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Health-Enhancing Physical Activity

Base Document for Switzerland

Gesundheitsförderung Schweiz
Promotion Santé Suisse
Promozione Salute Svizzera

Schweizerische Eidgenossenschaft
Confédération suisse
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To make this document more readable, source references are not included. The following documents contain detailed references to important sources:

- WHO Europe (2006). Physical Activity and Health in Europe: Evidence for Action.
- WHO Europe (2006). Promoting Physical Activity and Active Living in Urban Environments: The Role of Local Governments.
- Swiss Observatory for Sport and Physical Activity, at www.sportobs.ch
- Recommendations and scientific position statements of the Swiss Federal Offices of Sport and Public Health, the Network HEPA Switzerland and other partners at www.hepa.ch

A few important facts

Why physical activity is healthy

- Regular physical activity decreases the risk of widespread conditions and diseases such as obesity, cardiovascular diseases, type 2 diabetes, osteoporosis, back pain, colon cancer and breast cancer. Physical activity also relieves symptoms of depression and puts people in a better mood. Physically active individuals live longer and need less care in old age.
- For adults, half an hour of physical activity per day is sufficient for improving health, well-being, quality of life and fitness. The intensity of the activity should be equivalent to brisk walking. A person who is already active can derive further benefit through specific endurance, strength and flexibility training. Even older people who have not been very active previously can profit from regular physical activity.
- Adolescents should be active one hour a day, and younger children even more. In addition, children and adolescents should engage several times a week in activities that build strong bones, stimulate the cardiovascular system, strengthen muscles, maintain flexibility and improve agility.
- The harmful effects of physical activity are much less critical or extensive than the harmful effects of inactivity.

Activity levels in Switzerland

- Nearly 60 percent of adults in Switzerland are either not active enough or entirely inactive when measured against the minimum recommendation of half an hour per day. While inactivity rose in the 90s, this trend has now been broken and physical activity behaviour seems to have changed for the better.
- First representative data on physical activity of young people in relation to the recommendations are now available. However, data for children under ten are still needed.

The costs of physical inactivity

- Inactivity causes at least 2,900 premature deaths per year in Switzerland, 2.1 million cases of illness, and direct treatment costs totalling 2.4 billion Swiss Francs (1.6 billion Euro).
- Being physically active and meeting other people is important for building up and maintaining a society's social capital.

Factors that influence our activity behaviour

- Physical activity behaviour is affected by many different factors. Some of these factors such as age and gender cannot be changed. Personal characteristics and factors of one's personal environment, on the other hand, can be changed for the better through appropriate measures.

Getting people to be more active

Switzerland already has a very favourable environment and offers a range of traditional activities involving physical activity, exercise and sports. In order to reach new population groups, additional efforts are required.

- Based on previous experience in Switzerland and abroad, programmes and initiatives for promoting physical activity should appeal to the broadest possible segments of the population. In addition, it may be advisable to develop specific programmes for high-risk groups.
- Promotion of physical activity must take into account individual basic requirements and expectations. Activity patterns, mobility habits, social norms and economic conditions may vary from one population group to the next.
- If we maintain a broad view of physical activity that includes leisure-time activities, transport-related physical activity, and activities at home and at work, we will be more likely to succeed in meeting different human needs.
- This broad understanding of physical activity means that organisations promoting physical activity must form alliances with other disciplines.
- The commitment of national, cantonal and municipal institutions is also needed.
- And finally, findings must be documented and made available to others. This knowledge can then be incorporated into the development of new programmes and can contribute to progress in the promotion of physical activity and sports.

Introduction

Technical achievements and the associated social developments have created a situation in which we are much less active in our daily lives. Earlier generations in human history did significantly more physical work than we do. Mechanisation of labour, motorisation of transport as well as household appliances and modern means of communication have made our lives easier in many respects. But this freedom from physical drudgery also has its drawbacks. Most people hardly move any more – either at work or at home or in getting from one place to another. This is detrimental to health. The human organism was designed to cover great distances for days on end in the search for food, by either hunting or gathering. Our bodies therefore need – even today – a certain degree of strain and exertion in order to function well and to remain healthy.

The comparatively new research area referred to as "Physical Activity and Health" has become more important in recent years. For one thing, this is because the development of scientific methods and new technologies has made it possible to study complex relationships. But it is also because the lack of physical activity has reached an alarming dimension. It has been shown scientifically that inactivity is a high-priority problem for the health of industrialised societies.

Ten to twenty years ago, researchers were interested in determining the health benefit of physical activity and how much exercise is required in order to derive a health benefit. Now the focus has been expanded and other issues are in the spotlight: Which factors in today's world affect physical activity habits? And what measures can be used to combat inactivity?

This base document presents the current state of knowledge in physical activity promotion. Its structure has been conceived in line with the framework for promoting physical activity established by HEPA Europe, the European Network for the Promotion of Health-Enhancing Physical Activity, and with other models published in scientific literature.

Framework for physical activity promotion
This base document conceptualises physical activity promotion as a cyclic process with a central role in the utilisation of existing knowledge.

The following sections discuss the various stages and relationships in this cycle.

- The section entitled **"Why physical activity is healthy"** describes the health benefits of physical activity and the level of activity that is currently recommended.
- The section on **"Activity levels in Switzerland"** discusses how active the Swiss population is relative to these activity recommendations.
- The section entitled **"The costs of physical inactivity"** describes the consequences of inactivity for society.
- The section on **"Factors influencing our activity behaviour"** looks at factors that affect physical activity habits such as personal attitudes or conditions in one's social environment.
- The Section **"Getting people to be more active",** discusses the promising strategies and measures that can be used to combat inactivity.

Basic concepts

Physical activity and sports:
Physical activity is often carried out as a specific activity – in the form of a sport, for example. The health effect of physical activity is based on the overall activity during a specific time period. This can consist of sports as well as other types of physical activity.

People often distinguish between different domains of physical activity: physical activity at home, as part of transportation, at work or during leisure hours.

Health-enhancing physical activity:
Health-enhancing physical activity (HEPA) is any form of physical activity that improves health and has the fewest possible undesirable side effects. Health-enhancing physical activity is characterised by frequency, duration and intensity.

Exercise:
The concept of "exercise" describes a form of training at a fairly intensive level aimed at improving fitness and health.

Why physical activity is healthy

Regular physical activity reduces the risk of widespread conditions and diseases such as obesity, cardiovascular diseases, type 2 diabetes, osteoporosis, back pain, colon cancer and breast cancer. Physical activity also relieves symptoms of depression and puts people in a better mood. Physically active individuals live longer and need less care in old age.

