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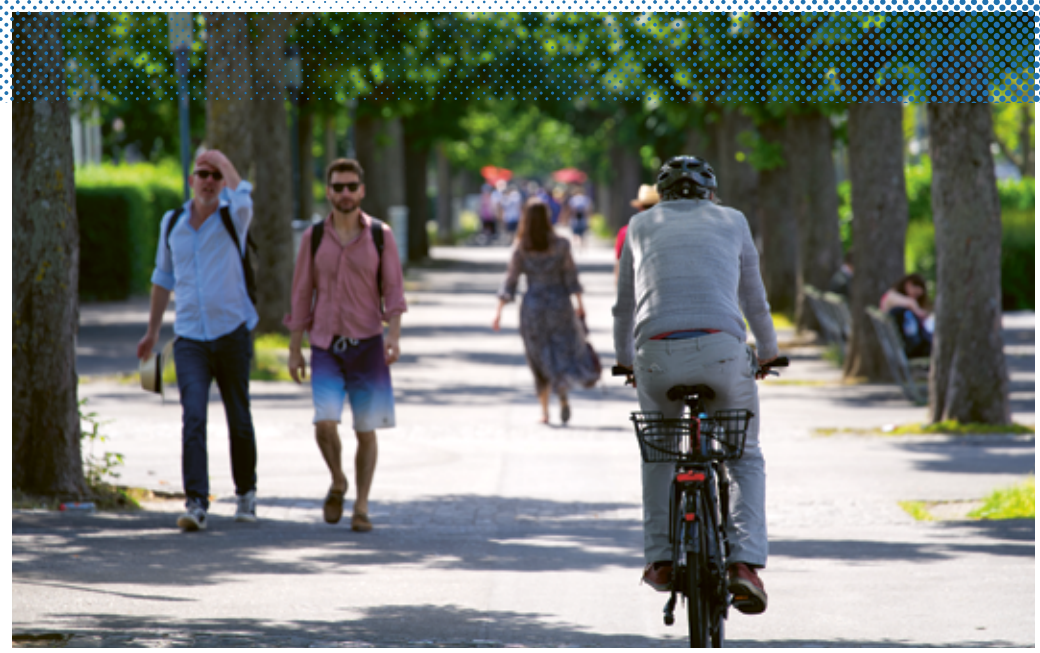

Exercise

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Exercise: a lot can be achieved with relatively little effort

The pandemic has changed physical activity patterns, both for the better and the worse. The important requirement now is to reinforce positive patterns and reduce negative ones. The good news: Intensive sports training is not necessary to achieve a positive effect on the body. Regular exercise that just makes us slightly out of breath is sufficient.

When initial reports of a new virus in China emerged in the Swiss media in January 2020, most of us had no idea how this virus would change our lives. Above all, we couldn't imagine how many areas of our lives would be affected by this pathogen. In this issue of spectra we want to focus on one of these areas: exercise. How has the pandemic changed our exercise habits? What can we do to improve our exercise habits? But also: What positive effects do physical activity and sport have on our health, and how can we use them to strengthen our immune system?

The pandemic certainly triggered positive developments in relation to physical activity: Many people exercised more, using their time in the lockdown for yoga, jogging, going for walks during the lunch break and finally going out on their bike, as they had been planning to do for ages. The pandemic has motivated people to change certain things in their lives – including in relation to exercise and sport.

Another positive effect has been observed in nutrition: Many people in Switzerland discovered local producers and acquired a taste for fresh foods from their region, while purchases from the butcher in the village or local district have increased significantly. This conscious nutrition in combination with more physical activity caused some people to lose weight. But negative effects have also been reported. The fact that people exercise less when they have to stay at home is not surprising. Thus, a study by the Gottlieb Duttweiler Institute (GDI) showed a reduction in physical activity during lockdown. On average, two out of five people exercised less compared to before the pandemic. However, exercise habits changed over time: A survey conducted by Health Promotion Switzerland found that one month after lockdown (in Switzerland with no curfew), 49 percent of those questioned exercised less; a month later this figure had dropped to just 29 percent.

