerge. These devices and equipment enabled the next phase in the development of medical support to sports people and development of health care for amateur and professional athletes. The first manual ergometer, measuring physical work, was constructed in 1883. Six years later, the first treadmill was promoted and first bicycle-ergometer was represented at the World Exhibition of Technical Achievements in Paris, France in 1896. When the Scotsman Douglas constructed gas-bag in 1911, it could be accessed to complex analysis of the metabolic changes in the human body under the influence of defined physical effort and determining physical working capacity based on samples of exhaled air. This and other new inventions made it possible to study human organism reaction to physical efforts and to determine its physical ability. During the first modern, renewed Olympic Games, doctors, mainly former athletes, who took care of health and physical ability of sports national teams, first became interested in new developments. The first sports medical laboratory for anthropological, functional and radiological examinations, managed by Arthur Mallwitz, was established during the First International Hygiene Exhibition, organized in Dresden, Germany in 1911. During that exhibition, which was open for six months, the visitors could check their physical ability based on parameters obtained before and after exercises under medical supervision [1, 2]. Jiri Kral, a Czech medical doctor, founded the first Institute for Sports Medicine affiliated to the Medical Faculty of Charles University in Prague, Czech Republic in 1945. Among other research projects, the first wireless transmission of heart frequency and cardiologic observations during sports events were studied at this Institute [2]. Technological inventions and healthcare support measures have resulted in the discovery of possibilities of human body and methods of how to make the body and mind keep up with growing physical and psychological efforts induced by competitions and ever-lasting motive always to perform better. The link between sports, science and medicine became stronger.

Today, the sports science may be defined as a scientific discipline applied to the theory and practice of athletic performance [2]. Parts of modern medicine fields of science and practice, as well as modern sports medicine, are clinical practice, healthcare science, biomedical research, medications, surgery, medical devices, as well as alternative medicine and psychotherapy. The application of new techniques, methods and modern medical equipment help to further develop sports medicine. New machines, which promote health and ensure the safety of athletes, have contributed to the development of sports medicine and its important and unavoidable role in life of professional athletes as well as everyday health-driven exercise practices of individuals all over the world.

**Association and Cooperation within Sports Medicine**

The Second German Sports Medicine Congress was organized in 1924 in Berlin, Germany, whose name was changed into the German Medical Association for the Promotion of Physical education. At the 4th Congress of German Association, which was held in Berlin, Germany in 1927, Walter Schnell, the president of the Association, invited sports medicine doctors from 12 countries to discuss international cooperation and establishment of an international organization of sports medicine. Association Internationale Médico-Sportive (AIMS) was established in Sent Moritz, Switzerland in 1928. Its first president was Wilhelm Knoll from Switzerland, and Arthur Mallwitz from Germany became the first secretary general. The main aims of the association were to exchange information and experience related to research and practical aspects of sports medicine. This event is considered the official date of launching sports medicine as new medical disciplines. In the same year, during the 9th Summer Olympic Games held in Amsterdam, the Netherlands, the First AIMS International Congress of Sports Medicine was organized with participation of 286 physicians from more than 30 countries. They had the opportunity to study many of the athletes taking part in the Games by collecting anthropometric, cardiovascular, physiological and metabolic data. The first statute determined three directions of AIMS action: promotion of scientific researches in the field of biology, psychology and sociology of sport, promotion of medical research projects associated with athletes’ training and competition, and organization of international sports medicine congresses. AIMS changed its name into the International Federation of Sports Medicine (Fédération Internationale de Médecine du Sport - FIMS) during the 3rd International FIMS Congress in Chamonix, France in 1934. The FIMS started mostly as a European organization, but later, during 1960s until 1980s, it included countries from all five continents. Today, the FIMS includes continental and national sports medicine associations, multinational groups and individual members. It is the biggest federation of national medical associations in the world, which includes hundreds of thousands of medical doctors and other professionals from different fields of sports medicine. The primary aims of FIMS are to promote scientific research and development of sports medicine all over the world, and to help athletes to achieve optimal con-
petition ability by improving their genetic potential, health, nutrition, quality of medical protection and training. It organizes courses, international congresses and publishes scientific information related to sports medicine in specific scientific journals, and keeps and promotes the contacts with sports medicine specialists throughout the world. During the Second World War (1939-1945), no sports activities were organized. The revival of FIMS started after the Second World War. During the 20th century, the FIMS congresses were organized throughout Europe. For example, the 7th International FIMS Congress was organized in Prague, Czechoslovakia in 1948, the 10th International FIMS Congress and the 30th Anniversary of FIMS was in Moscow, Union of Soviet Socialist Republics (USSR) in 1958. Since 1963, the FIMS has organized FIMS European Congresses, besides the international ones, which changed their name into the FIMS World Congress at the 16th FIMS World Congress in Hannover, Germany in 1966. The 1st FIMS European Congress was organized in Prague, Czechoslovakia in 1963. Since the 1980s, the FIMS has developed relations with other institutions and countries throughout the world. The first joint meeting of FIMS and the World Health Organization (WHO) was organized in Cologne, Germany in 1994. In 2003, the FIMS celebrated 75 years of its existence in all five continents. For example, the Bone and Joint Decade World Network Conference was held in Berlin, Germany, and the 7th IOC Olympic World Congress on Sports Sciences in Athens, Greece. The FIMS ambassador had his tour through Eastern European countries, Slovakia and Serbia and Montenegro in 2004. The last 32nd FIMS World Congress was held in Rome, Italy in 2012.