For adults, half an hour of physical activity per day is sufficient for improving health, well-being, quality of life and fitness. The intensity of the activity should be equivalent to brisk walking. A person who is already active can derive further benefit through specific endurance, strength and flexibility training. Even older people who have not been very active previously can profit from regular physical activity.

Adolescents should be active one hour a day, and younger children even more. In addition, children and adolescents should engage several times a week in activities that build strong bones, stimulate the cardiovascular system, strengthen muscles, maintain flexibility and improve agility.

The harmful effects of physical activity are much less critical or extensive than the harmful effects of inactivity.

How regular physical activity affects health

Protection against disease
In industrialised countries, the adverse impact of inactivity on health is about as strong as that of smoking. Coronary heart disease is the most frequent cause of death in these countries, and inactivity is the disease's most important risk factor that can actually be changed. For a number of common diseases and conditions such as cardiovascular diseases, type 2 diabetes, back pain or osteoporosis, regular physical activity has a significant protective effect. This is also true for colon cancer and breast cancer. Recent studies also indicate that regular physical activity can have a positive impact on intellectual achievement or mental performance. Active individuals feel healthier both physically and psychologically, need to see a physician less often, and have less frequent and shorter hospital stays. They are also absent from work less frequently.

It is also known that people who have regular friendly contact with other people are less often sick. Physical activity and sports offer good opportunities for regular contact with others – whether in a sports club or on a weekly walk in the woods with a friend.

Effects on psychological health
Physical activity and sports also have an impact on psychological health. They improve people's mood and outlook and relieve symptoms of depression. This increases self-esteem and stress tolerance. Almost half of all mild depressions could be prevented through regular physical activity.

Greater quality of life
Physically active individuals live longer. And in old age they are more mobile, more independent and require less care than people who are inactive.

Good health habits
People who are regularly active are also more health-conscious in other areas. Physical activity can trigger a health-enhancing domino effect. Physically active people smoke less, have healthier eating habits and are less likely to be overweight.

Health impact of physical activity			
Cardiovascular disease	↓	Life expectancy	↑
Stroke	↓	Independence in old age	↑
Type 2 diabetes	↓	Psychological well-being	↑
Obesity	↓		
Colon cancer	↓		
Breast cancer	↓		
Osteoporosis	↓		
Falling by the elderly	↓		
Depression	↓		
Decrease in the risk for this disease	↓	Improvement in this aspect of health	↑

Secondary prevention and rehabilitation
In individuals who smoke, who have high blood pressure or high cholesterol or who are overweight, physical activity can partially compensate for the negative impact of these health risk factors. Specific forms of physical activity also improve the health and quality of life in individuals with cardiovascular diseases or people who suffer from asthma, type 2 diabetes or cancer. Physical activity has a beneficial effect on rehabilitation after injuries or surgery involving the musculoskeletal system.

In addition, the many different physical and psychological effects of physical activity, play and sports also help to compensate for addiction-related deficits.

Social integration
Physical activity and sports – when carried out together with other people – facilitate the social integration of different generations and different cultural groups.

Physical activity and health in children and adolescents

Adequate physical activity is very important for children's physical, psychological and social development. This is widely recognised. However, there is not yet as much evidence for the health effects of physical activity and sports in children and adolescents as in adults. Reliable and accurate methods of measuring children's activity have only recently become available. And it is also true that one of the primary consequences of inactivity is chronic disease, which tends not to appear until adulthood.

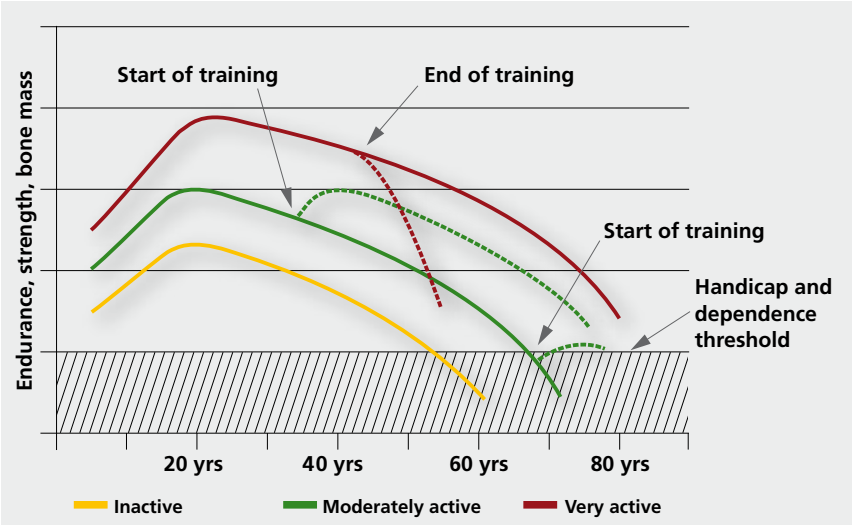
- *Studies have confirmed the following health effects of physical activity in children and adolescents: The risk of becoming overweight is lowered and existing excessive weight can be reduced. Bone mass is increased. There are indications that the risk of getting type 2 diabetes is lower, and the profile for cardiovascular risk factors improves.*
- *There are also indications that sports improve psychological health, school performance and social integration.*
- *Participation in sports probably also has an addiction-preventing potential in children and adolescents: at least with regard to smoking and perhaps also to the use of cannabis. However, sports probably do not protect against alcohol abuse.*