The pandemic also had an effect on mental health. For example, an increase in mental health problems was observed in those who had already been suffering from mental stress. In many cases, the pandemic led to an exacerbation of existing stress symptoms in these people. Particular risks also existed for people who suffered extreme financial hardship as a result of the crisis, for example by losing their jobs, experiencing a drop in earnings or bankruptcies.

The pandemic has motivated people to change certain things in their lives – including in relation to exercise and sport.

Promoting exercise as therapy

It is therefore important now to focus on exercise and on ways of reinforcing positive pandemic patterns and breaking negative ones. Intensive training is not necessary to achieve this. We often associate exercise with sport and sweat. But just by making ourselves slightly out of breath, we are achieving something positive. Basically, anything other than sitting or lying down is good for health. Walking up the stairs instead of taking the lift, taking the tram instead of the car, cycling to work, walking to the shops, a lunchtime walk in the park, gardening, cleaning the apartment. And for all those who work mostly sitting down, the following applies: Stand up and move about at regular intervals. With relatively little exercise a lot can be achieved for health.

Exercising acts on three levels:

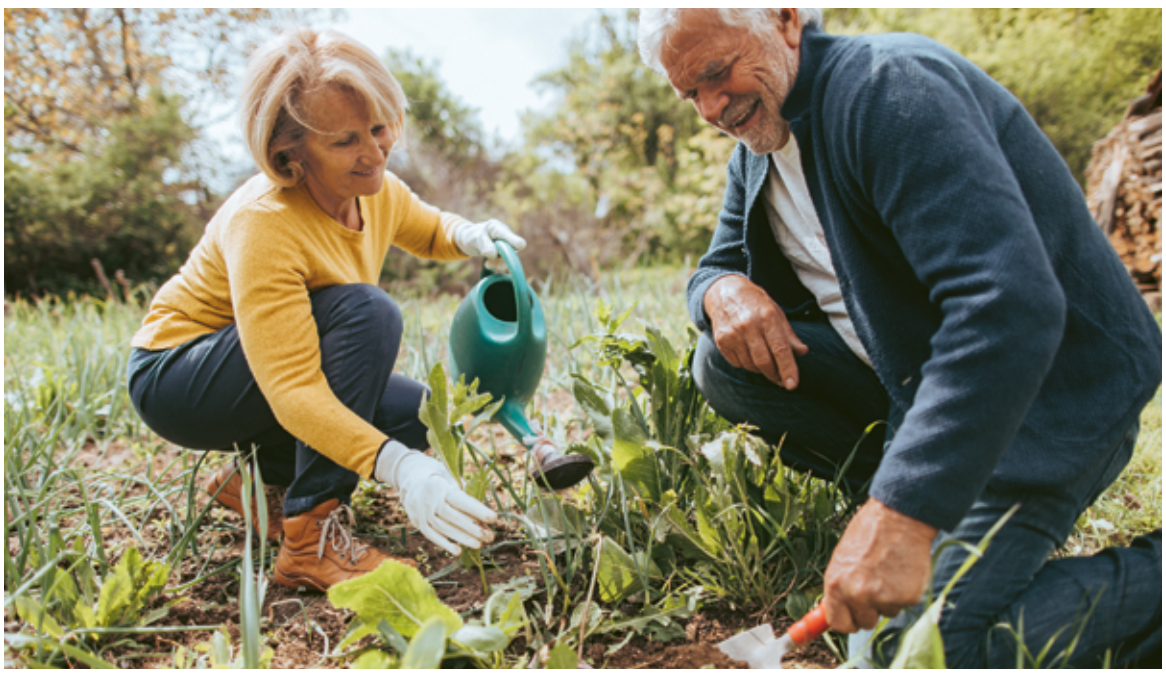
- Firstly, on the level of prevention, because regular exercise reduces the risk of contracting a non-communicable disease (NCD).
- Secondly, exercise has an effect in people who are already ill, for example those who suffer from an NCD, since the right type of physical activity can alleviate some of the symptoms.
- Thirdly, on the mental and social levels, because exercise often has a social component since it usually takes place together with other people.