The European Federation of Sports Medicine Associations (EFSMA) was founded in Porto, Portugal in 1997. Its first president was Norbert Bachl from Austria, Fabio Pigozzi from Italy was the first secretary general, and today Dr Nenad Dikic is the representative of Sports Medicine Association of Serbia. The goals of EFSMA are to establish sports medicine as a specialty in Europe, to develop and coordinate training and teaching of sports medicine at the relevant educational institutions, to create a pan-European forum to coordinate activities between European societies of sports medicine and sports science facilities, to promote the importance of physical activity and exercise for the prevention, treatment and rehabilitation after illness and injury, to exchange scientific results and experiences in the field of sports medicine and to work on joint research projects, creation of licensed sports medicine centers, and promotion of ethical principles in sports medicine.

**Modern Sports Medicine in Eastern Europe**

In most countries of Eastern Europe, medicine and sports had their own parallel history of development. The key role in connecting these two branches and making the scientific link between them was to establish movements, associations and institutions for physical education and gymnastics that were part of the state public-health system. When it comes to the development of modern sports medicine in Eastern Europe, one organization played a significant role in promoting sports medicine and spreading the spirit of physical education in Eastern Europe. The name of this youth sport movement and gymnastics organization was The Sokol. The Sokol was a youth sport movement and gymnastics organization first founded by Miroslav Tyrs and Jindrich Fungar in Prague, Czech in 1862. It was the first physical education organization in the Austro – Hungarian Empire at the time of political freedom in the 1860s, with more than 2000 members in 1863, and over a million members in the period between the two world wars. It had a versatile program based on physical, moral and intellectual training of the nation. The Sokol found its base in the German gymnastic movement Turnverein founded by Friedrich Ludwig Jahn in 1811. Miroslav Tyrs (1832-1884), a Czech art historian, sports organizer and founder of the Sokol movement, introduced new gymnastic exercises and its terminology. Sokol gymnasia were built as sports and cultural centers. The movement units organized regular training of all age groups, sports competitions, cultural events, excursions and youth camps, active discussions and exhibitions. The Sokol festival (SLET), held for the first time in 1882, represented a mass gymnastic festival. The Sokol movement started to be popular in most of the Slavic countries, such as Poland, Serbia, Bulgaria, Russia (Ukraine, Belarus), Slovenia, Croatia, etc. It established the base for the 20th century development of widely accepted approach to make sport activities become more science with a specific purpose than mere leisure or entertainment activity [6, 7].