Better late than never

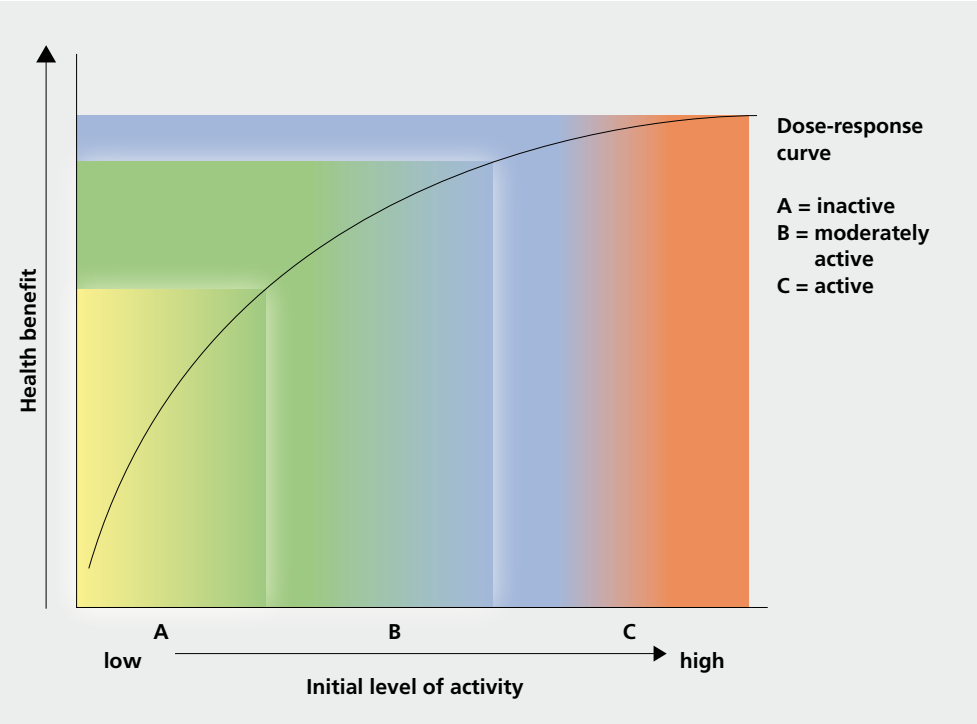
Any step away from inactivity – however small – is important and benefits health. And it is never to late to take the first step. Even older individuals who have never been very active can do a lot for their health, their fitness and their well-being if they incorporate regular physical activity into their daily routine.

On the other hand, research in recent years has clearly shown that the health effects of physical activity and sports cannot be stored up for the future. This means that individuals who were endurance athletes at age 30 no longer derive any benefit from this activity at age 50 if they have been inactive in the interim.

With bone health, however, the situation is different: deficits in the build-up of peak bone mass in one's childhood can be made up for to some degree in old age, but only partially. This is why it is important for children and adolescents to get sufficient physical exercise. Nonetheless, the risk of falling and breaking bones can be reduced throughout the lifespan – even with existing osteoporosis – as strength and balance training is possible at any age.



Health and performance during the lifespan:
Physically active individuals are fitter and healthier during their entire life. Inactive individuals can, however, approximate the improved state of health of more active individuals at any time simply by incorporating regular physical activity in their lives.



Dose-response relationship:
Each increase in physical activity produces an added health benefit. However, the added benefit decreases with increasing training level. Individuals who were previously barely active or not active at all can expect to derive the greatest added benefit.

Source: based on Haskell 1994

Physical activity recommendations for adults

Recommendations for health-enhancing physical activity can be derived from scientific studies of physical activity and health. The recommendations for Switzerland were developed jointly by the Swiss Federal Offices of Sport and Public Health and the Network HEPA Switzerland.

The following activity recommendations relate to large population groups. Recommendations for individuals or selected groups should be tailored to the specific target group in terms of form and content.

From an inactive to an active daily routine

Minimum recommendation:
Women and men of any age should engage in physical activity

- **every day** (or at least on most days of the week)
- **for at least a half hour** (although activities that last at least ten minutes can be added up over the course of the day)
- **at moderate-level intensity** (involving a slight increase in breathing).

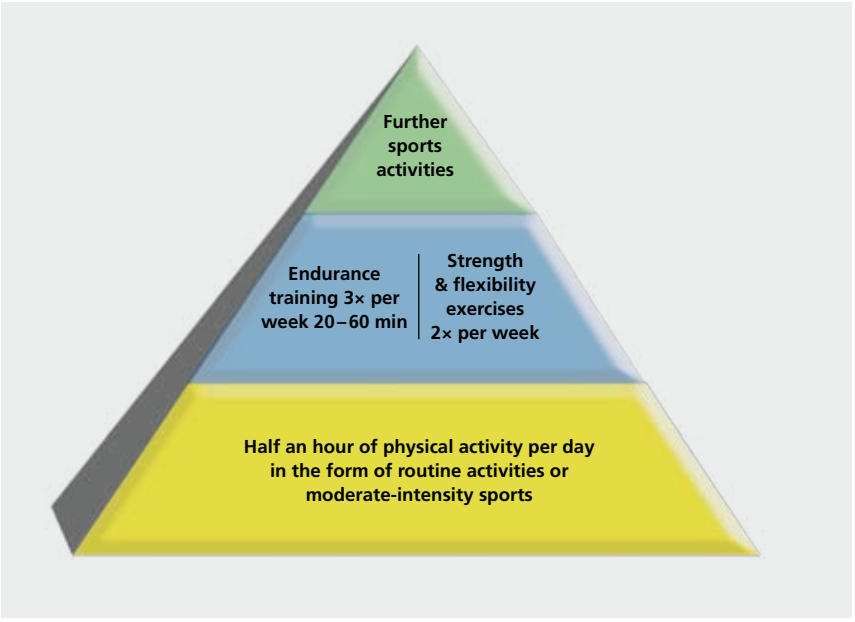
This minimum recommendation alone will have a beneficial impact on health, well-being, quality of life and fitness. Studies show that people who were barely active previously can expect the greatest added health benefit from increased physical activity (see dose-response relationship).

Health-enhancing physical activity does not necessarily mean participating in sports. Everyday activities such as brisk walking, cycling or gardening have the advantage that they can be easily integrated into the daily routine. Types of physical activity that require little in the way of equipment and practice, have a low accident risk and can be enjoyed throughout one's lifetime – such as hiking, walking, cycling, swimming, water aerobics or cross-country skiing – are particularly suitable leisure-time activities.

From an active daily routine to a specific training programme

Recommendations for active individuals:
Women and men who already meet the minimum recommendation can do even more for their health, quality of life and fitness by doing specific types of training or exercise.

Endurance or **aerobic training** – also called cardio-respiratory fitness training – comprises at least three units per week of 20 to 60 minutes each. Training should be intense enough to cause light sweating and faster breathing while



The activity pyramid:
Physical activity recommendations for adults: Just half an hour of physical activity per day involving slightly faster breathing can significantly improve the health of women and men at any age. The further levels promise additional benefits.

still allowing one to talk. Such activities as running, cycling, cross-country skiing, swimming or cardiovascular training on fitness equipment are suitable for endurance training.

Strength training serves to develop and maintain muscle mass and contributes to health and quality of life at any age. This becomes especially important after the age of about 50 – so that people will be able to manage routine activities more independently at a later stage in life. Strength training should be done twice a week. The load should be selected so that eight to fifteen repetitions are possible in each exercise.

Flexibility training can be ideally combined with strength training by incorporating gymnastics and stretching exercises.