So exercise works as a holistic therapy. It's physical activity, well-being, it gives you energy and pleasure. Hippocrates of Kos was aware of this almost 2,500 years ago, writing that "walking is humanity's best medicine".

Exercise also has a positive effect on our immune system: when we exercise sufficiently at regular intervals, we strengthen our immune system and arm ourselves against possible infections.

Remit of the FOPH

How does the FOPH contribute to positive developments in the area of physical activity? The FOPH is involved in various action areas designed to promote physical activity in everyday life: for example in the area of "exercise is medicine", where exercise is promoted as an adjunct to treatment. It also supports various projects in the structural promotion of exercise, for example the pilot projects for sustainable spatial development. The FOPH is also involved in the hepa network, which links stakeholders in physical activity promotion. hepa is responsible for the Swiss recommendations on physical activity. Last but not least, the FOPH is active in promoting physical activity in schools, for example by supporting Schulnetz21, the network of health-promoting and sustainable schools.



Exercise does not necessarily have to be sport; everyday activities that can easily get us out of breath, such as gardening, already do the job.

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Sources:
- Prevention in Transition, GDI, 2021: https://tinyurl.com/mvrdh7vh
- COVID-19 Social Monitor: https://covid19.ctu.unibe.ch

Link:
Movement Promotion (FOPH; in German): https://tinyurl.com/yh686enu

“We must ensure that the natural joy in activity can be restored”

The pandemic has had negative effects on the physical activity behaviour of children and adolescents. But most of these effects are transient and demonstrate the need to take every opportunity to establish a healthy lifestyle in children, according to paediatrician and sports medicine specialist Susi Kriemler.

Professor Kriemler, you led the “Ciao Corona” study and investigated how the pandemic has affected the lifestyle of children and adolescents in Switzerland. What emerged from this study?
In over 3,000 children aged between 5 and 18 in the cantons of Zurich, Ticino, St. Gallen and Graubünden, we used questionnaires to record how much time they spent being physically active, how much in front of a screen and how long they slept. Our results show that the children and adolescents did much less physical activity during the lockdown in the spring of 2020 – and as a result spent more time with electronic devices, although they also slept for slightly longer than before the pandemic.

The fact that physical activity decreased during the lockdown was only to be expected.
True, although we have shown that the figures improved again towards the end of 2020, during the second wave – but still without reaching the levels before the pandemic. Our data also established a further interesting connection: children and adolescents whose behaviour is in line with our recommendations on physical activity, screen times and sleep enjoy better health on average and are more satisfied with their lives overall than those who are not sufficiently active or who do not sleep for long enough.

Do you think that the pandemic will have a long-term impact on the health behaviour of the young?
No, I don’t think so. But once again the pandemic has shown the health-promoting importance of schools, because the gap in the population widened during the lockdown: There are children who weren’t affected by staying at home, because their parents were able to intercept and prevent the negative effects of the lockdown. But other children suffered considerably. Being overweight has increased overall, and there are also more eating disorders and psychological problems. But these primarily affect children from educationally disadvantaged families with few financial resources, who were already at increased risk, before the pandemic, of suffering from health problems. Therefore it is up to us, as a society, to find our way back to normality as soon as possible – and improve our activity patterns.

What do you mean exactly?
Most children are sufficiently active during their first few years of life. Whenever you sit near a playground and watch what’s happening, you always see children running round. That’s their natural urge to move, and it doesn’t need to be encouraged, it’s simply there. But then they go to school – leading to a change in their activity pattern: The start of school sets a trend in motion that involves a steady reduction in the physical activity of children, as proved by data on almost 50,000 children and adolescents across Europe. In Switzerland, this finding has also been confirmed by the “Sophya” (Swiss children’s Objectively measured PHYsical Activity) study: Whereas almost all six- and seven-year old children satisfy the guidelines on physical activity, only 22 percent of 14- to 16-year-old children are active at the recommended level.

