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GLADE study about lifelong well-being and healthy aging in the EC2U 7 countries and in Europe

THEMATIC REPORT ON PHYSICAL ACTIVITY

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I. Abstract

Virtual Institute for Good Health and Well-being (GLADE) is the EC2U Alliance's Virtual Institute aimed to develop specific approaches in education, research, innovation and service transfer to the community in areas of the third UNSDG: Good Health and Well-being for All. This thematic report on physical activity is related to the GLADE study about lifelong well-being and healthy aging in the EC2U 7 countries and in Europe.

The report starts with an introduction to the World Health Organization's Global Action Plan on Physical Activity followed by description of the current physical activity levels within each of the EC2U country. After that, the national physical activity recommendations will be introduced. Finally, successful initiatives and programs of promoting physical activity across EC2U countries are presented.

The report and its content will be presented in the EC2U Jena forum in 22-24th May 2023. The report will also be published in the EC2U alliance website.

Key words: physical activity, sedentary time, physical activity recommendation

II. Introduction

[World Health Organization](#) (WHO) defines physical activity as *any bodily movement produced by skeletal muscles that requires energy expenditure* (1). Physical activity refers thus to all movements taken during leisure time, transportation from one place to another, and during working hours. The most popular ways to be active include play, recreational sports, walking, and cycling, which all can be done at any level of skill and for enjoyment by everybody, at all ages. Even a single bout of exercise, i.e. a session of moderate-to-high intensity activity, can reduce blood pressure, cholesterol and/or blood sugar levels, improve sleep, and reduce anxiety (2,3). However, these adaptations, among others, are reversible so that for more persistent health effects exercise sessions are needed to be repeated regularly.

Among children and adolescents regular physical activity improves physical fitness, cardiometabolic, bone, brain and mental health, as well as reduces adiposity (1,2). Long-term physical activity at moderate-to-high intensity is shown to prevent and help in managing non-communicable diseases, such as heart disease, stroke, diabetes, and several cancers (1,2). Physical activity also helps to prevent hypertension, maintain healthy body weight and it can improve mental health, brain health, quality of life and well-being as well as reduce risk of falls by improving balance and coordination among adults and older adults (1,2). However, although the health benefits of physical activity and exercise are widely known, people are spending more and more of their time on sedentary behaviour, often as sitting (4). The more daily sitting hours occur; the more physical activity is needed to gain health benefits (2,5).

[WHO guidelines on physical activity and sedentary behaviour](#) (2020) provides recommendations for different age groups and specific population groups on how much physical activity is needed for good health, including separate recommendations for aerobic and muscle strengthening activities (6). The main message of the current recommendations is that *every minute (of physical activity) counts*, addressing that people can achieve the recommended level of physical activity in short bouts of activity throughout the day. Moreover, the recommendations encourage to add light activity and break up sitting time whenever it is possible.

However, according to the WHO's latest [Global Status Report of Physical activity](#) (2022) 1 in 4 adults, and 3 in 4 adolescents (aged 11–17 years) do not currently meet the global recommendations for physical activity (7). It is estimated that almost 500 million people will develop heart disease, obesity, diabetes or other noncommunicable diseases attributable to

physical inactivity between 2020 and 2030. This will cost US\$ 27 billion annually, if no change in the current prevalence of physical inactivity occurs (7). In addition to large health (8) and economic burden (9), increased levels of physical inactivity have negative impacts on health systems, the environment, economic development, and community well-being. Therefore, countries and communities are recommended to take action to provide everyone with more opportunities to be physically active (7). This can be done, for example, by enabling walking, cycling and other forms of non-motorized transportation for everybody, encouraging workers to do commuting activity, providing physical education at schools, and keeping the sport and recreational facilities accessible for all age groups.

III. WHO Global Action Plan on Physical Activity

In 2018 the WHO launched a [Global Action Plan on Physical Activity \(GAPPA\)](#) for 2018-2030 to call for countries, cities and communities to adopt a ‘whole-of-system’ response involving all sectors and stakeholders taking action at global, regional and local levels to provide the safe and supportive environments and more opportunities for people to increase their levels of physical activity (10). The goal of the GAPPA is to have 15% relative reduction in the global prevalence of physical inactivity in adolescents and adults by the year 2030. The GAPPA is tightly linked with the United Nation’s [Sustainable Development Goals \(SDGs\)](#) set for 2030. The SDGs are an urgent call for action to improve health and education, reduce inequality, and spur economic growth, and tackling climate change.

The four strategic objectives of the Global Action Plan on Physical Activity (10) are:

- 1) **Create active societies** by enhancing knowledge and understanding of, and appreciation for, the multiple benefits of regular physical activity, according to ability and at all ages (e.g., via conducting national and community-based campaigns and programmes raising awareness and knowledge of the benefits of physical activity).
- 2) **Create active environments** in which all people, of all ages can engage in regular physical activity, according to their ability (e.g., by promoting walking, cycling, and public transportation).

- 3) **Create active people** by creating and promoting access to opportunities and programmes to engage in regular physical activity as individuals, families and communities (including e.g., whole-of-school programmes, patient counselling, and tailored programmes for older adults).
- 4) **Create active systems** across all sectors to achieve excellence in resource mobilization and implementation of coordinated international, national and subnational action to increase physical activity and reduce sedentary behaviour (e.g., developing national guidelines for physical activity, and conducting regular population surveillance of physical activity).