From a specific training programme to competitive sports

The added benefit decreases: Every athletic activity that goes beyond the recommendations for inactive or already active individuals can offer an added health benefit. However, this added benefit becomes smaller and smaller as training is increased. After about 50 kilometres of jogging or 5 hours of swimming per week, there is hardly any added benefit.

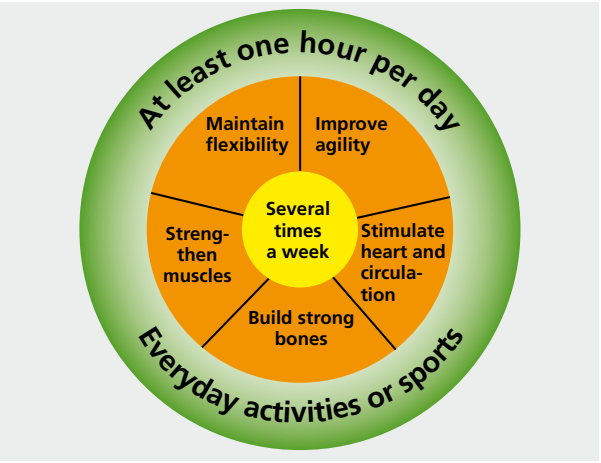
Although even more sports is not damaging to health, it requires better planning of training time, competitions and recovery phases plus special attention to appropriate nutrition. Otherwise the risk of strains and injuries will increase.

Physical activity recommendations for children and adolescents

Based on current estimates, adolescents should be physically active for at least one hour per day as they near the end of school age, and younger children should be active for an even longer time. A varied range of physical activities and sports is necessary for optimum development. As part of this "minimum hour" or in addition to it, at least 10 minutes several times a week should be devoted to activities that build strong bones, stimulate the heart and circulation, strengthen muscles, maintain flexibility and improve agility.

If sedentary activities last longer than about two hours, short "activity breaks" are recommended.

The recommendations for children and adolescents are rather cautions when it comes to specifying time required. The recommendations will need to be revised as soon as further research findings are available.



The activity disc: physical activity recommendations for children and adolescents:
Adolescents should engage in physical activities at least one hour a day and younger children even more. As part of or in addition to the one hour minimum, at least 10 minutes several times a week should be spent in activities that build strong bones, stimulate the heart and circulation, strengthen muscles, maintain flexibility and improve agility.

Potential undesirable effects of physical activity

Limiting risk and preventing accidents are integral components of modern health promotion.

Sports accidents and injuries
Injuries and accidents happen rather frequently, but they usually do not have serious consequences. They occur particularly if the sports participants are poorly prepared, careless or overzealous (football tournaments, skiing, etc.). The direct treatment costs of sports injuries amount to about 800 million Swiss Francs (500 million Euro) per year. Additionally there are indirect costs, for example as loss of production. An increase in physical activity in Switzerland will not increase these figures significantly since the activities that are being recommended for inactive individuals are less accident-prone activities such as walking, light aerobic exercise on foot or by bicycle, working out in a fitness centre, climbing stairs or gardening.

The risk of heart attacks or arthrosis
The risk of a heart attack only increases briefly after heavy or vigorous physical activity. People who are not in good physical shape should therefore avoid intense stress. For individuals who regularly engage in low-intensity or moderate-intensity physical activity, the risk of heart attacks is very small. The basic rule is that if you adapt your physical activity to your level of fitness, you will not have increased health risks.

For the majority of people active in sports, the risk of wear and tear on the joints is also not increased. In individuals who are heavily involved in sports over many years, however, the weight-bearing joints may change visibly when viewed on an x-ray.

Air pollution and physical activity
Suspended particulate pollution in the winter and ozone pollution in the summer are so high on certain days in Switzerland that they can have an adverse effect on health. Aside from trying to reduce air pollution through political means, it is also advisable and necessary to avoid strenuous outdoor activities during periods of maximum concentration and to switch to indoor activities if possible. This applies especially to sensitive individuals such as people with chronic respiratory diseases. From a health standpoint, however, it would be wrong to give up physical activity altogether out of a fear of air pollution.

Activity levels in Switzerland

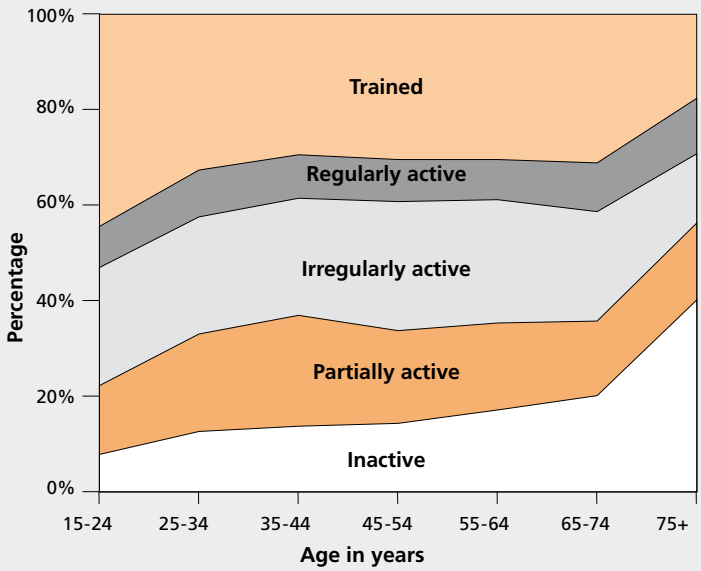
Nearly 60 percent of adults in Switzerland are either not active enough or entirely inactive when measured against the minimum recommendation of half an hour per day. While inactivity rose in the 90s, this trend has now been broken and physical activity behaviour seems to have changed for the better. First representative data on physical activity of young people in relation to the recommendations are now available. However, data for children under ten are still needed.

Data from the 2007 Swiss Health Survey show that the extent of inactivity in Switzerland is serious: 59 percent do not satisfy the minimum recommendation or the recommendation for endurance training, which means that they are either inactive or insufficiently active. Accordingly, 41 percent of the adult population engages in sufficient activity: 32 percent can be considered trained and 9 percent achieve the minimum recommendation.

In addition, the data make it possible to more precisely describe the 59 percent of inactive and insufficiently active people: Individuals whose weekly activity totals the equivalent of five times 30 minutes but who are not active on an (almost) daily basis, as recommended, comprise 24 percent of the population. Another 19 percent are partially active: they practice certain activities, but do not meet the recommended weekly amount of activity. The remaining 16 percent of the population are active for less than one half hour per week and can therefore be described as entirely inactive.

