

Health-Enhancing Physical Activity Core Document for Switzerland



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.
- U.S. Department of Health and Human Services (2008). Physical Activity Guidelines Advisory Committee Report 2008.
- The Lancet (2012). Series on Physical Activity (<http://www.thelancet.com/series/physical-activity>):
 - Global physical activity levels: surveillance progress, pitfalls, and prospects.
 - Correlates of physical activity: why are some people physically active and others not?
 - Evidence-based physical activity interventions: lessons from around the world.
 - The implications of megatrends in information and communication technology and transportation for changes in global physical activity.
 - The pandemic of physical inactivity: global action for public health.
 - Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy.
- Global Advocacy for Physical Activity (GAPA), International Society for Physical Activity and Health (ISPAH)
 - The Toronto Charter for Physical Activity: A Global Call for Action (2010)
 - Non-communicable disease prevention: investments that work for physical activity (2011)
- Swiss Observatory for Sport and Physical Activity, at www.sportobs.ch
- bfu – Swiss Council for Accident Prevention (2012). An overall approach to promoting physical activity and preventing accidents.
- Comments and recommendations of FOSPO, FOPH, Health and Physical Activity Network Switzerland and other partners, at www.hepa.ch

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A few important facts

Why physical activity is healthy

- Regular physical activity reduces the risk of widespread conditions and diseases such as obesity, high blood pressure, cardiovascular diseases, type 2 diabetes, osteoporosis, back pain, colon cancer and breast cancer. Physical activity has a positive effect on our psychological well-being and quality of life. Physically active individuals live longer. They are also mentally fitter and need less care in old age.
- Ideally, adults should devote at least two and a half hours per week to physical activity in the form of routine activities or moderate-intensity sport. This basic recommended regime can also be achieved through one and a quarter hours per week of high-intensity sport or physical activity, or a combination of both. This activity should ideally be spread over a number of days during the week. Additional endurance, strength and flexibility training is advisable for men and women who are already physically active.
- Old people should engage in as much physical activity as possible, even if they are unable to complete the basic recommended regime. Additional power, balance, flexibility and endurance training can help people who are already physically active to enhance their health, well-being, fitness and independence even further.
- Adolescents should engage in physical activity for at least one hour a day. In the case of younger children, this daily period of physical activity should be significantly longer. 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.
- Any harmful effects of physical activity are much less critical or extensive than those of inactivity.

Activity levels in Switzerland

- When measured against the new minimum recommendation, referred to herein, of at least two and a half hours per week of moderate-intensity physical activity, nearly 35% of adults in Switzerland are either not active enough or entirely inactive. While inactivity rose in the 1990s, this trend has now been broken, and physical activity behaviour seems to have changed for the better overall.
- Initial representative data are now available on physical activity among adolescents in relation to the basic recommendation of one hour a day of physical activity. However, there are still no such data in relation to children aged under 10.

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 CHF 2.4 billion.
- 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 and environmental factors, on the other hand, can be changed for the better through appropriate measures.

Encouraging people to be physically active

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

- According to the latest international recommendations, physical activity promotion should
 - pursue evidence-based strategies,
 - place emphasis on equal opportunities,
 - focus on environmental factors of a social and physical nature, as well as personal factors,
 - aim for long-term cooperation at all levels as well as partnership across multiples sectors,
 - provide basic and continued training of skills in relation to research, practice, policy-making, evaluation and health monitoring,
 - develop approaches for the entire adult lifespan,
 - work to engage resources and political support,
 - take account of cultural aspects
 - and enable healthy life choices.
- There is currently good evidence of physical activity promotion being effective in the following areas:
 - Integrated schools programmes
 - Transport policies and systems that give priority to pedestrians and cyclists
 - Urban planning providing infrastructure for safe access to leisure activities and for pedestrians and cyclists in all age groups
 - Incorporating physical activity promotion into primary health care
 - Publicity work and mass-media campaigns for the purpose of disseminating information and changing social dynamics
 - Integrated programmes within municipalities and other communities
 - Recreational sports opportunities for all age groups
- Basic findings should be documented and made accessible. Such knowledge will then play a beneficial role in continuing to promote physical activity and sport.

Introduction

People of earlier generations did significantly more physical work than we do today. Technical achievements and the associated social developments have created a situation in which we are much less active in our daily lives. Mechanisation of labour, motorisation of transport, 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 in the search for food, by either hunting or gathering. Our bodies therefore need – even today – a certain minimum 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 between physical activity and health. But it is also because people’s lack of physical activity has reached an alarming dimension. It is now widely recognized that inactivity is a high-priority problem for the health of industrialized societies.

Some 20 years ago, researchers were particularly interested in determining the health benefits of physical activity and how much minimum exercise is necessary in this regard. Now the focus has been expanded and other issues are in the spotlight: Which factors in today’s world affect physical activity habits? What measures can be used to combat inactivity? In the last 10 years, important processes have gained momentum at international level to counteract inactivity and its negative consequences.

This core document summarizes current knowledge in relation to physical activity promotion, referring to models expounded in recent academic studies.

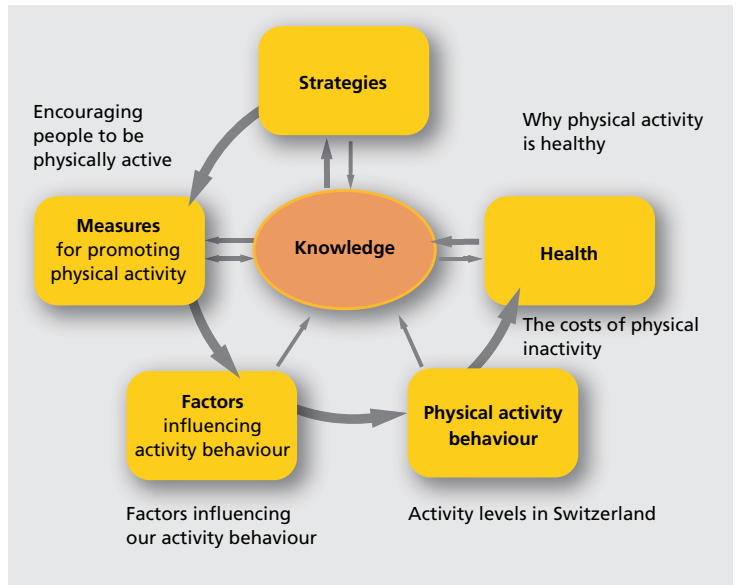


Fig. 1: Framework for physical activity promotion: This core document conceptualizes physical activity promotion as a cyclic process in which existing knowledge plays a central role.



The following sections discuss the various stages and interrelationships in the framework for physical activity promotion:

- The section entitled **“Why physical activity is healthy”** summarizes the health benefits of physical activity and the level of activity that is currently recommended.
- The section on **“Activity levels in Switzerland”** discusses the extent to which the Swiss population fulfils these physical activity recommendations.
- The section entitled **“The costs of physical inactivity”** describes the consequences of inactivity on society.
- The section on **“Factors influencing our activity behaviour”** looks at factors that affect physical activity habits, such as personal attitudes or conditions in our social or physical environment.
- The section entitled **“Encouraging people to be physically active”** describes the promising strategies and measures that can be used to combat inactivity.

Basic concepts

Physical activity and sport:

Physical activity refers to all physical activity performed by the skeletal muscles that leads to an increase in energy consumption. This deliberately broad definition can cover sport as well as other types of physical activity. The health effect of physical activity is based on the overall activity during a specific time period. Differentiations are often made between physical activity at home, at work, during leisure hours, or as a part of human mobility. Sport therefore represents a special form of physical activity which may – but need not have – a certain competitive element. Nowadays, other leisure activities involving physical activity, such as hiking, are often also referred to as sport.

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 characterized by intensity, duration and frequency.