During the FIMS's Congress of Sports Medicine held in Romania in 1969, the Turkish representative Dr Necati Akgın proposed the establishment of the Sports Medicine Association of the Balkans (BSMA). The BSMA was established in 1971 with the representatives from the Balkan countries that linked all the sports doctors from Bulgaria, Greece, Romania, Turkey and Yugoslavia. The 1st Balkan Congress of Sports Medicine was organized in Athens, Greece in 1972. Today, the Association consists of the Sports Medicine Association of Albania, Bulgaria, Cyprus, Greece, Macedonia, Romania, Moldova, Serbia and Turkey. Unfortunately, due to the large number of annual conferences in the field of sports medicine and a lot of historical and political reasons, the BSMA Executive Committee decided to freeze its activities, and focus on work under the auspices of the European Federation of sports associations. In 1995, the Balkan Congress of Sports Medicine was organized in Belgrade, and the last, 15th Balkan Sports Medicine Congress was organized, in Bucharest.
Romania in 2008. Germany is considered the cradle of sport medicine worldwide. In 2012, they celebrated a hundred years of organized sports medicine in Germany. Although the terms “sportarzt” and “sportmedizin” were not used in German before the last century, their area of concern and their issues are among the oldest in medicine [5]. Turbulent German history of the 20th century, however, shaped the development of sport medicine and gave it different 45 years of development in Western and Eastern part. After the Second World War, about 60 percent of the sports facilities in Eastern Germany were shuttered or used for other purposes, such as emergency and refugee lodgings, and agrarian facilities. Nevertheless, sports-medical curricula were set up by various facilities of physical education for sport students and trainers in 1946. In the same year, Friedrich Wilhelm University in Berlin included sports-medical teaching as “sport biology” and began teaching it. In 1950, the Ministry of Health created a department of sports medicine, and right afterwards issued a decree on the physical examination for acquisition of a sport medal. Thus, the necessity for doctors with sports-medical engagement arose and sports-medical examinations as a paid “additional activity” were introduced. Also in 1950, a decade-old demand that “every doctor (be) a sports doctor” was reaffirmed by Arno Arnold. He believed that sports medicine should be a mandatory examination subject in the study of medicine. This created a pathway for the introduction of lectures in sports medicine or sports-related topics as a part of other subjects at the six medical university faculties in the Deutsche Demokratische Republik (DDR) and three medical academies (Erfurt, Dresden and Magdeburg) starting in the late 1950s. German College of Physical Culture (Deutsche Hochschule für Körperkultur – DHFK) was founded in 1950, with the Sports Medicine Department right from the start. The Department was in charge of the sports medical teaching of sport students and the monitoring of students’ health. In 1961, the Institute for Sports Medicine was founded as well as the Faculty of Natural Sciences and Sports Medicine in 1962. The Rehabilitation Centrum Kreischa (near Dresden) was affiliated to the Institute in 1962. This Centrum evolved into the Central Institute for Sports Medical Services in 1968. In Leipzig, as well as in Kreischa, there were courses and advanced seminars in sports medical areas with national and international participants. Sports medicine was taught there primarily by doctors with sports-medical qualification in out- and in-patient health services and university faculties. The Research Institute for Physical Education and Sports (FKS) was founded in 1969 to meet the high-performance sports goals of the DDR effectively. It was a combination of the research facility and the major part of the Institute for Sports Medicine of the German University for Physical Education in Leipzig. The FKS was the only institution for high-performance sports research in the DDR and employed more than 600 people until it was closed down in 1990. As a result of this effective practical work at the FKS, sports type specific ergometers were introduced in all types of sports by 1974. Among these were the current channel in swimming and the tiltable treadmill for cross-country skiing. With the establishment of the Sports-medical Consultation Centers in 1952, and the introduction of the specialist in sports medicine in 1963, the sports medicine management system became a centralized state organizational structure. Until the end of the 1950s, county sports doctors from health services used to give advice to those going in for sports and to examine them. However, since 1970, they have been assigned clearly defined responsibilities in order to facilitate high-performance sports system. The county sports doctors became responsible especially for the extensive care of young aspiring athletes enrolled in the training centers. Every activity in high-performance sports was kept strictly secret. Since the leaders of the political party and sports directors recognized the significance of athletic achievement for the international reputation, they spared no expense to uphold and boost the impressive success of DDF sports on the world stage. The preparations in some sports for the Olympic Games in 1971 in Munich included particular or “supportive measures” as doping was euphemistically called. Still, the DDR and its sports managers had always officially recognized the Anti-Doping Charta. Doctors were not forced to perform measures determined by the Sports Leagues, but anyone who refused could be certain of being judged unsuitable for employment in high-performance sports. These activities casted a shadow over a very successful state sports medicine works done in the past. At the end (1990), there were about 1800 people employed in the Sport Medical Department and 350 of them were specialists for sports medicine. At the end of 1990, the Sports Medical Department as the central institution was closed by the Federal Ministry of Finance for all of Germany although some of the doctors and well-known university teachers strongly opposed that decision [8]. In the USSR, the term “vраcheny kontrol” (medical supervision) was sometimes used instead of the term sports medicine [9]. Modern sports medicine started to develop in the countries of the former Soviet Union at the end of 19th century. Ivan Mikhaylovich Sechenov (1829-1905), the father of Russian physiology, explained how the alveolar $P_2O_3$ changed with barometric pressure. At the end of 19th century, Russian army doctors made comprehensive examinations of the fitness of soldiers at high altitude and of procedures for improving acclimatization [10]. The development of sports medicine in the USSR was closely related with N. A. Semashko, V. V. Gorenevskii, B. A. Ivanovskii, I. M. Sarkizov-Serazini, V. N. Moshkov, I. A. Kriaich-ko,
S. P. Letunov, R. E. Motylianskaia, and others [9]. These individuals laid the scientific foundation of sports medicine as an integral part of the Soviet system of public health, physical culture, and sports. In the Soviet Union, sub-departments, laboratories, and departments of sports medicine were organized in the 1920s and 1930s at scientific research institutes and educational institutes of physical culture. Dispensaries and stations for medical supervision of all categories of physical culturists and athletes were established in the 1940s. There were more than 300 dispensaries and about 1500 stations in 1975. The Federation of Sports Medicine of the USSR was organized in 1946 and became a member of the FIMS in 1952. It was represented at international congresses on sports medicine sponsored by the FIMS. The All-Union Society of Medical Supervision and Kinesiology of the Ministry of Public Health of the USSR were founded in 1961, and the Kiev Scientific Research Institute of Medical Problems in Physical Culture and Sports was founded in 1967. Laboratories (groups) on different aspects of sports medicine were created in the 1970s at many scientific research institutes of the Academy of Medical Sciences of the USSR. Research in sports medicine was coordinated by the Commissions for Medical Problems in Sports and in Physical Culture [9]. As an educational discipline, sports medicine was a part of the curricula at institutes of physical culture, medical institutes, and pedagogical higher educational institutions with departments of physical education.