However, the most recent data of the Swiss Health Survey also show a positive development: while the percentage of insufficiently active people had increased between 1992 and 1997, figures from the 2002 and 2007 Health Surveys reveal that this trend has reversed. The first movement toward more physical activity began in German-speaking Switzerland between 1997 and 2002, and French-speaking Switzerland and Canton Ticino followed this trend five years later. Data from the Swiss Health Surveys and specific information from the 2008 Swiss Sports Survey suggest that in particular the sports behaviour of the Swiss public has improved.

Furthermore, the Swiss Health Surveys also asked about physical activity as part of travel behaviour. In 1997, 56 percent of the population indicated that they occasionally walked or cycled to work, to the shops, or during leisure time. This percentage decreased to 49 percent in 2002. Five years later, the level of 1997 was attained again, with 57 percent. Thus, active travel has decreased for some time in the last ten years and then increased again. This recovery is confirmed by the observations of the Swiss Microcensus on Travel Behaviour.



Source: 2007 Swiss Health Survey

Activity levels of the Swiss population:
- Trained individuals report vigorous intensity activities during leisure time at least 3 days per week.
- Regularly active individuals get a little out of breath at least half an hour per day.
- Irregularly active individuals engage in the recommended amount of weekly physical activity but not with the recommended regularity.
- Partially active individuals engage in certain activities but do not meet the recommended amount of physical activity per week.
- Inactive individuals are physically active less than half an hour per week.

Inactivity increases sharply with age.

The activity levels of children and adolescents

The findings on the physical activity behaviour of children and young people are still incomplete. The following three studies collected representative data about various aspects of physical activity:

- *A study on the health behaviour of school-aged children from 11 to 15 years (Health Behaviour of School-aged Children, HBSC Study), which was conducted across Europe using a standardised questionnaire, surveyed the overall physical activity behaviour of children in 2006. In Switzerland, only 15 percent of the boys and 11 percent of the girls were active for one hour per day as recommended. However, 39 percent of the boys and 32 percent of the girls exercised for one or more hours at least five days per week. These percentages have not changed since 2002.*
- *The 2008 Swiss Sports Survey investigated the sports behaviour of children aged 10 to 14. In addition to the mandatory physical education courses at school, 14 percent played no sports, 39 percent played sports for up to three hours per week, 31 percent played sports for three to seven hours per week and 16 percent played sports for more than seven hours per week. By adding up all activities in different domains, the total amounts of physical activity were also estimated. On school days, 88 percent of the children were active for more than one hour on average, while 58 percent of them did so during the weekend.*
- *Every five years, the Swiss Microcensus on Travel Behaviour collects information on the mobility behaviour of the Swiss population aged six and up. In 2005, half of the children and young people up to age 17 spent 28 or more minutes every day walking or riding their bike. 78 percent of children aged 6 to 12 walked or cycled to school, which was four percent less than ten years ago. Compared to other countries around the world, this percentage is still very high. There has been hardly any change in walking to school during this ten year period among the various age groups. However, in the 10 to 17 year-old age group (the typical bike riding age), the percentage of those who ride their bike has fallen from 29 percent to 18 percent.*

The notable discrepancy between the very low percentages of sufficiently active children, also in comparison to other countries, between the ages of 11 and 15 in the HBSC study and the data regarding sports or mobility behaviour cannot be overlooked. For that reason, in the future, methods will have to be developed to be able to adequately measure the physical activity behaviour of children in the cultural context of Switzerland.

The costs of physical inactivity

Inactivity causes at least 2,900 premature deaths per year in Switzerland, 2.1 million cases of illness, and direct treatment costs totalling 2.4 billion Swiss Francs (1.6 billion Euro). Being physically active and meeting other people is important for building and maintaining a society's social capital.

Inactivity and public health

Physical activity behaviour – i.e. the ways in which individuals are physically active or inactive – is very significant for public health for two reasons:

- Physical activity has a strong effect.
- The percentage of people who are not active enough is large.

Economic consequences

Physical inactivity causes an estimated 2,900 premature deaths per year in Switzerland, 2.1 million cases of illness, and direct treatment costs totalling 2.4 billion Swiss Francs (1.6 billion Euro). Additionally there are indirect costs, such as loss of product.

These estimates are based partly on an economic study completed in 2001 and partly on data on physical activity levels from the 2002 Swiss Health Survey.

Social consequences

The social costs of inactivity also need to be considered in addition to the economic consequences. In order for members of a society to be in contact with one another, they must be mobile and be able to engage in physical activity. This is how people get to know and trust one another and become involved in the community. It also allows less privileged groups to participate in the social life of the community.

Opportunities for meeting people and for physical activity within the public sphere facilitate and support these diverse interactions. If people's activity spaces are limited, then valuable social capital is lost.

Factors influencing our activity behaviour

Physical activity behaviour is affected by many different factors. Some of these factors such as age and gender cannot be changed. Personal characteristics and environmental factors, on the other hand, can be improved through appropriate measures.

Factors that cannot be changed

Influencing factors that **cannot be changed directly** by activity-promoting measures include the following:

- **heredity,**
- **age** and **gender,**
- membership in a specific **cultural group,**
- **social class** (based on education or income).

The Swiss Health Surveys indicate the following:

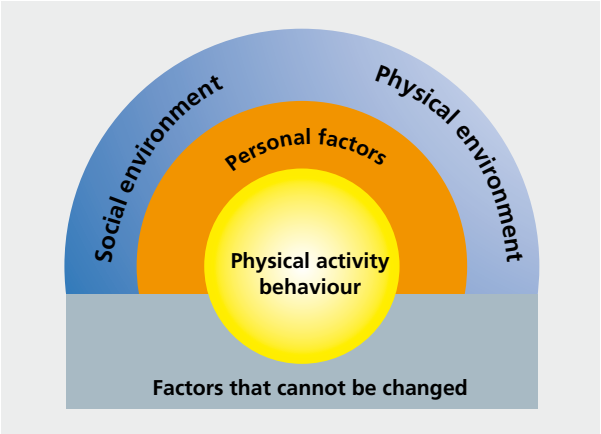
- Young people are more physically active than older people.
- Men are more physically active than women.
- Residents of German-speaking Switzerland are more physically active than those in the French-speaking and Italian-speaking areas.
- Individuals with medium or high income are more physically active than those with low income.

In promoting physical activity, it is especially important to ensure that the particular groups who are less physically active have adequate access to programmes and opportunities.