What can be done to counteract this change in activity at school?
Some time ago, in our “KISS” study (Kinder-Sport-Studie [children-sport-study]) we showed that an hour of sport a day in school improves the activity behaviour and physical stamina of the children. At the same time, body fat and other cardiovascular risk factors are also reduced. The intervention lasted an academic year, i.e., nine months, but even four years later the children had better blood pressure and blood sugar levels. So a healthy lifestyle has long-term effects. I think these are very impressive and important results. They suggest that we ought to introduce a sports lesson every day in all schools across Switzerland – at the expense of those subjects that demand great concentration on the part of the children.

Is there any international experience with daily sports lessons in school?
Yes, Denmark introduced them almost ten years ago. And there are several regions in Canada that have adopted this strategy. But these are still just isolated pioneers, the idea has not yet caught on worldwide. In fact, all the agencies that are concerned with lifestyle improvement (the WHO, for example) have concluded that school is the lever for initiating changes.

You write that physical activity is an “important foundation for health”.
Yes, according to the WHO definition, health is a bio-psycho-social construct. Indeed, in many respects exercise has positive effects on the physical, psychological and social development of children and adolescents. Because, as we know from countless studies: physically active children not only have greater stamina and strength, they are also psychologically more stable and have fewer anxiety-related symptoms and episodes of depression than children with little physical activity in their lives. Physical activity also promotes social integration. In team sports, children learn how to function in groups.

Prof. Susi Kriemler MD

Susi Kriemler studied medicine at the University of Zurich and subsequently specialised as a paediatrician at the University Children’s Hospital Zurich. Since 2013, she has headed the “Children, Physical Activity and Health” research group at the University of Zurich’s Epidemiology, Biostatistics and Prevention Institute. Since 2015, she has been the President of the Society for Paediatric Sports Medicine.

At first hand

Roy Salveter, Head of Prevention Non-communicable diseases Division

Every physical activity counts

Exercise is good for you. I’ve experienced just how true this is during the phases of working from home over the past two years. Instead of commuting by bike, I reached my workplace in my home in a few steps. No more climbing the stairs up to the staff restaurant, no walking to meeting rooms in the large office building – instead, I simply put on my headphones for meetings. Just the physical activity associated with my office work underwent a drastic change: Before the pandemic I would accumulate around 7,000 steps on the way to and from work and during the working day, but in my office at home I would manage just 700. After long days of countless Skype meetings I was missing something. To make myself feel better, I tried taking evening walks in the woods to achieve something that would otherwise happen completely automatically in everyday life. I needed to do this. Because exercise is a wonderful medicine: It lifts your spirits and makes your whole body feel healthier. Exercise makes you feel more vital, boosts the immune system and lowers stress levels.

Exercise does not necessarily mean sport
But exercise is not only good for me, it also gives me great pleasure. Many people equate exercise with sport. I love sport – but some people are put off by sport. The important point is that exercise does not necessarily mean sport. Walking the dog, hanging out the washing, cleaning the windows, weeding in the garden – everyday life is full of opportunities for physical activity. Those who don’t enjoy such activities can exercise with others. For example, walking, chatting and simply enjoying a nice day with friends. Or playing tag and hide-and-seek and balancing on logs with children. Or what about dancing? People dance because they enjoy it, because they love music – while also training their bodies as an incidental benefit. The fact is that every physical activity counts. Whether at home, at work or during your leisure time. Those who exercise stay healthy for longer.

Exercise as therapy: still great potential in Switzerland

In Switzerland, exercise has been used infrequently to date as therapy for people with non-communicable diseases, mental illness or addiction problems, although it is actually an effective treatment. The Federal Office of Public Health (FOPH) wants to see exercise as therapy become a more established part of healthcare provision.

Swimming for mobilisation – therapeutic exercise programmes also increase social integration because they often take place in groups.

Non-communicable diseases (NCDs) are steadily on the rise in our society as a result of increasing life expectancy, but also due to lack of physical activity. This trend is not without its consequences: an estimated 80 percent of health costs in Switzerland are caused by NCDs and mental illness.[1] Working with partners, the FOPH has therefore drawn up the "National Strategy for the Prevention of Non-Communicable Diseases" (NCD Strategy). In all three action areas of the strategy, promoting exercise is a key measure, since physical activity is clearly an important prevention factor for the development of NCDs. But exercise also has a therapeutic effect: one aim of the NCD Strategy is to establish exercise as a form of treatment in healthcare provision.

