Although instructions and rules of conduct for the practice of various types of sport were available even for the most ancient of peoples, sports medicine in today's sense is still something new. Never before have the physiological and psychological effects of sport on the human body been so carefully scientifically examined and researched as carefully as they are today. The sports doctor has three tasks; to observe sport and its influences on those who practise it, to treat injury or accidents which occur, and, thirdly, to show the way in which sports training can be of most use to all groups of the population.

Sports medicine is, in fact, the science of remaining healthy, of preventing premature strain on the system, and of providing training which is designed to benefit the organs' functions and which will therefore contribute towards prolonging life. From the first notions of this kind within ancient cultures, where the mystics —
their priests — were also the doctors, we have come a long way to modern knowledge of sports medicine. Its history is briefly described in chronological order below.

**HEALING EXERCISES IN EAST ASIA**

Long before Western man had attained a level of culture which permitted him to use free time for games and sport, the idea of a people keeping fit through exercise was already well established in East Asia. Almost five thousand years ago, Taoist priests and monks in China made close links between cult rituals and healing exercises — in fact almost every sport was linked to a cult in its beginnings. It was hoped that such exercises would make it possible to achieve immortality of the soul. The Chinese priests explained the congestion of the body's organs as being the cause of all illnesses, and attempted to cure these by a special sort of breathing exercise, which has become known under the name of Kung-Fu. What re-emerged at the beginning of the last century as “Swedish Gymnastics” was already well known in China under the Huang Ti Dynasty (2697 BC). The similarity of many of the Kung-Fu exercises with the Ling Gymnastics is striking, and they are still highly regarded in China today. In the Atharveda — a collection of Indian hymns of approximately six thousand lines dating from two thousand years before our own era — there are instructions for healing exercises which could be carried out by priest-doctors along with magical spells and curses against illnesses.

Health and breathing exercises were also known among other ancient cultures, such as the Persians and the Egyptians, but the origins of sports medicine can be found with the doctors of the ancient world, and above all the Greek and Romans.

Based on his own experiences, Ikkos of Tar- ent, a physical education teacher, created a document regarding training methods for athletes in which not only the importance of correct diet towards physical endurance was mentioned but also the value of exercise in keeping the body healthy. The doctors Herodikos of Knidos and Euryphon also noted the interrelation between diet and physical endurance. From the exper-
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ience and the observations of these forerunners, Herodikos of Selymbria then attempted to cure his own illness — probably tuberculosis — by energetic walking, wrestling, steam baths and massages, and in doing so discovered a regular system of healing exercises which was nevertheless strongly criticised by Hippocrates (460 - ca. 377 BC). In the 6th volume of his “Epidemics”, that “Herodikos treated feverish illnesses by running, wrestling and steam baths, but he was wrong as a feverish condition is the enemy of such exercises”. The doctors who recognised the value of physical training for the organism as a whole and for health reasons, however, became more and more numerous, and even Hippocrates took the best of Herodikos’ instructions on the subject. In his text “On Diet”, he noted that “in order to remain healthy, the entire day should be devoted exclusively to ways and means of increasing one’s strength and staying healthy, and the best way to do so is through physical exercise”. New and important impetus was brought to “sports medicine” through the discoveries of the philosophers. Krates, a pupil of Diogenes, began to take daily walks to improve his illnesses of the liver and spleen. Even before this Socrates had learned gymnastic dances in order to be able to eat and sleep better but also in order to improve his health — and was teased by his friends because of it.

Plato (427-347 BC) already called medicine a sister art to that of physical exercise and was active in the popularisation of the latter. The scientific theory of the therapeutic effect of healing exercises, of massage and of movement in water was founded by Asklepiaedos of Bithynia.