Factors that can be changed

The scientific literature shows that there are many factors influencing people's physical activity behaviour that can be **directly changed** by appropriate measures. These include personal factors, social factors and physical environmental factors.

Personal factors
An individual's personal **attitude** and **motivation** with respect to physical activity shape that individual's physical activity habits. However, also important are positive and negative **expectations** and the appropriate **abilities** and **skills.**



Factors influencing physical activity behaviour:
Physical activity behaviour is influenced by factors that cannot be changed (heredity, age and gender). And also by factors that can be changed. These include personal factors and factors in the social and physical environment.

Social environment
Having models within the **family** and the support of relatives has a positive effect on behaviour. An individual's **circle of friends** (peer group) or programmes offered by his or her **employer** can also influence physical activity habits. Furthermore, the number and type of **activities offered** in conjunction with organised sports are critical, whether in clubs, at private facilities or in conjunction with physical education in the schools.

Physical environment
In many localities, **urban structures** have been created over the last few decades involving a **residential and work environment** in which routine physical activity is less attractive or even practically impossible. Closely tied to the development of the designed environment is the **transport infrastructure** (for motorised individual transport, public transport, pedestrian and bicycle traffic). This also has a direct impact on our levels of physical activity. The environment for many people today is designed such that physical activity is no longer necessary. You can get directly from the underground car park to your office or to a shopping centre by taking an elevator.

Another critical factor is access to natural or constructed **recreational and sports facilities.**

From knowledge to action

Changing habits is a long and often difficult process in which relapses into old patterns of behaviour also occur. Programmes for health promotion through physical activity and sports should take this complexity into account. The path to greater physical activity is supported by removing barriers, emphasizing positive expectations and strengthening self-confidence.

Personal stumbling blocks

- *"I don't have time."*
- *"I am not athletic."*
- *"I am too tired."*
- *"I already get enough exercise."*

Keys to changing behaviour successfully

- *Gradual increase in activity*
- *Help people experience success*
- *Make people aware of individual progress*
- *Select appropriate role models*

Activity-friendly environments

International studies show what an environment must look like so that people will engage willingly and frequently in physical activity. First, human-powered mobility must be safe and attractive so that people will cover more distance on foot or by bicycle. Second, easily accessible and attractive spaces for physical activity are required so that people will be more active in their leisure hours.

Elements that promote physical activity

- *Zone planning: mixed use areas (residential, shopping and services, work)*
- *Short distances to destination points*
- *Direct connections, particularly for pedestrians and cyclists*
- *High residential density*
- *A neighbourhood attractively designed for pedestrians*
- *Short distances to stops for public transport*
- *Access to parks and recreational facilities*
- *Access to cycling paths*
- *The more pedestrians there are, the safer it will be for all pedestrians.*
- *The more cyclists there are, the safer it will be for all cyclists.*

Getting people to be more active

Switzerland already has a very favourable environment and offers a range of traditional activities involving physical activity, exercise and sports. In order to reach new population groups, additional efforts are required.

Based on previous experience in Switzerland and abroad, programmes and initiatives for promoting physical activity should appeal to the broadest possible segments of the population. In addition, it may be advisable to develop specific programmes for high-risk groups. Promotion of physical activity must take into account individual basic requirements and expectations. Activity patterns, mobility habits, social norms and economic conditions may vary from one population group to the next. If we maintain broad view of physical activity that includes leisure-time activities, transport-related physical activity, and activities at home and at work, we will be more likely to succeed in meeting different human needs. This broad understanding of physical activity means that organisations promoting physical activity must form alliances with other disciplines. The commitment of national, cantonal and municipal institutions is also needed. And finally, findings must be documented and made available to others. This knowledge can then be incorporated into the development of new programmes and can contribute to progress in the promotion of physical activity and sports.

Traditional offers and structures for physical activity

Compared with many countries, Switzerland is in a privileged position as far as opportunities and basic conditions for physical activity and sports are concerned. These elements have a decade-long tradition and form an important foundation for physical activity promotion.

Switzerland has the following important elements, for example:

- A **tradition-rich system of clubs** and **associations** for organised sports: There are around 22,000 sports associations with 1.5 million active members and 300,000 volunteers who serve largely without remuneration.
  Free right of access to forests and meadows: Every individual has the right to enter any forest in Switzerland. This basic right which has been part of the Swiss Civil Code for 100 years is a fundamental requirement for countless leisure-time physical activities.
- A dense network of **hiking trails:** 62,000 km of marked paths, created since 1934.
- Three hours of physical education and sports per week in the **schools,** as required by law.
- A **sports office** in every canton.
- A dense and well-functioning **public transport** network. This encourages people to travel to public transport stations by walking or cycling instead of travelling only by motorised vehicle.

Many initiatives have also been established in recent years in Switzerland that are designed to encourage people to engage in more physical activity.

Measures for promoting physical activity

On both the international and national level there are several studies that examine how physical activity behaviour changes through specific intervention efforts. Although the research area is still developing, there are already important findings. Some of these findings, however, are still incomplete or contradictory. We should also keep in mind that the cultural context in the United States and other countries in which studies have been carried out can differ markedly from the situation in Switzerland.

Whenever possible, institutions promoting physical activity should evaluate the concrete effects of a given measure on activity levels. However, this is often very challenging from a methodological standpoint and too expensive. It may also take years until effects can be observed. It is therefore important – and even valuable – to collect data relating to the suitability of an implementation activity such as the following information:

- number of persons reached,
- characteristics of people reached,
- degree of programme acceptance.

Physical activity promotion projects are directed either at the **population as a whole** or at specific **target groups** such as senior citizens, children, the working population, or other groups.

There are different forms of physical activity promotion efforts:

- structured activities (such as courses and classes),
- campaigns (media campaigns, mass participation activities etc.) and events,
- projects to design activity-promoting environments (e.g. residential environment, sports infrastructure, transport, etc.),
- counselling and support of individuals or groups.

These measures can be carried out in isolation, but ideally they should be combined and coordinated with one another. Often they take place in a specific **setting:** in the community, in a medical environment, in the workplace or in schools.

We will present in greater detail below the various forms of physical activity promotion and examples of projects from Switzerland. The specific projects have either been implemented on the national level or are pilot projects whose impact is being studied in depth. For the national projects, findings are already available on the number of participants, on acceptance and on whether the target group was reached.