“Exercise”:

The concept of “exercise” describes a form of physical training at an 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, high blood pressure, cardiovascular diseases, type 2 diabetes, osteoporosis, colon cancer and breast cancer. Physical activity has a positive effect on our psychological well-being and quality of life. Physically active individuals live longer. They are also mentally fitter and need less care in old age. For children, regular physical activity improves fitness, psychological well-being and bone health and has a beneficial effect on body weight and on the risk profiles for cardiovascular and metabolic disorders.

Adolescents should engage in physical activity for at least one hour a day. In the case of younger children, this daily period of physical activity should be significantly longer. In addition, children and adolescents should engage several times a week in activities that build strong bones, stimulate the cardiovascular system, strengthen muscles, improve agility and maintain flexibility.

Ideally, adults should engage in two and a half hours per week of physical activity in the form of routine activities or moderate-intensity sport. This basic recommended regime can also be achieved through one and a quarter hours per week of high-intensity sport or physical activity, or a combination of both. This activity should ideally be spread over a number of days during the week. Additional endurance, power and flexibility training can help men and women who are already physically active to enhance their health, well-being and fitness even further.

Old people should engage in as much physical activity as possible, even if they are unable to complete the basic recommended regime. Additional power, balance, flexibility and endurance can help those who are already physically active to enhance their health, well-being and fitness even further.

Any harmful effects of physical activity are much less critical or extensive than those of inactivity.

How regular physical activity affects health

Adults and older adults

Protection against disease In industrialized countries, the adverse impact of inactivity on people's 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. Inactivity is today the fourth most significant risk factor worldwide in terms of premature mortality. For a number of common conditions and diseases such as obesity, high blood pressure, cardiovascular diseases, type 2 diabetes, osteoporosis, colon cancer and breast cancer, regular physical activity has a significant protective effect. Studies also indicate that regular physical activity can have a positive impact on intellectual achievement or mental performance. Physically active people suffer less frequently from degenerative brain diseases such as Alzheimer's. On the whole, they feel both physically and psychologically healthier and need to see a physician and visit hospital less often. The average length of their stays in hospital are also shorter, and they are less frequently absent from work.

What is more, physical activity and sport offer good opportunities for regular social contact – whether in a sports club or on a weekly walk in the woods with a friend. It is also known that people who have regular friendly contact with other people are less often sick. This social aspect of physical activity is of particular significance in the case of older adults, because their contact with others at work usually ceases after retiring.

Effects on mental health Physical activity and sport also influence 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.

Living better and longer Physically active people not only have a better health-related quality of life, but they also live longer. In old age they are more independent, more mobile, require less care and are also mentally fitter than people who are inactive.

Good health habits People who are regularly active are also more health-conscious in various other areas of life than people who are inactive. Physical activity is often a component part of health-conscious living. Physically active people smoke less, have healthier eating habits and are less likely to be overweight.

Health impact of physical activity in children and adolescents			
Cardiovascular endurance	↑	Risk profile for cardiovascular diseases	↓
Muscle power	↑	Risk profile for metabolic disorders	↓
Healthy body weight	↑	Anxiety-related symptoms	↓
Bone health	↑	Depressive symptoms	↓
In adults			
Life expectancy	↑	Cardiovascular disease	↓
Fitness	↑	Stroke	↓
Healthy body weight	↑	High blood pressure	↓
Bone health	↑	Type 2 diabetes	↓
Psychological well-being	↑	Colon cancer	↓
Quality of sleep	↑	Breast cancer	↓
Health-related quality of life	↑	Depression	↓
Additionally in older adults			
Independence	↑	Falling accidents	↓
Mental acuity	↑		
Key			
Improvement in relation to this health-related aspect	↑	Decrease in risk in relation to this health problem	↓
Strong evidence ↑ Moderate evidence ↑			

Fig. 2: Overview of scientifically proven health impact of physical activity in different age groups.

Secondary prevention and rehabilitation In the case of 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. For example, physically active people who are obese live longer on average than people who are of a normal weight but physically inactive.

In addition to health-related aspects, targeted physical activity also improves the quality of life of people with cardiovascular disease, asthma, type 2 diabetes or cancer. Physical activity has a beneficial effect on rehabilitation after injuries or surgery involving the musculoskeletal system. Physical activity is also proven to be an effective means of combating depression. Furthermore, the many different physical and psychological effects of physical activity, sport and games help to compensate for addiction-related deficits.

Social integration Physical activity – when performed together with other people – also facilitates the social integration of different generations and different cultural groups.

Children and young people

Extensive evidence now also exists of the multi-faceted health impact of physical activity and sport in young people. Adequate physical activity is essential for children’s physical, psychological and social development.

Better risk profile Physically active children and adolescents have greater stamina and power than those of their peers who do not engage in adequate physical activity. Physical activity reduces body fat as well as the risk of becoming obese. Bone mass is increased. What is more, physical activity has a positive impact on a variety of risk indicators for health problems later in life – particularly metabolic disorders such as type 2 diabetes, and cardiovascular disease. Physically active young people also less likely to experience anxiety-related symptoms or suffer from depression. In addition, there are indications that their academic performance improves.



Significance of physical activity levels

There is a direct link between the amount of physical activity performed and the extent of its impact on health. The more physical activity a person performs, the greater the probability of him or her deriving consequent health benefits. However, the added benefit decreases with increased training levels. Once the amount of weekly training reaches the equivalent of around 50km of jogging, the expected health benefit only increases insignificantly. Individuals who were previously barely active or not active at all can expect to derive the greatest added benefit from increasing their levels of physical activity. As a rule of thumb, physical activity corresponding to the minimum recommended health-enhancing threshold (see Fig. 3) achieves around half of the possible health impact.

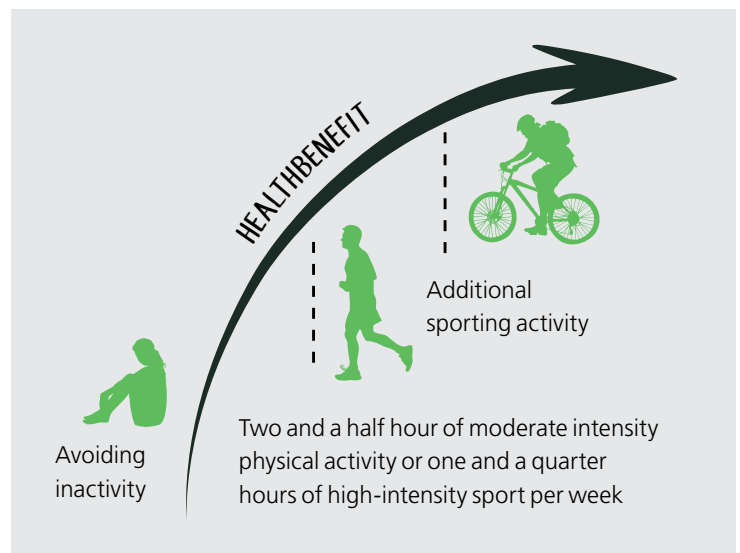


Fig. 3: Dose-response curve:
Each increase in physical activity produces an added health benefit. Individuals who were previously barely active or not active at all can expect to derive the greatest added benefit.

Source: according to Haskell 1994

Physical activity – better late than never

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

On the other hand, research has shown that the health effects of physical activity and sport 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 during 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 and to engage in weight-bearing and strength-building activities. Nonetheless, the risk of falling and breaking bones can be reduced at any age – even in the case of individuals with osteoporosis – through regular strength and balance training following consultation with experts.