Bulgaria started its first formal institution for physical education in 1942 as Higher school for physical education. Today, the same school exists under the name the National Spots Academy “Vassil Levski”. Its role in establishing the basis for development of methodology and multi-disciplinary approach to sports in Bulgaria was significant. The school had four departments: 1. Health sciences - anatomy, biology, anthropology, general physiology and physiology of physical exercises, general hygiene and hygiene of physical exercises, first aid, correctional gymnastics and massages; 2. Physical education - history of physical education, theory of physical exercises, methods in physical exercises (including practice); 3. General education - general knowledge of Bulgaria (in the field of Bulgarian language and literature, ethics, Bulgarian history, culture and geography), common psychology and psychology of physical exercises at different ages, common pedagogy and education by means of physical exercises; 4. Organization of physical training - modern organization of physical training in the world, law matters concerning the organization of physical education, concept of organized camps, summer and winter sports activities, children playgrounds, fairs, competitions etc., construction and equipping of facilities for exercising, knowledge of exercise equipment and apparatus.

In 1967, Higher school for physical education was divided into the Sports-pedagogical faculty and the Faculty for mass health and healing physical culture. Twelve departments replaced the old four ones, including general hygiene and hygiene of the physical exercises, medical surveillance, study of the physical development of the human body, and anthropometry. This was the beginning of an important work to be done in the next decades aimed at providing professional support to Bulgarian athletes in the field of sports medicine.