The views of the Greek doctor Claudius Galen (131-201 AD) could be called modern. He took Plato’s philosophy and stated that exercises belonged within the domain of health practices, and the doctor should decide which exercises were advantageous to the gymnast. (This is also one of the requirements of modern sports medicine which has still not yet been fully achieved). Hygiene was ruled by medicine, and exercises were one resource of the latter. Claudius’ text “Thrasybulus” lays down clear limits between the respective tasks of physical education teacher and doctor, and in another tract “The game with a small ball”, he praises and recommends ball games as one of the best and least dangerous forms of sport. In addition, he was a great believer in sports massage.

Philostratos Flavius (about 200 AD) followed in Claudius’ footsteps, and in his book “Logos Gymnastikos” — which has, unfortunately, only been preserved in fragments — he says, for example “What can we say about physical education? Is it not a science which consists of healing and the art of the physical education teacher together, but which is more perfect than either of these alone? All illnesses involved with catarrh, dropsy tuberculosis or epilepsy are treated by doctors using enemas, drinks and plaster, whereas exercises attempt to arrest such illnesses through diet and massages.” From him come the first and best details about the physical condition of the runners, wrestlers and spear throwers, etc. The ideal gymnastic exercises, he states, were the Kalokagathia, and for older people who were no longer able to carry out sports training he recommended regular sun baths.

Until the time of the new methods of Arabian medicine. Oribasius in Byzantium in the 4th century, Aurelian of Rome and his contemporary Theodorus Priscianus in the 5th century all
worked to increase the sports medicine knowledge gained to date and to develop its use. Before the Germanic peoples were able to develop a cultural hegemony during the Middle Ages, the Arabian doctors paved the way for western medicine with the development of Islam. The most noteworthy examples from this period mixed Greek and Arabic traditions to form a new whole. The philosopher and doctor Ibn S'lna, famous under the name Avicenna (980-1037), and who worked in various Persian courts as an advisor and personal physician, did not create a new impetus for medicine as a whole. However, his book “Kitabasch schifa” — the book of healing — he also recommended healing exercises. He developed special exercises for convalescence from fevers, weakness, dropsy, nervous ailments of the feet, illnesses of the kidneys, etc. Even if his advice on this matter was given little attention, he did nevertheless influence Western medicine for centuries to come.

RENAISSANCE

Even some writings by doctors from the middle ages refer to some concepts which go back to Avicenna's day. The most important of these are: Arnaldao de Villanova, Giovanni de Sancto Amando, Petrus de Santo, Petrus de Abano and Michale Savonarola. It was only with the renewed interest in the authors from ancient times in the period of Humanism that medicine underwent a Renaissance and began to develop the views, discoveries and teachings of ancient times. Georg Pictorius of Villingen wrote his “Hantbüchlein von den sieben Dingen, so die Arzt natürlich Ding benennet” (Handbook of seven things that the doctor calls natural) based on the medical writings of ancient times, but which also contained newly developed advice. A similar path was followed by the most famous sports doctor of the Renaissance, Hieronymous Mercurialis (1530-1606), who in his work, first published in Venice in 1569 “Libri the arte gymnastica”, gave not only an overview of the history of exercises and athletics in ancient times (our photo) but, in the third section of the work, dealt with the medicinal aspect of physical exercise — thus completing the metamorphosis from ancient to present times. This is without doubt the most thorough and momentous publication of its kind and was reprinted six times, the last edition being in 1672. Mercurialis energetically contested the false assumption that a healthy person did not need exercise by quoting doctors from ancient times and giving useful advice and, among other things, recommended moderation at sports competitions. He was to draw the attention of many doctors to the value of physical exercise in connection with health, and therefore a number of similar works quickly followed his own. In 1575, Julius Alexander of Neustein published his “Libri Salubrium sive de sanitate tuenda”, whilst Hieronymus Gardanus, in his “Opus Sanitate tuenda” of 1580 not only drew on material from previous authors but was one of the few doctors who practised sport themselves, and wrote from his own experience. It is remarkable that he did not contest the long outdated ideas and false notions of Asklepiades and Johannes Actuaris, that physical exercise was for the healthy but not for the sick and convalescent. (To be continued)