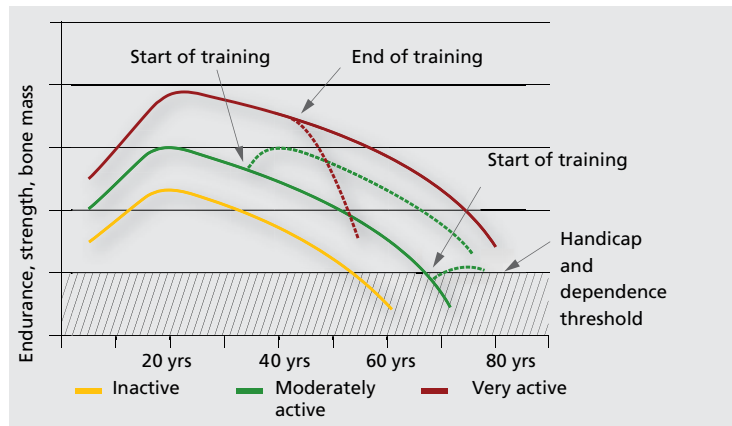


Fig. 4: Health and performance during lifespan: Physically active individuals are fitter and healthier during their entire life. Inactive individuals can, however, approximate the state of health of more active individuals at any time by engaging in regular physical activity.

Concept of relative intensity

As part of taking the right approach to physical activity, a differentiation is made normally between activities of “moderate” and “high” intensity. In general, a moderate intensity level relates to physical activities in which the individual gets a little out of breath but does not necessarily break sweat. Brisk walking, cycling, snow-shovelling and gardening are examples of moderate-intensity physical exertion, as are many other leisure, sports and routine day-to-day activities.

A high intensity level relates to activities that cause people to break sweat and accelerate their breathing. Such activities include highly aerobic sports that stress all muscle groups – such as running, vigorous cycling, swimming or cross-country skiing – as well as training on exercise machines.

The intensity of a given activity corresponds to the degree of effort put in by the individual in question. Intensity levels therefore not only vary depending on the type of physical activity, but also on the individual circumstances. For instance, nordic walking can constitute a moderate-intensity activity for a well-trained individual, but can equate to a high-intensity activity for an older person or for someone with health impairments. The aforementioned examples of sporting and physical activities that correspond to moderate or high intensity levels therefore only apply to the general population; adjustments to match particular circumstances are possible following adequate clarification and consultation.

Physical activity recommendations



Aim of recommendations

The recommendations below are specifications for developing and assessing movement-oriented, health-enhancing activities. They do not constitute direct instructions for adopting, structuring and maintaining a personal physical activity regime. For additional information, please refer to the section entitled “Implementing the recommendations”.

Physical activity recommendations for adults

Basic recommendations for health-enhancing physical activity

Regular physical activity and sport are essential for health and fitness in all age groups. For individuals who are physically inactive, any step towards greater physical activity is important and also has direct immediate benefits. Extended periods of sitting down need to be punctuated more frequently by periods of physical activity.

Basic recommendations for working-age men and women:

- At least two and a half hours per week of physical activity in the form of routine activities or moderate-intensity sport.
- Or one and a quarter hours per week of high-intensity sport or physical activity.
- Combinations of physical activity of varying intensity are also possible – 10 minutes of high-intensity physical activity result in the same health benefits as 20 minutes of moderate-intensity physical activity.

A moderate intensity level relates to physical activities in which the individual gets a little out of breath but does not necessarily break sweat. Brisk walking, cycling, snow-shovelling and gardening are examples of moderate-intensity physical exertion, as are many other leisure, sports and routine day-to-day activities.

A high intensity level relates to activities that cause people to break sweat and accelerate their breathing. Such activities include highly aerobic sports that work large muscle groups – such as running, vigorous cycling, swimming or cross-country skiing – as well as cardiovascular training on exercise machines. It is possible and practical to combine as well as vary different activities.

Ideally, physical activity should be spread over a number of days during the week. Every period of physical activity lasting at least 10 minutes can be added up over the course of the day.

There are various ways in which to achieve the basic recommended regime. For example:

- Half an hour of moderate-intensity physical activity on five days respectively per week.
- Half an hour of moderate-intensity physical activity on three days plus half an hour of high-intensity physical activity on one day per week.

Additional recommendations

The key step in improving your health is that of making the transition from physical inactivity to regular physical activity in accordance with the basic recommendations. Men and women who already perform the basic recommended regime can do even more for their health, well-being and fitness by taking up a targeted programme of training that focuses on endurance, strength and flexibility.

Higher-intensity activities generally result in additional health benefits. The existing recommendations for endurance and cardiorespiratory fitness training, comprising at least three high-intensity training sessions per week, are also relevant in this regard.

Strength training is conducive to well-being and health at all ages, and becomes particularly important in terms of staying fit and maintaining personal independence for people aged around 50 or over. It helps to develop and maintain muscle mass. Priority should be on strengthening the torso muscles, the legs and the shoulder-arm region. Strength training should be performed at least twice a week, ideally through gymnastics or stretching exercises to improve flexibility.

The varied benefits of physical activity and sport

In general, sporting activities that exceed the aforementioned recommendations are additionally beneficial to health. However, such extra benefits become less and less pronounced and hardly increase at all once the amount of physical activity corresponds, for example, to 50 kilometres of jogging or five hours of swimming per week (see also dose-response curve).

An even greater volume of training does not have an adverse impact on health. However, the higher the training workload becomes, the more important it is to achieve a targeted and balanced training, recovery and nutrition regime and to combine competition with training in a judicious manner so as to prevent physical strain.

Physical/sporting activities that are systematically planned and coordinated can have a positive effect on our psychological well-being. They can also help to regulate stress, increase self-esteem and facilitate the social integration of individuals and a wide variety of population groups. In addition, therapy and rehabilitation treatments for a whole range of ailments and impairments feature additional uses for specific forms of physical activity.

Adults with health problems or disabilities also benefit from regular physical activity. Medical assessments and individual adjustments to physical activity recommendations regarding the type and intensity of activity, in consultation with experts, may be advisable in this regard.

Implementing the recommendations

Physical activity recommendations that are geared directly to individuals or specific population groups should be based on the recommendations defined in this document, but their content and form may be adapted to the relevant target group. They should be realistic and user friendly and focus on tackling hindrances and motivational issues.

Making lasting changes to physical activity habits is often a long process that typically comprises various stages and also involves setbacks. The complexity of this process, the significance of various factors on a behavioural and relationship level, and the particular characteristics of respective target groups must be taken into account when developing models to promote health through physical activity and sport.

Practical experience of demanding sports activities should be acquired under professional supervision. Where appropriate, such activities should have structures in place to prevent accidents.

Summary of recommendations for adults

For individuals who are physically inactive, any step towards greater physical activity is important and also has direct immediate health benefits. Extended periods of sitting down need to be punctuated more frequently by periods of physical activity.

It is recommended that working-age men and women engage in two and a half hours per week of physical activity in the form of routine activities or moderate-intensity sport. This basic recommended regime can also be achieved through one and a quarter hours per week of high-intensity sport or physical activity, or a combination of moderate and high-intensity physical activity.

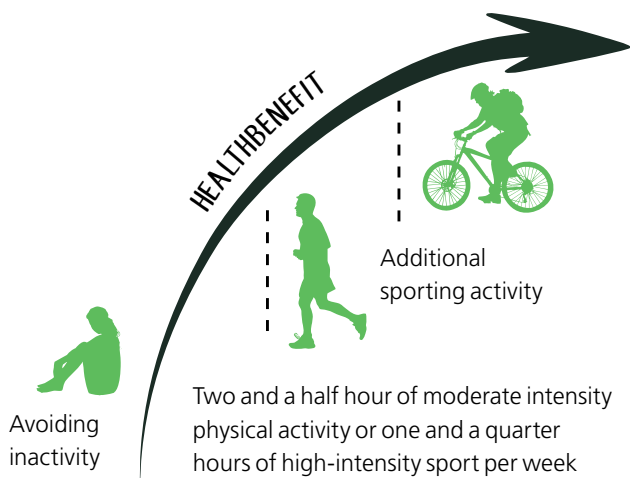
Adherence to these basic recommendations has a significant and varied positive impact on health and quality of life.