The development of sports medicine in former Yugoslavia began when a group of doctors started up an organized health control of athletes, and hygienic control of sports facilities in Belgrade in 1930. In 1936 the first sports outpatient department was opened within the Clinic for Internal Medicine at the Medical Faculty University in Belgrade, under the leadership of Prof. Dr. Vojislav Arnovljević. The first doctor from Yugoslavia, Vojin Smodlaka, was sent to specialize Sports Medicine in the Center of Sports Medicine at the Academy of Physical Culture in Berlin in 1937, and as early as 1940, Sports Medicine was introduced as an optional course, led by Dr Smodlaka, at the Faculty of Medicine in Belgrade. After the Second World War, in 1945, teaching of sports medicine was introduced at the Federal Institute of Sports Culture in Belgrade (today – Faculty of Sport and Physical Culture), and the Department of Sports Medicine was established within the Medical Association of Serbia. Soon afterwards, in 1952, the Institute for Sports Medicine was founded within the Yugoslav Institute for Physical Culture and Sports Medicine in Belgrade. A year later, in 1953, the Sports Institute of Vojvodina (today – the Regional Institute for Sports and Sports Medicine) was established in Novi Sad. The Sports Health Care Center was opened in Belgrade in 1957. In 1965, the Section of Sports Medicine was established in Novi Sad within the Society of Physicians of Vojvodina, a part of Serbian Medical Society. Today, the Section of Sports is a part of Serbian Medical Society, and since 2011 its president has been Dr. Ivan Lukic from Vojvodina. The crowning moment in the development of sports medicine in Serbia was the graduation of the first specialist. Medical doctor Miodrag Petrovic passed the exam in sports medicine in 1966, thus paving the way for generations of sports medicine specialist who supported enormously the success of Yugoslavian athletes during the 1970s and 1980s. In 1970, the Institute for Sports Medicine was founded at the Medical Faculty University of Belgrade. Three years later the symposium “Athlete’s heart” was organized in Novi Sad. In 1975, our karate player and doctor of medicine Prof. Dr. Vladimir Jorga became the head of the World Karate Federation established by the Health Commission (Medical Bureau) of the World Karate Federation. The First International symposium of sports medicine “Medical and Biological Characteristics of Karate Training” was organized in Belgrade. In 1977, the Congress of International Federation of Sport Medicine was organized in Belgrade. The Sports Medicine Associa-
The Sports Association of Serbia (SMAS) was founded in 1995 as an association of specialists in sports medicine, doctors of other specialties, as well as other experts engaged in health care and improvement of physical abilities of participants in sports and recreation in the territory of the Republic of Serbia. Its first president was Prof. Dr. Slobodan Živanić. The goals of SMAS are education through training courses in fields of sports medicine, wide publishing activity and organization of regular conferences in the field of sports medicine and sports science as well as dietary supplements. The main objectives are to develop and promote technical and scientific practices in the field of sports medicine and sports science, to provide adequate healthcare to all athletes, to protect professional interests and rights of doctors and medical staff involved in sports medicine, to educate in the field of sports medicine, to issue certificates and licenses, to publish technical and scientific articles and to cooperate with other national associations of sports medicine. The SMAS is a member of the Sports Association of Serbia (SSS), Olympic Committee of Serbia (OKSCG), British Association of Sports Medicine (BSMA), EFSM, and FIMS. The SMAS organized the 1st Serbian Congress of Sports Science and Sports Medicine in Belgrade in 2003, and the 1st Congress about dietary supplements in 2007 [11]. These congresses have been held every two years so far.

Conclusion

Regarding physical health, sports system is trying to deal with the lack of physical activities, which is present among the population in most of the so-called developed countries. The main concerns of modern sports medicine are healthcare of active sporting and exercising population, prescribing exercise as therapy in chronic diseases, and prevention of chronic disease caused by sedentary lifestyle by health promotion. It demands sports-specific knowledge and expertise of health care professionals, researchers and educators from different disciplines, especially of doctors, as sports medicine specialists and leaders of sports medicine team. Physical examination, medications, drugs and other substances, such as special instruments and equipment, are used to prevent, diagnose, treat or cure the illness or other damage of the human body, and to promote health. Current national tasks are to motivate the population to participate in physical activity and promote sports, since health related problems and diseases based on sedentary behavior are rising as well as costs in the health care system. The authors of this article indirectly tried to show that the achievement of doctor’s success has never been easy, but it is worthwhile.

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