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Specialist Sport and Exercise Medicine in *The Netherlands*



Sport and Exercise Medicine (SEM) in the Netherlands has its roots in social medicine. Sports physicians have been trained in the Netherlands since 1976, but it took until 1986 before Sports Medicine was recognised as an official branch of social medicine by the Dutch College of Social Medicine (CSG). In 2014, after a long struggle, the Ministry of Health, Science and Sport recognised Sports Medicine as a Medical Specialty and since then the sports physician is allowed to call himself a Specialist Sport and Exercise Medicine. The title Sports Physician is also a protected title in the Netherlands.

Sports Physician expert

Sports medicine in the Netherlands is the medical specialty that focuses on restoring, safeguarding, and promoting the health of people who (want to) play sports or exercise. It also focuses on restoring and promoting the health of people with chronic conditions using sport/exercise as an intervention. In both facets, the specific load and loading-capacity of the patient is explicitly considered. The sports physician is the expert regarding the balance between load and loading-capacity in relation to sport/exercise. The sports physician is also an expert in analysing sport and exercise related

problems, thereby considering their multifactorial etiology. In cases of a musculoskeletal injury, it is good practice that abnormalities in the entire kinetic chain are assessed. This implies that therapeutic interventions can be aimed at several areas. The analysis and management of the health problem also includes advice about equipment, environmental conditions as well as psychological, social and cognitive factors.

Complementary to other specialties

Sports physicians have a complementary and synergistic role in relation to other medical specialists

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such as orthopedic surgeons, cardiologists, pulmonologists, physicians for rehabilitation medicine, surgeons, doctors for internal medicine, and general practitioners.

For example, there is collaboration with orthopedic surgeons for maximising conservative treatment of sports injuries and for optimising recovery and return to performance after surgical interventions of the musculoskeletal system, and the use of sports and exercise by patients with chronic musculoskeletal disease, e.g., osteoarthritis.

In several hospitals cardiologists and sports physicians work together in the rehabilitation of cardiac patients. Sports physicians have specific expertise in physiological aspects of training (heart failure, angina pectoris). They often use cardiopulmonary exercise testing to design an effective personalised training intervention. They also cooperate in the diagnostic work-up and management of more complex exercise-related symptoms (e.g., unexplained fatigue).



Specialists at the training hospitals teach and train the resident in Sports Medicine to become a sports physician based on the National Training Plan, translated into regional and local training plans.

Sports physicians work together with pulmonologists, by athletes and patients with sports/exercise related lung problems. Sports physicians perform elaborate lung function tests themselves in the context of preventive sports medical examinations, however they often refer athletes with exercise-induced asthma or other lung-related symptoms to a pulmonologist.

Sports physicians, with their specific knowledge in exercise physiology and cardiopulmonary exercise testing, can design and prescribe personalised training programs for specific target groups in the rehabilitation setting. Especially patients who are deconditioned because of their (chronic) disease or treatment. Exercise testing is used to determine the individual loading-capacity and excluding cardiopulmonary pathology. These diagnostic findings are used to develop training programs that aim to increase the load capacity of the patient/athlete in question. The knowledge and expertise of the sports physician is also increasingly used in the field of pre-operative training, also known as preconditioning/prehabilitation.

Sports physicians also collaborate with internal medicine doctors in prevention and management of diabetes mellitus, oncological rehabilitation, and exercise prescriptions for people with all forms of chronic diseases. General practitioners refer to the sports



physician for sports medical problems that cannot be solved in primary care as well as for clinical diagnostics and conservative treatment of sports-related injuries and secondary prevention.

Exercise is Medicine

Exercise is used worldwide as a 'medicine' for primary and secondary prevention of chronic disease. The Dutch government has also recognised the importance of lifestyle factors including physical activity in the prevention of chronic disease.

The Netherlands Association for Sports Medicine (VSG, the scientific association) has the ambition that the sports physician will be the medical specialist in the field of 'exercise is medicine'. How this translates to the daily practice of sports physicians will become clearer in the coming years.

In relation to the sports medicine specialist training this means that the resident learns the principles of how to prescribe exercise to patients with various chronic

conditions. Exercise prescriptions are given during consultations as well as during preventive sports medical examinations.

The specialist training of Sports Physicians

An independent organisation The Foundation for Professional Training for Sports Physicians (SBOS) specifically designated for this purpose by the Ministry of Health, Welfare and Sport: is responsible for the education and training of the sports physicians. This is different from other specialties in the Netherlands, whereby the teaching hospitals are responsible. The SBOS financially supports and facilitates the sports medicine specialist training as well as fulfilling the role of employer.

Sports Medicine residents are employed by the SBOS and are trained at accredited teaching hospitals based on a distribution plan established by the government. The Netherlands Association for Sports Medicine (VSG) is responsible for developing and regularly updating the National Training Plan (LOP).

Sports medicine specialist training consists of compulsory residencies / teaching on the job in relevant disciplines (Sports Medicine, Cardiology, Pulmonary Medicine, Orthopedics and General Practice) in combination with national and local (cross-discipline) education including courses on various topics both within and outside Sports Medicine.

Declarations of Competency

The sports medicine specialist training program has been described in the form of Entrusted Professional Activities (EPAs). In the nine EPAs, the competencies are operationalised in observable behavior. EPAs fit in well with the daily work of the sports

physician resident in practice. The order in which the resident learns these EPAs has not strictly been determined, as this can differ per training region. By issuing phased declarations of competence, residents in Sports Medicine are gradually growing towards professional independence and responsibility. After their training they can work in several places. In addition to the normal training program, in-depth specialist training can be included in the final year of the training.

The training plan pays explicit attention to several current social and organisational themes to properly prepare the Sports Medicine resident for the various roles that the sports physicians fulfill in addition to their clinical activities.

Competency-orientated

The nominal duration of the training is four years and since 1 July 2014 it is possible to personalise the duration of the training for the individual resident. The aim of this regulation is to make it possible for the resident to be trained for as long as necessary and as short as responsible. This makes it possible to create a tailor-made competency-based training. As a result, the duration of the training is determined by what the resident has developed in terms of competences prior to and during the training. To properly prepare residents in Sports Medicine for the various roles that sports physicians fulfill in daily work in addition to clinical activities, the Sports Medicine program pays explicit attention to several current social and/or organisational themes such as medical leadership, patient safety, efficiency, vulnerable elderly people, chronic ailments, scientific research and education as well as communication, collaboration, management and health advocacy.