Ideally, physical activity should be spread over a number of days during the week. Every period of physical activity lasting at least 10 minutes can be added up over the course of the day.

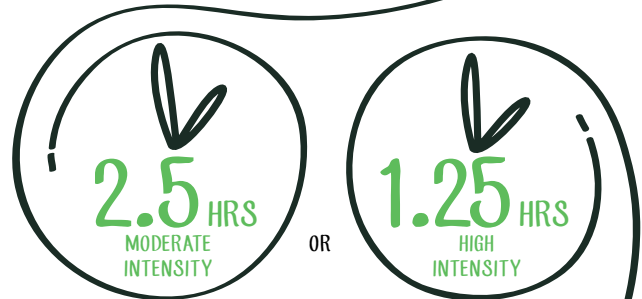
Additional endurance, power and flexibility training can help those who are already physically active to enhance their health, well-being and fitness even further.

Additional sporting activities provide extra health benefits, albeit to progressively smaller degrees (see dose-response curve).

Dose-response curve



ADULTS



IDEALLY SPREAD OVER A NUMBER OF DAYS DURING THE WEEK

MODERATE INTENSITY



HIGH INTENSITY



Additional benefits through further training in relation to:

- ENDURANCE
- POWER
- FLEXIBILITY



Physical activity recommendations for older adults

Basic recommendation for health-enhancing physical activity

Physical activity and sport are important for health and fitness in all age groups. For individuals who are physically inactive, any step towards greater physical activity is important and also has direct immediate benefits. Extended periods of sitting down need to be punctuated more frequently by periods of physical activity.

Regular physical activity is important for older adults because it helps to increase their quality of life and prevents them from becoming dependent on and requiring assistance from other people (or at least delays the time when this will be the case). Nevertheless, differences from person to person can be very substantial. Older adults of more robust health are more or less able to follow the recommendations that apply to younger adults. Older adults who are frail or dependent on other people often have more than one ailment and suffer from functional impairments and reduced vitality. It is for these people that the recommendations need adjusting.

Basic recommendations for men and women of robust health who are past retirement age:

- At least two and a half hours per week of physical activity in the form of routine activities or moderate-intensity sport.
- Or one and a quarter hours per week of high-intensity sport or physical activity.
- Combinations of physical activity of varying intensity are also possible – 10 minutes of high-intensity physical activity result in the same health benefits as 20 minutes of moderate-intensity physical activity.

A moderate intensity level relates to physical activities in which the individual gets a little out of breath but does not necessarily break sweat. Brisk walking, cycling, snow-shovelling and gardening are examples of moderate-intensity physical exertion, as are many other leisure, sports and routine day-to-day activities.

A high intensity level relates to activities that cause people to break sweat and accelerate their breathing. Such activities include highly aerobic sports that work large muscle groups – such as running, vigorous cycling, swimming or cross-country skiing – as well as training on exercise machines. It is possible and practical to combine as well as vary different activities.

Ideally, physical activity should be spread over a number of days during the week. Every period of physical activity lasting at least 10 minutes can be added up over the course of the day.

There are various ways in which to achieve the basic recommended regime. For example:

- Half an hour of moderate-intensity physical activity on five days respectively per week.
- Half an hour of moderate-intensity physical activity on three days plus half an hour of high-intensity physical activity on one day per week.

Frail and dependent older adults should also engage in physical activity as much as possible, even if they are no longer able to complete the basic recommended regime on account of their impairments.

Additional recommendations

The key step in improving your health is that of making the transition from physical inactivity to regular physical activity in accordance with the basic recommendations. Men and women who already perform the basic recommended regime can do even more for their health, well-being and fitness by taking up a targeted programme of training that focuses on power, balance, flexibility and endurance.

When growing old, strength training is particularly important in terms of staying fit and maintaining personal independence. It helps to maintain muscle mass. Priority should be on strengthening the torso and leg muscles, as well as the shoulder-arm region. Together with exercises to improve balance, strength training for the torso and leg muscles is important for preventing the type of falls that can have serious consequences for people of advanced age.

Strength and balance training should be performed at least three times a week, ideally through gymnastic or stretching exercises to improve flexibility.

Higher-intensity activities generally result in additional health benefits. The existing recommendations for endurance and cardiorespiratory fitness training, comprising at least three high-intensity training sessions per week, are also relevant in this regard.

The varied benefits of physical activity and sport

In general, sporting activities that exceed the aforementioned recommendations are additionally beneficial to health. However, such extra benefits become less and less pronounced and hardly increase at all once the amount of physical activity corresponds, for example, to five hours of swimming per week (see also dose-response curve).

An even greater volume of training does not have an adverse impact on health. However, the higher the training workload becomes, the more important it is to achieve a targeted and balanced training, recovery and nutrition regime and to combine competition with training in a judicious manner so as to prevent physical strain.

Physical/sporting activities that are systematically planned and coordinated can have a positive effect on our psychological well-being. They can also help to regulate stress, increase self-esteem and facilitate the social integration of individuals and a wide variety of population groups. Furthermore, physical activity and sport can be applied as a form of therapy on a range of ailments and impairments.

Older adults with health problems or disabilities also benefit from regular physical activity. Medical assessments and individual adjustments to physical activity recommendations regarding the type and intensity of activity, in consultation with experts, may be advisable in this regard.

Implementing the recommendations

Physical activity recommendations that are geared directly to individuals or specific population groups should be based on the recommendations defined in this document, but their content and form may be adapted to the relevant target group. They should be realistic and user friendly and focus on tackling hindrances and motivational issues.

Making lasting changes to physical activity habits is often a long process that typically comprises various stages and also involves setbacks. The complexity of this process, the significance of various factors on a behavioural and relationship level, and the particular characteristics of respective target groups must be taken into account when developing models to promote health through physical activity and sport.

Physical activity promotion per se also helps to prevent accidents among older adults. Practical experience of demanding sports activities should be acquired under professional supervision. Where appropriate, such activities should have structures in place to prevent accidents.

Summary of recommendations for older adults

For individuals who are physically inactive, any step towards greater physical activity is important and also has direct immediate health benefits. Extended periods of sitting down need to be punctuated more frequently by periods of physical activity.

It is recommended that men and women of robust health who are past retirement age engage in two and a half hours per week of physical activity in the form of routine activities or moderate-intensity sport. This basic recommended regime can also be achieved through one and a quarter hours per week of high-intensity sport or physical activity, or a combination of moderate and high-intensity physical activity. Physical activity promotion per se also helps to prevent accidents among older adults.

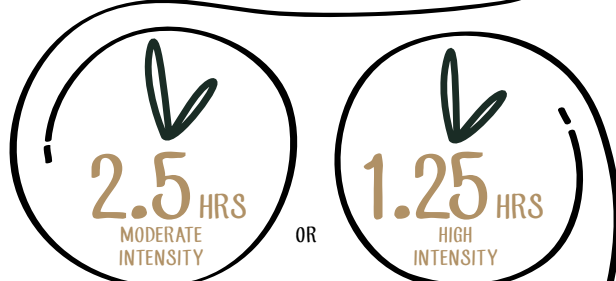
Older people should engage in physical activity as much as possible, even if they are no longer able to complete the basic recommended regime. Adjustments to the physical activity recommendations are of particular importance in the case of older adults who are frail or dependent on other people.

These basic recommendations have a significant and varied positive impact on health and quality of life. Ideally, physical activity should be spread over a number of days during the week. Every period of physical activity lasting at least 10 minutes can be added up over the course of the day.