Structured activities

Empirical data on structured activities – such as courses and educational projects – are few and far between on the international level. Switzerland is in comparatively good shape with three major long-term programmes:

Youth+Sports

Youth+Sports (Y+S) is a federal programme aimed at promoting sports. The Y+S objectives and content are communicated and implemented in clubs and associations, schools, municipalities and cantons. The goal is for children and young people between the ages of 10 and 20 to be able to experience and help shape youth-appropriate sports in an integrated way. Y+S aims to make children and adolescents more involved in sports activities and to promote their integration into a sports association.

Around 50,000 instructors per year are given basic and advanced training in more than 2,500 courses. They work in more than 43,000 camps and courses in which more than 500,000 children participate every year. The federal government supports these efforts to train instructors and young people by contributing about 60 million Swiss Francs (40 million Euro) per year.

Structured adult sports opportunities

*From 1996 to 2008, the **Allez Hop** programme offered sporting activities such as walking, Nordic walking and aqua aerobics to groups of individuals and companies. The activity leaders were provided with standardised training and development. The programme was funded by national sponsors and by revenues from license agreements. When the programme had established itself, approximately 2,000 courses with more than 20,000 participants were held every year. The profile of the participants remained stable from year to year: women accounted for almost 90 percent of the participants and the average age was 48. A more detailed evaluation in 2005 revealed that more than two-thirds of the participants described themselves as not active enough at the beginning of the courses.*

*The objective of the **Swiss senior sports programme** was intended to offer a wide range of exercise, game and sports activities to the elderly in Switzerland. These activities were offered locally or regionally by sports clubs, cantons, Pro Senectute or individuals. The activity leaders and experts were trained according to a common curriculum. The activities were self-financed, and the activity leaders and experts were trained with federal funds. Given the decentralised structure of the senior sports programme, there is no reliable data about the number of persons reached. A partial evaluation revealed that most senior sports activities were offered by Pro Senectute, which held approximately 5,500 courses with around 70,000 participants in 2003. Two-thirds of the participants were between 65 and 80 years old, while one-fifth was over 80. According to estimates, the some 6,000 registered activity leaders reached 125,000 to 315,000 people annually with their activities.*

As part of structural changes, both programmes were combined into the adult sports programme of the Federal Office for Sports in 2009 and conceptually realigned.

Campaigns and events

Media campaigns involving behavioural appeals are remembered and can improve knowledge about the issue of physical activity. However, they have no effect on the actual physical levels of the population. Media campaigns should therefore focus more on influencing social norms than on changing individual behaviour. Evaluation of such campaigns should be based on these objectives.

The advertising of specific courses and activities, on the other hand, is effective. Effectively positioned prompts to action also have an impact. A whole series of studies has found that people will use the stairs more frequently if posters encouraging people to walk are displayed next to the elevator or escalator. Especially effective are posters that are attractively designed and tailored to the specific situation and target group. However, the impact is temporary, since people passing by tend to get used to the posters and eventually ignore them. It is therefore advisable to change the prompts periodically or remove them and put them up again later.

bike to work

This participatory campaign in based on experiences with similar projects that have been carried out in many European countries and have involved tens of thousands of participants. Employees of companies that have signed up for the campaign are encouraged on a voluntary basis to use a bicycle to get to work on at least half of all work days for one month.

The Swiss Bicycle Advocacy Association carried out a pilot project in 2005. According to the evaluation, 46 percent of the participants were classified as insufficiently active. More than one-third of the participants switched to cycling during the campaign. Acceptance was excellent among both participants and non-participants. More than 400 businesses and over 20,000 people took part in the first national campaign in 2006.

slowUp

Car-free days are organised by national sponsors (Cycling in Switzerland Foundation, Health Promotion Switzerland and Switzerland Tourism) in cooperation with local and regional partners. The first event took place in the year 2000, and by 2006 there were already 12 events with an estimated 400,000 participants.

A participant survey at three slowUp events in 2004 shows that a significant percentage of insufficiently active individuals (52 percent) can also be reached. The growing number of events and participants demonstrates that acceptance is very good and the events meet a need in the population.

Vita Parcours

Vita Parcours are marked courses of about 2 to 3 km in length in local recreational areas or forests. They offer standardised flexibility, strength and endurance exercises at 15 different posts. The Vita Parcours Foundation is responsible for these courses. The first ones were installed in the late 1960s and today there are about 500 of these facilities. Beginning in 1998, all courses were redesigned based on new findings regarding promotion of physical activity and exercise physiology.

A survey in 2001 showed that these facilities have a very good reputation: Over 90 percent of the population is familiar with the Vita Parcours courses and about 20 percent report that they use them. Counts at a number of parcours courses in the summer of 2006 showed that the facilities are used by an average of 18 people per hour.

SwitzerlandMobility

SwitzerlandMobility manages a network of national and regional hiking, biking, mountain biking, inline skating and canoeing routes. The network is organised by the SwitzerlandMobility foundation and funded by all cantons and many federal offices, associations and private organizations. SwitzerlandMobility also offers communication tools, an information platform and information on tourism opportunities. Based on figures from counts and surveys of national bike paths, it is estimated that these routes hosted 4.3 million one-day and 170,000 multi-day excursions in 2004. The average age of the biking enthusiasts was 43 among women and 49 among men. 8 percent of the users indicated that they played no sports in their free time or during vacations.

Activity-friendly environments

There are many associations between the designed environment and levels of physical activity (see the box entitled "Activity-friendly environments" on Page 16). But we still know very little about whether a change in the environment will actually lead to a change in behaviour. Such studies are very time-consuming and expensive and extremely challenging from a methodological standpoint. There are indications from studies in North America that individuals who move into a new residential environment are more physically active in their transport habits if the new environment is more walkable. It has also been shown that people will walk more in their leisure hours if opportunities for walking are created. Or if the environment is designed to be more inviting.

Promotion of physical activity in specific settings

In medical practices

Studies from Switzerland and other countries show that general practitioners or primary care physicians can play an important role in promoting physical activity. Consultations by physicians or other specialists are most promising if the programmes meet the following criteria:

- They are based on a sound theory of behaviour change.
- They encourage people to participate in moderately intensive activities that can also be done at home or in a residential environment and be integrated into their everyday routine.
- They provide support both in beginning to be more active and in maintaining the new lifestyle.
- They offer the opportunity for regular contact with a specialist.
- They take into account local conditions in the consultation.

Such programmes can usually lead to short-term improvement in physical activity behaviour. Some programmes – such as in one study in Switzerland – also have a long-term effect.