On behalf of the FOPH, researchers at the Zurich University of Applied Sciences (ZHAW) in Switzerland and other selected countries have studied whether, and if so how, exercise can be used as a therapeutic intervention. From their findings, they have derived recommendations for action for Switzerland.

Exercise as therapy not yet widespread

Exercise is considered to be an effective treatment for non-communicable diseases such as cancer, cardiovascular diseases, diabetes, obesity, mental illness, etc. Since exercise courses often take place in groups, this increases social integration, which has a further positive impact on well-being. Exercise as therapy poses a challenge because – in contrast with drug treatment – it requires active input from the patients. Exercises also need proper instruction, which means that the professionals who conduct exercise programmes require specific training. Specialist courses already exist, for example those run by the Swiss Association of Professionals in Adapted Physical Activities (ASP-APA) or the Schweizerischer Verband für Gesundheitssport & Sporttherapie (SVGS).

Exercise as a therapeutic intervention is not yet widespread in clinical practice in Switzerland, as is apparent from the final report issued by the ZHAW. Although most exercise interventions in NCDs are part of structured rehabilitation programmes covered by basic health insurance, exercise is still not deliberately prescribed to everyone following such programmes.

Initiatives for comprehensive implementation

Based on these findings, the ZHAW researchers have drawn up recommendations, including the formation of the umbrella organisation "Exercise is Medicine (EIM) Switzerland", which is designed to prepare the ground for establishing exercise as therapy in healthcare provision. As well as the FOPH, therapeutic and medical professional associations, educational institutions and other stakeholders are responsible for EIM Switzerland. The umbrella organisation aims to bring these stakeholders together and jointly address the promotion of exercise as therapy. One of the tasks of a joint EIM concept is to produce a list of indications, establish guidelines and develop an exercise prescription.

Other recommendations for action include the establishment of appropriate funding options as part of basic health insurance and the development of guidelines for the professionals concerned.

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Projects that promote therapeutic exercise courses

Health Promotion Switzerland supports various projects involving exercise therapy: The pilot project "Pas à Pas" [step-by-step] (PAP+) is aimed at those who suffer from NCDs, or those who do not exercise enough and are therefore at risk of developing an NCD, with the aim of systematically integrating exercise as a measure for NCD prevention. Another project of Health Promotion Switzerland is "BeFit – fitness for those with Ankylosing Spondylitis". Sufferers are offered an exercise therapy programme designed to preserve their independence and quality of life.
Other initiatives include the "Diafit" project run by Diabetes Switzerland: a structured exercise programme specifically for patients with glucose intolerance. The aim is to prevent, or delay, the development of type 2 diabetes mellitus and to enable sufferers to lead a healthier lifestyle.

Links:
- Final report of ZHAW (in German): https://tinyurl.com/2p9bknea
- FOPH factsheet (in German): https://tinyurl.com/2p85rf5p
- Interface report "Élaboration de profils de compétences dans le domaine de l'activité physique comme moyen thérapeutique APMT) en Suisse", 2022 (in French): https://tinyurl.com/2p835am5
- Research reports on physical activity and weight (FOPH; in German): https://tinyurl.com/4m42pnfd
- Association Suisse des Professionnels en Activités Physiques Adaptées (ASP-APA, in French): http://asp-apa.ch
- Sport & Exercise Medicine Switzerland (SEMS; in German): https://sems.ch
- Schweizerischer Verband für Gesundheitssport & Sporttherapie (SVGS, in German): https://svgs.ch
- Pas à Pas (in French): https://www.pas-a-pas.ch
- BeFit (Health Promotion Switzerland; in German): https://tinyurl.com/2p8a3zt6
- Other projects sponsored by Health Promotion Switzerland: https://tinyurl.com/5n73sfjs
- Diafit (in German): http://www.diafit.ch

1 Wieser et al. 2014. Die Kosten der nichtübertragbaren Krankheiten in der Schweiz.

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