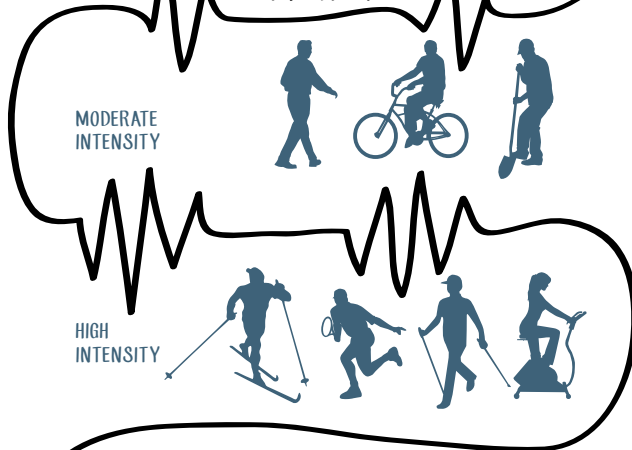
Additional power, balance, flexibility and endurance training can help those who are already physically active to enhance their health, well-being, fitness and independence even further. Additional sporting activities provide extra health benefits, albeit to progressively smaller degrees (see dose-response curve).



OLDER ADULTS



IDEALLY SPREAD OVER A NUMBER OF DAYS DURING THE WEEK

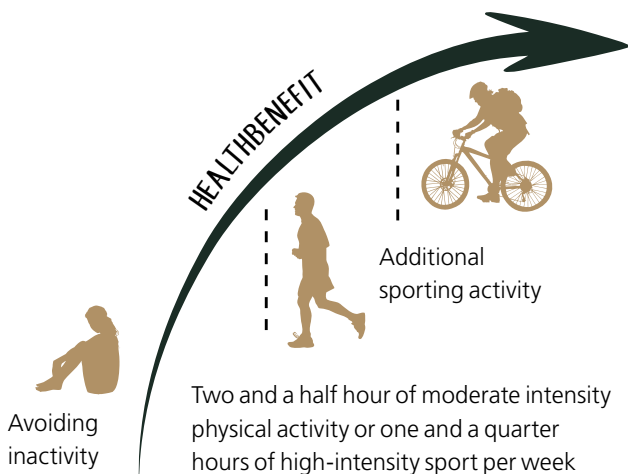


Additional benefits through further training in relation to:

- POWER
- BALANCE
- FLEXIBILITY
- ENDURANCE



Dose-response curve



Physical activity recommendations for children and adolescents

Basic recommendation for health-enhancing physical activity

As soon as they are born, children should be encouraged to move their body and afforded the opportunity to engage in various forms of physical exertion.

From a health-related perspective, it is recommended that children and adolescents of school age engage daily in moderate to high-intensity physical activity in addition to their routine activities.

Basic recommendations based on current findings:

- Adolescents who have reached the end of school age should perform at least one hour of moderate to high-intensity physical activity per day.
- Younger children should engage in significantly more than one hour of physical activity per day.

A moderate intensity level relates to physical activities in which the individual gets a little out of breath. Brisk walking, cycling, inline skating and playing games outside are examples of moderate-intensity physical exertion, as are many other leisure and sports activities.

High-intensity activities include all movement-intensive sports and activities that cause sweating and accelerated breathing, such as jogging, mountain biking, swimming, ball games and street dance. It is possible to achieve the recommended targets during PE lessons and other school activities, on the journey to school, at home with family and friends, and during leisure time, e.g. sports clubs, playing outside.

Undertaking a varied range of physical activities and sports

A varied range of physical activities and sports is necessary for children and adolescents to grow up in the best possible health. Children and adolescents should therefore engage several times a week in activities that:

- **Build strong bones**

Through weight-bearing and strength-building activities such as running, hopping, jumping, e.g. while playing games.

- **Stimulate the cardiovascular system**

Through endurance sports activities such as jogging, swimming or cross-country skiing; in the form of games or through physical activities such as cycling.

- **Strengthen muscles**

Through varied exercises such as climbing or negotiating climbing frames or hanging ropes, through exercises involving the person's own body weight, or – for adolescents who are sufficiently instructed – a targeted programme of strength training.

- **Improve agility (coordination)**

Through a varied programme of sports training as well as specific games and sports exercises.

- **Maintain flexibility**

Through a varied programme of sports training as well as specific games and sports exercises.

In particular, there is a whole range of sporting activities offering more than one of the aforementioned health benefits respectively. Time spent practising a variety of physical activities or sports can be included as part of a person's minimum daily recommended physical activity regime. Performed in an age-appropriate manner, such activities also help to expand the individual's movement repertoire, provide enjoyment and contribute to people having a positive attitude towards physical activity and sport for the rest of their lives.

Avoiding long periods of inactivity

The ability to sit still and concentrate on one particular thing at a time is important and must be taught over the course of a person's development. However, activities that involve excessively long periods of sitting down can become a health risk, especially when combined with the consumption of energy-rich food (e.g. eating snacks while watching television). It is therefore recommended that individuals avoid long periods of physical inertia as much as possible or that they punctuate such periods lasting around two hours or longer with active stints of physical activity.

The varied benefits of physical activity and sport

Content-wise, the recommendations cover the most important effects on physical health. However, physical activity and sport have additional psychological and social effects, particularly in terms of regulating stress, strengthening self-esteem, improving cognitive ability, facilitating social integration and promoting an active and healthy lifestyle. It is not possible to depict these effects via the requisite diagram. Specific organisation and implementation models are instead necessary. The same applies in relation to sport and training as part of therapy and rehabilitation treatments.

Whereas in the case of most children and adolescents the focus is on ensuring sufficient physical activity, the training load needs to be adjusted

to levels of fitness and physical development in the case of youth elite sports practitioners. Adequate recovery time also needs to be scheduled accordingly and nutrition adapted to the individual's needs. This is where qualified youth coaches and effective sports medicine play a key role.

Children and adolescents with health problems or disabilities also benefit from regular physical activity. Medical assessments and individual adjustments to physical activity recommendations regarding the type and intensity of activity, in consultation with experts, may be advisable in this regard.

Implementing the recommendations

Recommendations and opportunities in relation to physical activity and sport which are geared directly to individuals or to specific groups of children/adolescents should be based on the recommendations defined in this document, but their content and form may be adapted to the relevant target group. They should be structured in an age-appropriate fashion and in accordance with educational principles, and should take into account the importance of a safe environment conducive to physical activity.

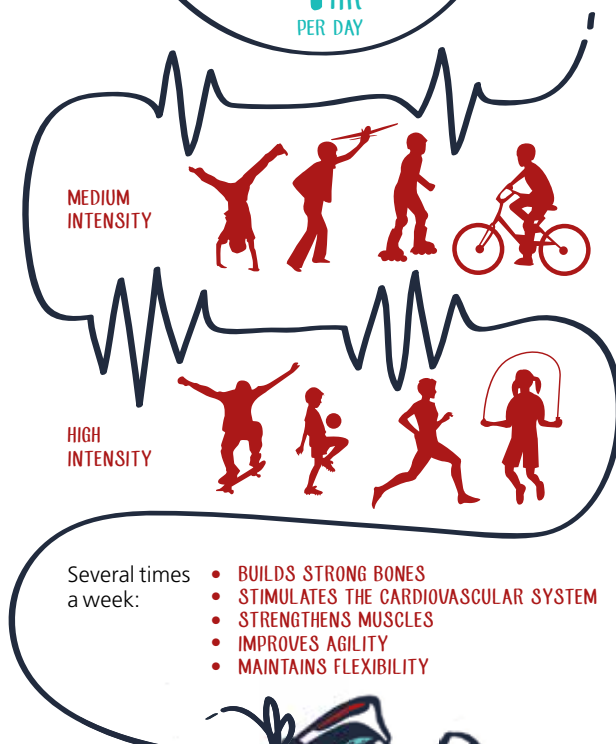
Numerically, accidents represent the greatest risk in connection with physical activity and sport. In relation to sport, road traffic or leisure activities such as swimming, proper instruction, age-appropriate supervision and the correct material and equipment act as key safeguards.

