

Position Paper Regarding Courses on Sports and Exercise Medicine in Medical Studies

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1. Introduction

Sports and exercise medicine encompasses different but related topics. (1) Sports medicine, on the one hand, focuses on the prevention, diagnosis, and the management of acute and chronic injuries and illnesses of the locomotor system in relation to physical activity. Exercise medicine, on the other hand, implements physical activities (PA) in primary and secondary prevention of chronic illnesses. (1, 2) Sports and exercise medicine has been acknowledged in 26 countries worldwide as a discipline, but fails to be taught sufficiently in basic studies in human medicine even in these countries. (4, 5)

2. Call to Action

The swimsa acknowledges that...

1. ... injuries to the locomotor system are highly frequent (including sports injuries) and that they infringe on daily activities and productivity.
2. ... a lack of exercise is proven to be the fourth most impactful risk factor for mortality worldwide and is classified as a pandemic.
3. ... it requires large-scale efforts of the Swiss authorities to reinforce measures undertaken to reduce the pandemic of physical inactivity.

The swimsa demands...

1. ... that medical faculties alleviate the lack of education and training in SBM as soon as possible to adequately educate future medical doctors in Switzerland in sports and exercise medicine in accordance with PROFILES and the “Global Action Plan on Physical Activity 2018-2030” by the WHO.
2. ... that medical faculties survey the possibilities of educating medical students in the disciplines of sports and exercise medicine (“chalk-and-talk” teaching, problem-based learning, online courses, ...) and subsequently choose the format that has the most benefits in their view.
3. ... that medical students advocate for the inclusion of SBM in the medical curriculum in order to be equipped with expertise in preventive measures and competence to advise patients.
4. ... that the Swiss legislature takes measures to better educate medical professionals in exercise medicine, which adheres to one item in the “Global Action Plan on Physical Health 2018-2030” of the WHO.

The swimsa endeavors to...

1. ... promote sports and exercise medicine through sensitization campaigns and projects.
2. ... follow the measures chosen to fight the pandemic and to represent the opinions of medical students in dealing with the most important groups of interest.

3. Main Text

Musculoskeletal disorders are ubiquitous amongst the general population of industrial and developing countries and negatively affect daily activities gravely. (6-8) In a representative random sampling of the general population of Denmark, sports injuries were reported to occur frequently with a yearly prevalence of 20%. (9) With the ever-increasing rate of noncommunicable diseases, the cost-effective search for measures of prevention and treatment of said injuries gained worldwide priority. (10-12) PA is one of the key measures taken to combat sports injuries. (13-15) Physical inactivity is considered to be the fourth most impactful risk factor for premature mortality worldwide and is classified as a pandemic. (13) The WHO published the “Global Action Plan on Physical Activity 2018-2030” in 2018, which aims to reduce the prevalence of physical inactivity by 15%. (16) In order to reach this goal, one of the main objectives introduced in these guidelines recommends the education of medical professionals regarding the promotion and prescription of PA. (16) As a member of the United Nations (UNO), Switzerland is obligated to adhere to the 17 sustainable

development goals (SDGs) of the UN-Agenda 2030 until the year 2030. (17) In addition to the direct benefits of PA, it also provides indirect benefits in social, economic, and environmental areas. (16) The “Global Action Plan on Physical Activity 2018-2030” by the WHO advocates that PA plays an important role in 13 out of the 17 SDGs introduced in the UN-Agenda 2030. (16)

Multiple studies since the year 2000 have shown that medical doctors, especially general practitioners, do not possess adequate awareness of the benefits of PA and, therefore, remain hesitant and insecure to refer patients to the corresponding specialists. (18-21) A similar British study reports that medical students underestimate the risk of physical inactivity. Many medical doctors are not aware of the recommendation of PA and subsequently do not feel competent enough to offer advice regarding PA to their patients (22). Despite the fact that PA plays an important role in the prevention and treatment of most NCDs, a systematic lack of information and presence of this subject is observable in the medical studies curriculum. (13-15) Numerous studies show, however, that medical students wish to learn more about sports and exercise medicine (23). *Movement for Movement* offers British medical faculties educational resources free of charge since 2018. (24,25) As one of the first universities to do so, the Lancaster University (UK) has incorporated thematically relevant learning resources into its medical studies curriculum to already familiarize medical students with the disciplines during their studies. (24) Nottingham (UK), South Carolina (USA), and Tehran (Iran) are further examples of a successful implementation of sports and exercise medicine in the curriculum of human medicine studies. (26-28)

The federal curriculum of human medicine adheres to the *Principal Relevant Objectives and Framework for Integrative Learning and Education in Switzerland* (PROFILES), which was developed by Swiss experts based on a mandate handed out by the Swiss Commission of Medical Interfaculty (SMIFK). PROFILES define the knowledge and abilities that medical students are meant to accumulate in order to be able to aptly perform as assistant physicians from day one. In 2019, a study reported that 32 of the objectives in PROFILES are correlated with PA (30). Unfortunately, the same study noted that only four out of eight Swiss universities that offer medical studies have courses on sports and exercise medicine in their curriculum. Said courses were highly limited in their content and time-frame. Only two out of four universities offered courses on PA, after all. Four out of eight universities had available electives on the disciplines of sports and exercise medicine. In case of an expanded scope of these courses, they were limited to a small number of students, regrettably. The courses on sports and exercise medicine are summarized in table 1 (courses in the basic curriculum) and table 2 (electives). The aforementioned study eventually conducted a survey between April and October 2017 on all medical students in Switzerland to assess their knowledge

and abilities in sports and exercise medicine and to gauge whether the medical students wished to receive additional training and education in the disciplines. 1764 students participated, which accounts for 22.9% of Swiss medical students and 482% of the required sample size to guarantee representativity. Every second student was not aware of the importance of sports and exercise medicine in the prevention and treatment of NCDs. 95% of all questioned students reported interest in additional training and education in sports and exercise medicine, be it through mandatory courses, electives, or both.

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