

# The Future of Sport and Exercise Medicine

## EXERCISE IS MEDICINE

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Exercise is medicine. This motto has become widely accepted. However, we are far from implementing it in clinical practice. This concerns both the advice given in the medical doctor and the knowledge of how to properly apply exercise as medicine. Only about 20-30% of medical doctors advise their patients to be physically active during a GP visit. Every step counts is often the only statement commonly made. No diabetologist would dare to say that every unit of insulin counts, and so it is also wrong for sport and exercise physicians or those doctors who care about exercise as medicine to pass on this recommendation to their patients. Because in practice they reduce the potential of physical activity and exercise training to a barely effective minimum or do not exploit the potential in any way. On the contrary, the “most successful medicine” is largely withheld from patients in prevention and therapy. We should resolutely challenge this by making counselling on exercise as medicine a compulsory part of clinical practice. With only two questions, namely about the intensity and frequency of physical activity or exercise, it is possible to get a rough overview of the lifestyle component exercise. If one spares more than 60 seconds to address exercise, it is possible to additionally ask about the type of physical activity and preferences. The counselling can then be conducted according to the 5-A model [1,2], which may take 30 seconds (Assess and Arrange), 3 minutes (Assess, Advise and Arrange) or a maximum of 5 minutes (Assess, Agree, Advise, Assist and Arrange) (*Table 1*).

1. Assess	Assess physical activity and exercise training
2. Agree	Agree to take action to increase physical activity and exercise
3. Advise	Give advice on what might be the right way forward
4. Assist	Overcome barriers, prescription of exercise
5. Arrange	Exercise network and/or new appointment in outpatient clinic

Table 1: The 5-A model to support behavior change in physical activity

Depending on your time budget, the consultation can be done within seconds or «in detail» within five minutes. Your patients will benefit from all options. The more concrete the consultation is, the more sustainable it will be. This includes creating an exercise plan that is as concrete as possible, keeping an exercise diary or monitoring movement with the help of wearables with an accelerometer. For the latter, goals such as a step target or time with physical activity by intensity according to WHO guidelines [3] are helpful. It does not always have to be 10'000 steps per day [4], since even an increase from inactivity, which is typically 3'000 to 4'000 steps, to 6'000 to 8'000 steps per day, or a goal of 10'000 steps two or three days per week can be a worthwhile goal [5]. In many cases this is a beneficial start for patients with reduced exercise capacity, who are not used to being physically active on a regular basis.

The prescription of physical activity is dependent on the patient's readiness to change their lifestyle. Those who are still at the beginning of lifestyle changes according to the Stages of Change Model of Prochaska and DiClemente [6], will have the most difficulties in starting an active lifestyle. It is better if there is already an intention to be active, although there is still a lack of activity. Once the decision has been made to engage in regular physical activity and the first steps have already been concretely planned or, even better, already taken, it becomes increasingly easier to accompany the patient with success. In clinical practice, many useful recommendations on how to carry out physical activity according to the principles of exercise training are incorporated and put into practice. Standard information includes frequency (F), intensity (I), time (T = Time), type (T = Type), volume (V = total Volume) and progression (P) (FITT-VP) [7]. Afterwards, it is important to reassure the patient in his or her lifestyle change and thus support him or her to continue the active lifestyle in the long-term. However, it is important to keep in mind that relapses may occur. In this situation, it is crucial to discuss barriers and obstacles, to support the patient in getting back on track and to build on positive experiences from the active phase. Frequently, the positive psychological effects of physical activity are noticed first, before there is an objectively measurable

increase in performance [8]. Effects on metabolism (glucose or fat metabolism) and blood pressure, for example, are of course not noticed, but can only be detected during check-ups. Therefore, the increase in well-being based on psychological improvements and the subjectively noticeable reduction in fatigue in everyday life are important indicators for the successful maintenance of the lifestyle change. According to the FITT-VP principles [7], physical activity and sport is prescribed like a medicine. Based on these, it is possible to give an individualized recommendation taking into account existing diseases. If there are no symptoms that could represent a contraindication to physical exercise, light and moderate exercise can be prescribed on the basis of these principles, even without a medical examination [9]. In the case of existing complaints e.g. arrhythmia or unusual dyspnea, a sport and exercise medicine consultation is always advisable before exercise. The minimum in this regard is to obtain a medical history, a physical examination with emphasis on signs of decompensation of the cardiovascular system and a resting ECG [10]. In the sense of prevention, the atherosclerosis risk factors should also be assessed. However, this should not necessarily be done in order to calculate one of the well-known risk scores [11]. In this regard, a lack of effectiveness of risk assessment in reducing cardiovascular disease events and mortality as well as a clinically insignificant influence on individual risk factor levels has been suggested [12]. Taking health resources into account might be a more effective way to promote a healthy lifestyle. In this respect, the American Heart Association's so-called Life's Essential 8 are a promising way to identify health resources [13]. Recent cross-sectional and prospective studies showed plausible associations between Life's Simple 7, its predecessor, and cardiovascular imaging biomarkers [14] and events [15]. In addition to physical activity, Life's Essential 8 health resources include a healthy diet, sufficient and good sleep, normalizing body weight and not smoking as behavioral components. These five factors, together with the measurement of total cholesterol, blood sugar or HbA1c and blood pressure as biological components, are incorporated into the health score [13]. Since prevention and therapy based on lifestyle changes are effective at any age, one can confidently give preference to health resource assessment (health score) over risk scores or at least a combination of both (*Figure 1*).