Summary of recommendations for children and adolescents

- Regular physical activity is a basic requirement for healthy living. Based on current findings, children and adolescent of school age should engage daily in at least one hour of moderate to high-intensity physical activity in addition to their routine activities. Many physical activities and sporting pastimes are suitable in this regard.
- A varied range of physical activities and sports is necessary for children and adolescents to grow up in the best possible health. As part of or in addition to the one-hour minimum, time should be devoted several times a week to activities that build strong bones, stimulate the cardiovascular system, strengthen muscles, improve agility and maintain flexibility.
- Children at primary school level should engage in considerably more physical activity. Additional activities offer health benefits to all age groups.
- Individuals should avoid long periods of physical inertia as much as possible or punctuate such periods with short active stints of physical activity.



CHILDREN AND ADOLESCENTS



- Several times a week:
- BUILDS STRONG BONES
 - STIMULATES THE CARDIOVASCULAR SYSTEM
 - STRENGTHENS MUSCLES
 - IMPROVES AGILITY
 - MAINTAINS FLEXIBILITY





Potential undesirable effects of physical activity

Limiting risk and preventing accidents are integral components of modern health promotion. Numerically, accidents represent the greatest risk in connection with physical activity and sport. In relation to sport, road traffic or leisure activities such as swimming, age-appropriate supervision and the correct material and equipment act as key safeguards.

Sports accidents and injuries

Injuries and accidents happen quite 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 number of sports accidents in Switzerland has increased a lot less sharply in recent years in relation to the amount of sport being practiced. The direct treatment costs for sports injuries amount to around CHF 2 billion per year. Additionally there are indirect costs, for example as production losses.

Academic studies show that, although physically active people suffer more injuries than physically inactive people as a result of physical activity and sport, such injuries are often less serious than those suffered by physically inactive individuals. Nor is any increase in physical activity in Switzerland likely to result in the number of sports injuries rising, because the activities that are being recommended for previously inactive individuals are less accident-prone activities such as walking, climbing stairs, gardening, light aerobic exercise on foot or by bicycle, or working out in a fitness centre.

Heavy involvement in sport is also associated with an increased risk of injury when it comes to children. On the other hand, there is hardly any correlation between physical non-sports activities and the risk of injury.

Physical activity promotion actually helps to prevent accidents among older adults, because it reduces the risk of falls or broken bones due to osteoporosis.

Physical activity promotion and accident prevention should therefore be viewed in combination and not as mutually opposing objectives.

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 or moderate-intensity physical activity, the risk of heart attacks during and after sport is extremely small.

The basic rule is that if you adapt your physical activity to your individual 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 not increased either. In individuals who are heavily involved in sport over many years, however, the weight-bearing joints may change visibly when viewed on an x-ray.

Road traffic accidents and active mobility

Cyclists and pedestrians belong to the more vulnerable group of road users. However, the road accident risk in Western European urban areas is comparably high, irrespective of whether people use motorized or non-motorized transportation. Recent academic studies also show that, on Western European roads, the health benefits of regular physical activity by pedestrians and cyclists far outweigh the possible negative effects of accidents.

Nevertheless, accident risk levels are an important factor deterring many people in urban areas in particular from using non-motorized forms of mobility on a daily basis. Around half of the population currently do not use non-motorized means of getting around regularly on a daily basis without any additional time expenditure. This is why the theme of mobility is also about promoting greater physical activity on the one hand and ensuring better levels of safety on the other.

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 particularly high air pollutant 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. Likewise, recent studies have shown that the health benefits of physical activity considerably outweigh the adverse effects of exposure to air pollution – even when breathing intensifies as a result of physical exertion.

Activity levels in Switzerland



When measured against the new basic recommendation of two and a half hours of moderate-intensity physical activity per week, 35% of adults in Switzerland are either insufficiently active or entirely inactive. While inactivity rose in the 1990s, this trend has now been broken and physical activity behaviour seems to have changed for the better overall.

Initial representative data are now available on physical activity among adolescents in relation to the new basic recommendation. However, there are still no such data in relation to children aged under 10.

This section will examine physical activity levels among the Swiss population in relation to the recommendations for health-enhancing physical activity.

The latest representative data on activity levels among Switzerland's adult population originate from the 2007 Swiss Health Survey.

The recommendations for health-enhancing physical activity were revised in 2013.

Based on the revised recommendations, the percentage of people classed as engaging in adequate physical activity has now changed.

Some 65 % of the population aged 15 or over engage in sufficient physical activity

- 32% of the population can be regarded as trained individuals, reporting vigorous intensity activities during leisure time at least three days per week.
- 9% are regularly active, engaging in at least half an hour of moderate-intensity physical activity per day.
- 24% of the population can be regarded as irregularly active, engaging in at least two and a half hours of routine activities or moderate-intensity sport – albeit not at a rate of five times 30 minutes per week – or in one and a quarter hours of high-intensity sport or physical activity, or combinations of physical activity of varying intensity – albeit not a rate of five times a week.

Some 35 % of population are insufficiently active

- 19% of the population consist of partially active individuals whose physical activity levels do not equate to two and a half hours per week.
- 16% are entirely inactive.

Based on the previously valid Swiss-wide recommendations, the above-mentioned 24% proportion of irregularly active individuals would not meet the minimum recommendations either, as they do not engage in physical activity as often as the prescribed frequency of five times 30 minutes per week. Under the old regime, the proportion of insufficiently active individuals would therefore amount to 59%.

According to recent surveys, there is no huge difference between the physical activity levels of immigrants from Northern and Western Europe and those of native Swiss. Among immigrants who hail originally from Southern Europe and regions outside Europe, the proportion of inactive individuals is greater, particularly in relation to leisure time activities. Women from these populations groups do notably little sport, with women generally engaging in less physical activity than men. The differences between social strata are even more pronounced. There are not yet any objective data available on inter-cultural differences.

The 2007 Swiss Health Survey also shows a positive development over time. Whereas the proportion of insufficiently active people increased from 1992 to 1997, the figures obtained for the period from 2002 to 2007 show a reversal in this trend. The move towards greater physical activity began in German-speaking Switzerland between 1997 and 2002, while French-speaking Switzerland and Ticino followed this trend five years later. Data from the Swiss Health Surveys and specific information from the 2008 Swiss Sports Survey suggest that the sports behaviour of the Swiss public has particularly improved.

Furthermore, the Swiss Health Surveys also asked about physical activity as part of travel behaviour. In 1997, 56% of the population indicated that they occasionally walked or cycled to work, to the shops or during leisure time. This percentage decreased to 49 % in 2002. Five years later, the percentage was however up to 57 %, reaching its 1997 level again. Active travel therefore decreased initially in the last ten years before increasing again. This recovery is confirmed by the observations of the Swiss Microcensus on Travel Behaviour.

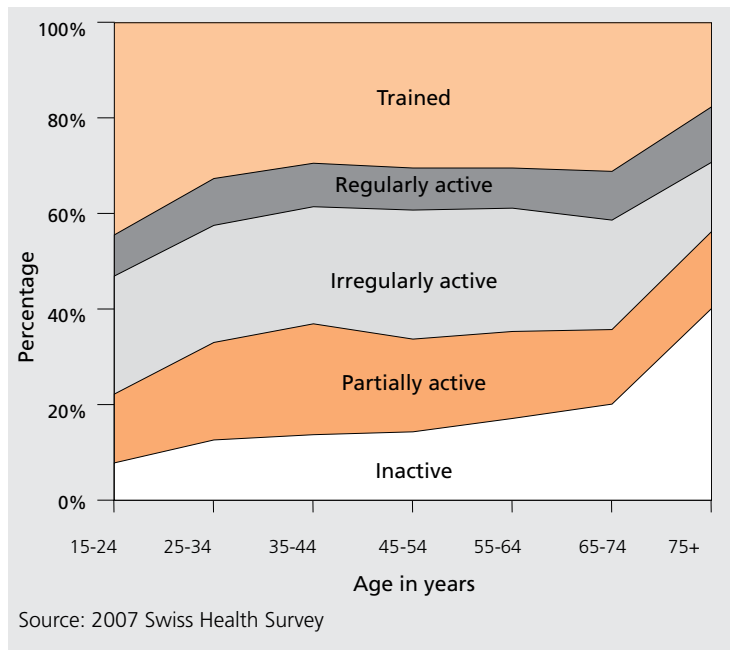


Fig. 5: Activity levels of the Swiss population:

- Trained individuals report vigorous intensity activities during leisure time at least three days per week.
- Regularly active individuals get a little out of breath at least half an hour per day.
- Irregularly active individuals also engage in an adequate amount of weekly physical activity according to the 2013 Swiss basic recommendations.
- 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.