Counselling and support

Individual counselling and support can help people who are not very active to find their own personal approach to physical activity, exercise and sports and to become motivated – over the long term – to be more active.

active-online.ch

active-online.ch is an interactive website that offers an automated, individualised motivational and counselling programme aimed at increasing physical activity. The service focuses primarily on insufficiently active individuals from about 30 to 60 years in age. It was launched in 2003 and is available at no charge in German, French and Italian.

The website is visited about 7,300 times per month, and the motivational section is used about 1,700 times a month. Evaluations of the database show that about three quarters of the users are in the targeted age group and that about 60 percent of the visitors describe themselves as insufficiently active.

The approach of the Swiss College of Primary Care Medicine

Various approaches for promoting physical activity through medical practices have been developed in Switzerland and some have been successfully implemented. This has yielded valuable findings. Practical and affordable models that are widely accepted by physicians, however, are still a big challenge internationally and also in Switzerland.

The Swiss College of Primary Care Medicine, the Swiss Federal Office of Sports and other partners have therefore developed a model that emphasizes suitability for routine use in medical practices. It is being used increasingly by Swiss general practitioners.

In the workplace

Promotion of health and especially physical activity has become very popular in companies. Findings obtained in workplace settings are still sketchy and incomplete, however. Most approaches studied to date are directed at employees on an individual level – such as through counselling, health check-ups or organised activities such as walking courses. Physical activity promotion in the workplace has particular potential if programmes address not just the individual level but also the structural level. Employees should not only be motivated to be more active in their leisure hours but also to commute to and from work on foot or by bicycle, either totally or in part.

Office in Motion

This project, which was designed to encourage sedentary employees to be more active, was the first such project in Switzerland to be studied scientifically with respect to effectiveness. It was found that there were positive changes in the physical activity habits of employees from participating offices of the federal administration. The project also led to long-term structural changes: such as the purchase of bicycles to be used by employees for business purposes and the installation of showers. In addition, the corporate programmes offered by Allez Hop benefited from the findings resulting from this project.

In the community

People are active where they live, work and spend their leisure hours. It is therefore reasonable to initiate promotion of physical activity on the community or municipal level. The most important principles of promising intervention efforts are the following:

- Programmes should be tailored to the size and the type of municipality or community. The better the cohesion and informal networks in a community, the easier it is to implement programmes. In large or impersonal municipalities it will probably be difficult to reach significant portions of the population.
- It is important to involve key persons and institutions.
- Programmes should be developed at all levels: from organised physical activities, changes in the built environment, counselling and information for families and individuals to monetary or tax incentives and laws.
- Media campaigns only make sense in connection with other measures.
- Long-term financing must be secured.

"It's better on foot!"
(«A pied, c'est mieux!»)

The goal of this campaign from the canton of Neuenburg is to encourage children to walk to and from school. The campaign also involves parents and schools and offers various types of information, infrastructural improvements and actions in addition to increasing general awareness of the issue. The entire campaign or elements from it were also adopted by other municipalities in other cantons. A parent survey after the campaign revealed that every eighth child had been driven to school by car at least some of the time, and that half of these children walked more frequently after the campaign.

A similar approach was taken and evaluated in the village of Evilard in the canton of Berne: here the number of cars driving children to kindergarten was markedly reduced over a period of three years.

Promotion of physical activity for children and adolescents

There are numerous programmes that encourage children and adolescents to be more physically active. However, only a few – and only very specific programmes – have been studied even internationally with respect to their effect on physical activity levels. Nevertheless, children can benefit from many general measures such as improvements in the built environment.

In school:
There are only a few evaluated intervention initiatives in schools that focus on levels of physical activity. Programmes that include different elements seem to be the most promising. Some conceivable approaches include the following:

- *Curriculum-based measures such as instructional units and material on health promotion.*
- *Changes in the built environment such as the design of recess areas or improvements in the transport infrastructure.*
- *Higher-level strategies such as teacher training and support.*

During leisure hours:
Organised physical and educational activities predominate in leisure-time contexts. Most of the programmes studied (generally U.S. projects) were designed to combat obesity. Approaches that include families appear to be the most promising.

At the doctor's office:
Programmes in the medical environment can have short-term effects on habits of physical activity. As with leisure activities, the programmes that were evaluated were usually carried out in the context of obesity prevention. They addressed topics such as nutrition or TV viewing habits in addition to physical activity.

Basic principles of physical activity promotion

National and international experiences indicate that promising strategies and initiatives for promoting physical activity are based on the following principles.

Population-wide approach
Inactivity is a population-wide problem which requires population-wide solutions. More can be accomplished when opportunities for physical activity and a good environment for an active lifestyle are created for everyone instead of developing programmes for specific small groups. In addition to population-wide approaches, programmes for high-risk groups may be required.

Taking into account specific conditions
Programmes should be developed by involving the population that will be addressed. Specific basic conditions should also be considered, since activity levels, mobility habits, social norms and economic conditions may vary from one population group to the next.

Broad view of physical activity
Physical activity includes not only sports but also other activities during leisure hours, for transport purposes, in the domestic environment, and at work. This broad view of physical activity makes it easier to meet different needs and preferences.

Involving other disciplines
A broad understanding of physical activity means that organisations promoting physical activity must form alliances with other disciplines. If the objective is to change the physical activity behaviour of the population, then the institutions promoting health and sports need the support of public and private partners from areas such as land-use planning, transportation, architecture, environment, education and culture.

Work on several levels
The promotion of physical activity requires the integration of national, cantonal and local organisations. The role of national institutions is to provide an overview of strategies and projects and to identify the need for action. Experiences and background knowledge must be made widely accessible, and possibilities of exchange at the national and international level are essential. The commitment of cantonal offices and local players is decisive for broad implementation of programmes promoting physical activity, especially if other disciplines are to be involved.

Collecting knowledge and learning from it
As a rule, initiatives for promoting physical activity should be evaluated. Only then they can be improved, and the findings can be incorporated in the development of other programmes. However, it is not always possible to study each individual initiative comprehensively because the expense that would be required is often unreasonable. It is especially important to evaluate large-scale projects and projects that should serve as models. In the area of smoking prevention, for example, a field with a long tradition, a large base of knowledge and experience has been accumulated over decades.

In order to have more knowledge available in the future, it is absolutely necessary to collect and document experiences and empirical data on projects and strategies. The accumulated knowledge must be made as widely accessible as possible. It can then be taken into account in the development of new programmes and it can contribute to progress in the promotion of physical activity and sports.

You can find up-to-date links to the websites of the various projects promoting physical activity in the electronic version of this base document at **www.hepa.ch.**

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Kees de Keyzer

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