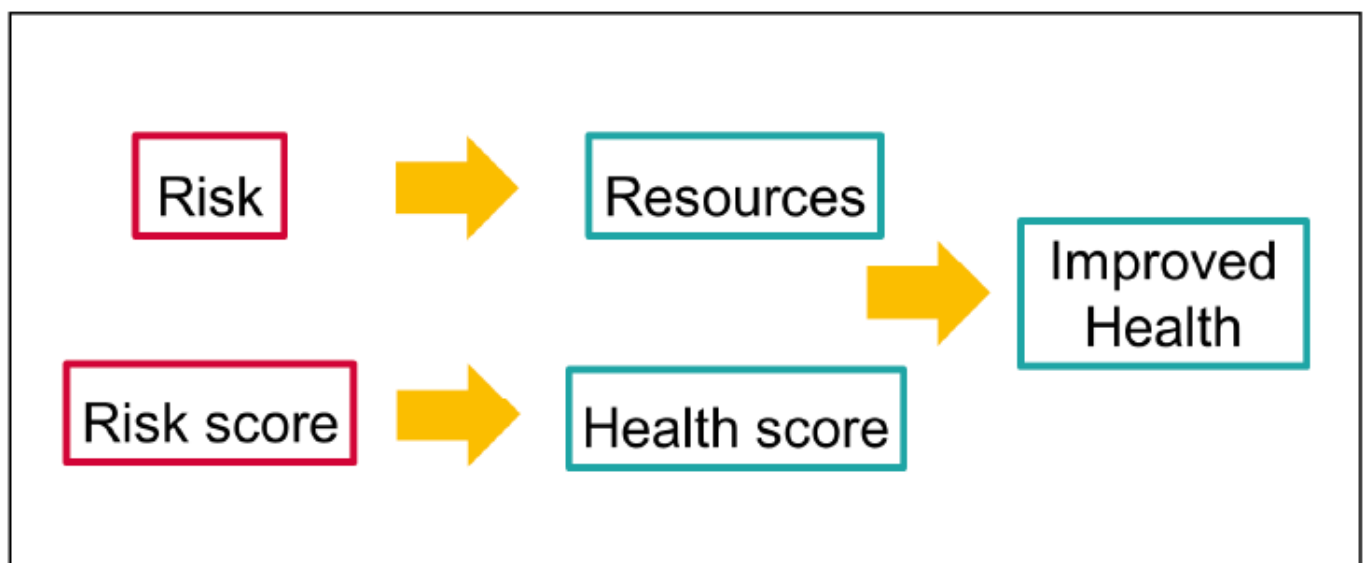


Figure 1: Changing mindset from risk-based to resource-based thinking to improve health

The current issue of your Sport and Exercise Medicine Switzerland Journal has the motto "Future of Sport

and Exercise Medicine”. This issue looks at neglected interrelations (“exercise in dieting”), unsolved therapeutic problems (“exercise to increase fitness in post-Covid-19”), underappreciated exercise-therapeutic possibilities (“exercise in vascular disease”) and promising perspectives (“innovative metabolic diagnostics in sport and exercise”). This is an attempt to show the immense importance of exercise as medicine, illustrated by these brief spotlights. Combining in-depth knowledge of sport and exercise medicine, the right approach during patient consultations and openness to new challenges in research, this issue will help to highlight the great future of research and practice within sport and exercise medicine.

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## Referenzen

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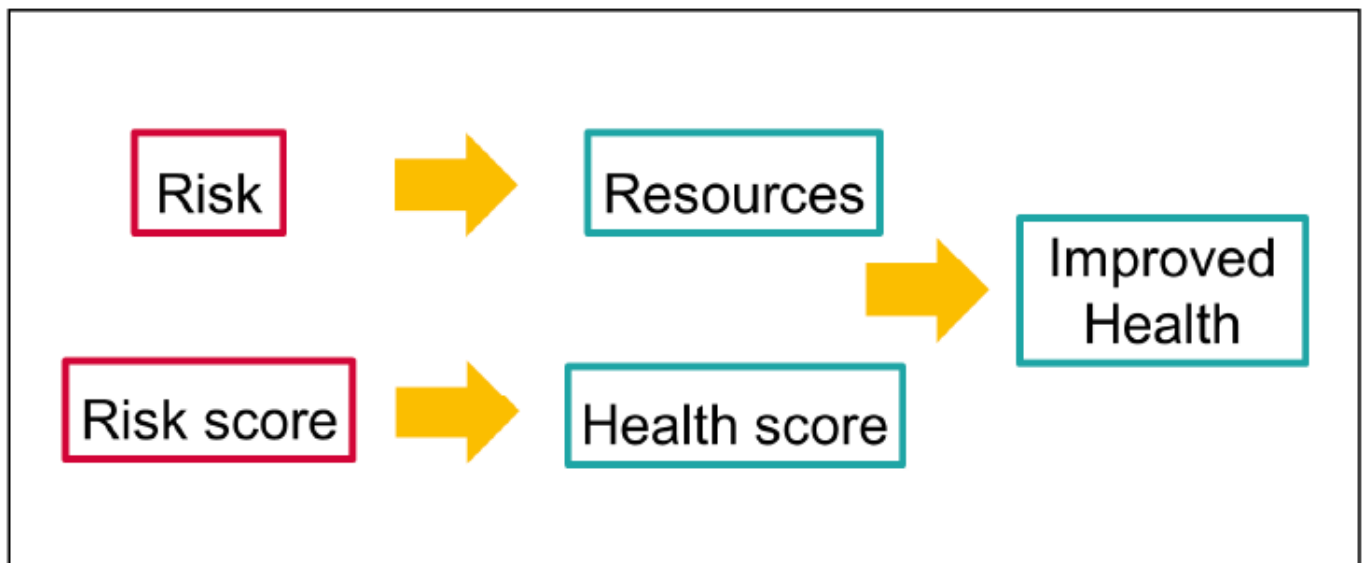


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