The activity levels of children and adolescents

The findings on the physical activity behaviour of children and adolescents 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*), which was conducted across Europe using a standardized questionnaire, surveyed the overall physical activity behaviour of children in 2010. In Switzerland, only 12 to 19% of boys and 6 to 11% of girls were active for one hour per day as recommended. These percentages have not changed since 2002. If, instead of seven days, five days per week were used as the assessment criterion for sufficient physical activity, 45% of boys and 33% of girls would meet the albeit slightly less strict recommended requirements (2010).
- The 2008 Swiss Sports Survey investigated the sports behaviour of children aged 10 to 14. In addition to mandatory PE courses at school, 14% did no sport, 39% did sport for up to three hours per week, 31% did sport for three to seven hours per week and 16% did sport 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% of children were active for more than one hour on average, while 58% 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 children and adolescents up to age 17 spent 28 or more minutes every day walking or riding their bike. Some 78% of children aged 6 to 12 walked or cycled to school – 4% fewer than ten years ago. Compared to other countries around the world, this percentage is still very high. The percentage of children and adolescents who cycle to school fell during the survey period in the 10 to 17 year-old age group (the typical bike-riding age) from 29% to 18%. However, the percentage of those walking to school hardly changed among the various age groups during this ten-year period.



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 from the other two studies regarding sports and mobility behaviour cannot be overlooked.

Initial comparable data underpin the assumption that Swiss adolescents are hardly less active than adolescents in other countries. Obtaining representative data via methods that accurately reflect the physical activity behaviour of children within the Swiss cultural context therefore constitutes an important task for the future.

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 CHF 2.4 billion. 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 CHF 2.4 billion. Additionally there are indirect costs, for example as production losses.

This estimate is 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 people to enjoy the company of others, 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. And 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 and environmental factors, on the other hand, can be changed for the better 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 from medium or high-income families are more physically active than those from low-income families.

In promoting physical activity, it is important to ensure that the particular groups who are less physically active or have health impairments have adequate access to programmes and opportunities, and are motivated to take advantage of these accordingly.

Factors that can be changed

Academic studies show that there are many factors influencing physical activity behaviour that can be directly changed through appropriate measures.

These include personal factors as well as influences from a person's social and physical environment.

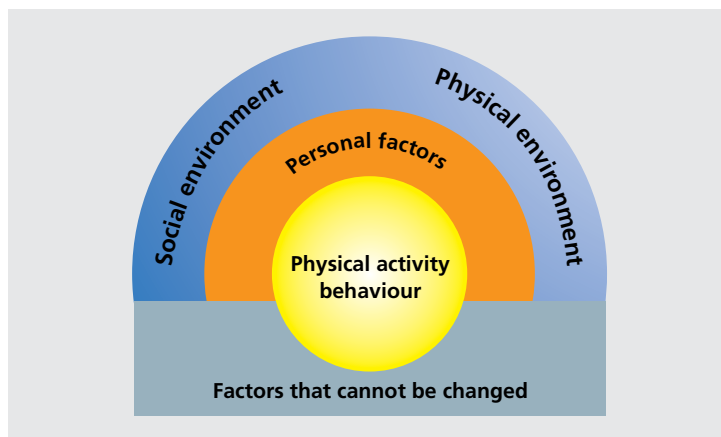


Fig. 6: Factors influencing physical activity behaviour: physical activity behaviour is influenced on the one hand by factors that cannot be changed (heredity, age and gender), and, on the other hand, by factors that can be changed. These include personal factors and factors in the social, physical and political environment.

Personal factors

An individual's personal **attitude** to physical activity and his or her **self-efficacy**, i.e. the measure of his or her own ability to complete tasks and reach goals, strongly characterize that person's physical activity behaviour.

Physical activity behaviour at a young age and the desire to maintain an physically active life also play a key role.

Recent studies also show that good health is important in terms of physical activity behaviour.

Physical environment

In many localities, **urban structures** have been created over the last few decades involving a **residential** and **working environment**, in which routine physical activity is less attractive or even practically impossible. 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.

Transport infrastructure (for motorized private transport, public transport, pedestrian and bicycle traffic) is closely tied to the development of the designed environment. This also has a direct impact on our levels of physical activity. Studies show that the general volume and speed of traffic is also key in determining whether people walk or cycle. This applies to children in particular. An attractive environment and mixed urban structures that closely combine city living with services are conducive to physical activity on a daily basis.

Social environment

Support within the **family** has a positive effect on the physical activity behaviour of adolescents. However, the influence of role models is less significant than previously thought. Friends can also influence an individual's physical activity habits.

Activities in the **home environment** or as part of organized sport can have a positive impact on physical activity. A positive **working environment** can also play a part.

Public perception and, in particular, society's image of active lifestyles are being increasingly recognized as important factors. In some countries, for example, cycling is viewed as an acceptable means of transportation among all sections of society, even to the point of being "trendy". Yet, in other countries, it is viewed merely as an acceptable form of transportation for children or for the most economically disadvantaged members of society. **Social trends**, such as an economic crisis or a period of growth, also have a significant impact on a population's physical activity habits.

Furthermore, early indications show for example that a **supportive policy environment** prioritising investment in non-motorized transportation might lead to an increase in non-motorized mobility in relevant countries. However, further research is necessary in this field.

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 sport should take this complexity into account. The path to greater physical activity is supported by removing barriers, emphasising 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 environment

International studies show what an environment must look like for people to engage willingly and frequently in physical activity. Firstly, human-powered mobility must be safe and attractive so that people will cover more distance on foot or by bicycle. Secondly, easily accessible and attractive spaces for physical activity are necessary for people to 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
- Promotion of routine physical activity on the one hand and safe environments on the other
- 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

Encouraging people to be physically active

Switzerland already has a favourable environment and offers a wide range of traditional activities involving physical activity, exercise and sports. In order to reach new parts of the population, and particularly those groups that are especially inactive, additional efforts are however required.

According to the latest international recommendations, nine guiding principles need to be adhered to and four spheres of action taken into account with regard to physical activity promotion. There is currently evidence of effectiveness in seven specific areas of activity.

Basic findings should be documented and made accessible. Such knowledge will then play a beneficial role in continuing to promote physical activity and sport.

Traditional infrastructures for physical activity

Compared to many other countries, Switzerland is in a privileged position as far as opportunities and basic conditions for physical activity and sports are concerned. These elements have been established for decades and are an important pillar for physical activity promotion.

For example, Switzerland boasts the following:

- A great tradition of **clubs and associations** in the area of organized sport: some 22,000 sports clubs with 1.6 million active members and 300,000 (mostly unpaid) volunteers.
- 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**, with 62,000 km of marked paths, created since 1934.
- Three hours per week of physical education and sport in schools, as required by law.
- A **sports office** in every canton.
- A dense and well-functioning **public transport network**. This encourages people to walk or cycle at least part of the way to public transport connections instead of only using motorized transportation.

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

At both the international and national level, numerous studies are examining how physical activity behaviour changes as a result of specific intervention. Although this area of research is still in its infancy, some key findings have already been made.

Please refer to the following two sections for a summary of the various forms of the physical activity promotion and as well as the recommended approaches. These two sections are based on the **Toronto Charter for Physical Activity** that was published in 2010 by the Global Advocacy for Physical Activity.

Guiding principles for physical activity promotion

Institutions and organisations that promote physical activity should adhere to the following nine guiding principles:

1. Physical activity promotion should adopt **evidence-based strategies** that target the whole population as well as specific population sub-groups, particularly those facing the greatest barriers. Inactivity is a widespread problem. Approaches therefore need to be developed that target as much of the population as possible. More can be accomplished when opportunities for physical activity and an environment conducive to an active lifestyle are established for everyone, instead of developing programmes for specific small groups. In addition to population-wide approaches, programmes for high-risk groups are required.
2. Physical activity promotion should embrace an **equity approach** aimed at reducing social and health inequalities and disparities of access to physical activity. Programmes that promote physical activity should not result in physically active members of the population becoming even more active while physically inactive population groups remain inactive.
3. Physical activity promotion should address the environmental, social and individual **determinants** of physical inactivity.
4. Physical activity promotion should implement sustainable **actions in partnership** at national, regional and local levels and across multiple sectors to achieve greatest impact.
5. Physical activity promotion should build **capacity** and support training in research, practice, policy, evaluation and surveillance.
6. Physical activity promotion should use a **life-course approach** by addressing the needs of children, families, adults and older adults.



7. Physical activity promotion should advocate to decision makers and the general community for a political commitment to **resources** for physical activity.
8. Physical activity promotion should ensure **cultural sensitivity** and adapt strategies to accommodate varying "local realities", contexts and resources. Activity patterns, mobility habits, social dynamics and economic conditions may vary considerably from one population group to the next. This approach is relevant in order to get the message across to members of the population with a migration background who are often subject to religious, social and cultural barriers. The population groups in question should be involved in helping to develop relevant programmes.
9. Physical activity promotion should facilitate healthy personal choices by making the physically active choice **the easy choice**.

Four spheres of action

Comprehensive physical activity promotion comprises four spheres of action. Each of these areas requires the involvement of all relevant stakeholders, because 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 sport need the support of public and private partners – particularly those in areas such as land-use planning, transportation, architecture, environment, education and culture.

1. Defining an umbrella strategy and action plan

A national strategy and an action plan set the tone and direction and facilitate partnership across multiple sectors. They also help to channel resources efficiently and determine responsibilities. Strategies and action plans should provide a means of involving all relevant stakeholders and defining roles. An implementation plan should specify the chosen strategies and measures as well as the relevant responsibilities, schedules and financial resources.

The National Programme on Nutrition and Physical Activity (NPEB) was established as a national strategy providing the basis in this respect. The recently presented initial evaluation defined where further action needs to be taken.

2. Establishing supporting strategies

A supporting strategic structure and the involvement of regulatory authorities are necessary to achieve lasting change at government level and within society. Strategies and provisions that underpin health-enhancing physical activity are required at national, regional and local level. These should, for example, include national targets that quantify physical activity among the population. All sectors should be involved in this regard and be able to define their own contribution to these targets. Such strategies and provisions may also comprise specific approaches to urban and spatial development, architectural and workplace-related guidelines, approaches to promoting physical activity at school (in and outside PE lessons), and financing strategies for sport and recreation that prioritize greater participation from all population groups and encourage the involvement of the media.

3. Realigning services and reallocating financial resources

Successful approaches to physical activity promotion often necessitate a change in priorities. The realignment of services and reallocation of financial resources can often yield numerous benefits. For example, lower exhaust emissions as a consequence of reduced traffic volumes lead to improved health and cleaner air, as well as fewer traffic jams, lower costs and greater social interaction. These or similar measures may prove effective at school, at the workplace, on the roads, at municipal level (particularly with regard to urban and spatial planning), within sport, during leisure time, at home and in the healthcare sector. For practical examples, please refer to the section entitled "Success stories – the most important spheres of action".

4. Developing partnerships for action

Measures that aim to increase physical activity among the entire population should be planned and performed through partnerships and in cooperation with various sectors and communities at national, regional and local level. Successful partnerships are developed on the basis of common values and activities, with roles, responsibilities and information shared accordingly. Such partnerships range from national working groups or cross-sector programmes at municipal level, to alliances with NGOs.

Success stories – the most important spheres of action

The following selected approaches to physical activity promotion were put together in an accompanying document to the Toronto Charter for Physical Activity. There is considerable evidence as to their effectiveness.

Integrated schools programmes

School is a medium for interacting with all children and teaching them the relevant knowledge, skills and habits with regard to an active lifestyle. Integrated schools programmes provide high-quality school sport and an environment that is generally conducive to physical activity, promoting exercise throughout the school day. Actively walking or cycling to school as independently as possible is also a key element in this context. Programmes should actively involve pupils and teachers.

Transport strategies and systems

Walking and cycling are ideal ways to engage in regular physical activity. They are relatively easy to incorporate into the daily lifestyle of most population groups. The promotion of non-motorized forms of mobility also has positive spin-off effects, e.g. general calming of traffic, reduced air pollution, less noise and fewer traffic jams. This is especially the case when short motorized journeys are covered instead on foot or by bicycle – a switch which most people are eminently capable of making. Corresponding strategies as well as investment in safe, attractive, linked infrastructures need implementing in parallel with support programmes and publicity campaigns. A well-developed public transport system is important for ensuring a sustainable transport system as a whole. An in-depth evaluation of the 2007 Swiss Health Survey revealed that people who primarily use public transport on a daily basis are, on the whole, no more active than people who mostly use their own motorized forms of transportation.

Urban planning

The built-up environment can facilitate or hinder an active lifestyle. Spatial and urban planning should therefore promote an optimum mix between living, working, services and leisure infrastructure. Good connections, particularly for non-motorized traffic, are also important, while access for all population groups to open and green spaces and to sports infrastructure provides an additional incentive for physically active recreation.

Integration in primary health care

General practitioners/primary care physicians and other health specialists can play a key role in promoting physical activity. The theme of physical activity as well as specific risk factors should be raised during consultations, preferably before health problems arise. Brief consultations by physicians are shown to have a positive impact whenever they are based on the established theory of behavioural change and discuss practical opportunities for increased physical activity at local level. Appropriate training programmes are now available for physicians.

Publicity work and mass-media campaigns

Large-scale, long-term campaigns are suitable for delivering a clear, consistent message. In particular, this can help to increase awareness of the importance of physical activity. It can also help to improve knowledge levels, change social dynamics and give a greater incentive to engage in more physical activity. Publicity work may cover all available communication channels, with social media playing an increasingly prominent role. Combined approaches involving events and participation at community level appear to be the most effective means of promotion.

Integrated programmes within municipalities and other communities

Integrated programmes are more effective than individual programmes. People are active where they live, work and spend their leisure hours. By involving all relevant sectors and settings within a given municipality, it is possible to take advantage of synergies between individual programmes and consequently deliver the message to a greater number of people. Integrated programmes enable the provision of opportunities adapted to different age and population groups.

Recreational sport

Sport plays an important part in comprehensive physical activity promotion and, through initiatives at recreational level, can help to increase physical activity among large groups of the population. For the attractiveness of sport to be fully exploited, such initiatives must provide opportunities to all age groups. Physical activity promotion should be formulated as the explicit objective in this respect. Training and coaching also constitute key elements, as does reducing the financial obstacles for people from lower social strata.

Collecting knowledge and learning from it

As a rule, initiatives for promoting physical activity should be evaluated. However, it is not always possible to study each individual initiative comprehensively because the expense that would be required is often unreasonable. In such cases, it is important – and even valuable – to collect data relating to the suitability of an implementation activity, such as the following information:

- *Number of people targeted*
- *Characteristics of people targeted*
- *Degree of programme acceptance*

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 can contribute to progress in the promotion of physical activity and sports.

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