IV. Prevalence of physical activity in the EC2U countries

A. Trends from 2017 to 2022

According to the Special Eurobarometer 525 [Sport and Physical activity](#) survey conducted in 2022 (11), nearly 40% Europeans say that they exercise or practice sport at least once a week. Overall, men reported to be more active than women (See Figure 1). However, on the other hand 45% reported that they have never exercised or played sport. The share of respondents who said that they have never exercised had declined by one percentage point from 2017 to 2022. However, there were no concomitant changes in the daily amount of time spent sitting. When comparing the trends among the EC2U countries, small positive changes (as an increase in proportion of people engaging to regular physical activity) were seen in Italy (+2%), Germany (+3%), France (+2%), and Finland (+1%), whereas there was a decrease in the proportion of regular exercisers in Spain (-3%), Portugal (-1%) and Romania (-4%) between 2017 and 2022 (11).

The Eurostat barometer [Performing health-enhancing physical activity by sex, age and educational attainment level](#) (2022) provides an opportunity to see the prevalence of aerobic and muscle-strengthening activities in the European countries, together and separately (12). As shown in Figure 2, the prevalence of all types of physical activity is higher in Finland and Germany when compared to the other EC2U countries and to the European average. Also, Spain exceeds the EU average in aerobic physical activity. All the other EC2U countries are under the EU averages, Portugal and Romania having the lowest proportions of active people.

Frequency of exercise (In %)

2022 2017

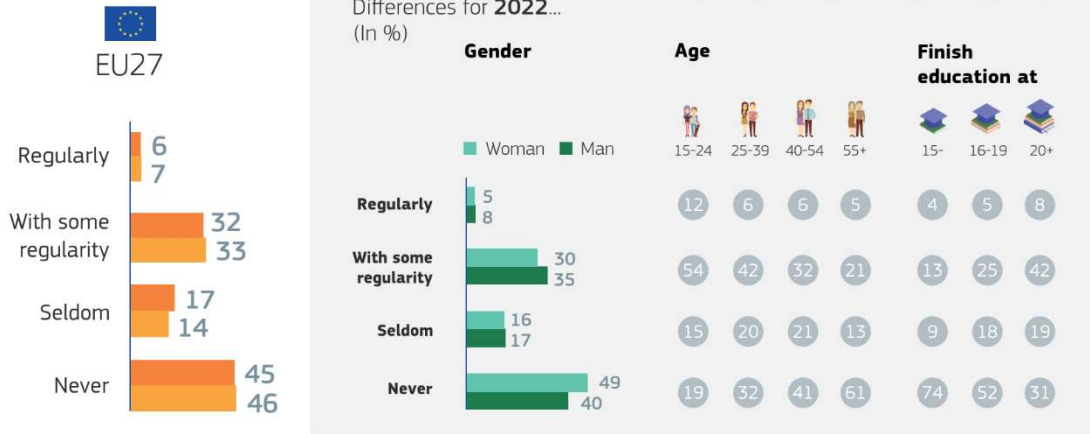


Figure 1. Frequency of Europeans who engage exercise or practice sport at least once a week in 2017 and 2022.

Source: [Sport and physical activity - September 2022 - - Eurobarometer survey \(europa.eu\)](https://ec.europa.eu/eurobarometer/surveys/trends/sport-and-physical-activity)

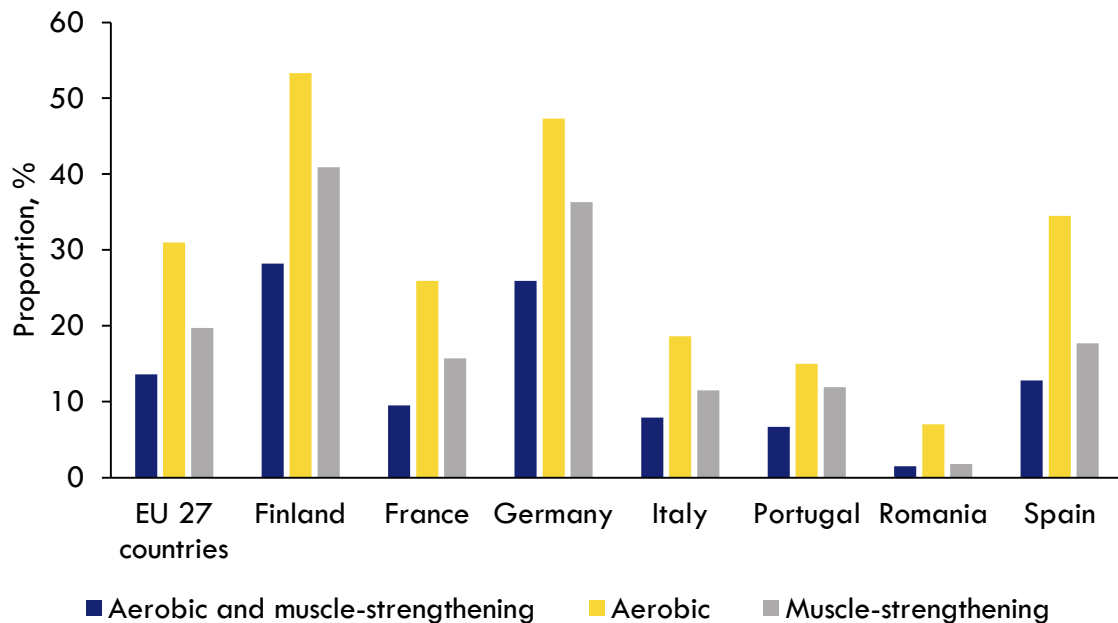


Figure 2. Proportion of people reporting to do aerobic and muscle-strengthening activities at least once a week for the EU and for the EC2U countries in 2022.

Source: [Statistics | Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat)

B. Motivators and barriers to physical activity

According to the Special Eurobarometer 525 [Sport and Physical activity](#) survey (11), physical activity was the most frequently performed in the park or outdoors (47%), at home (37%), or on the way between home and school/work/shops (24%). People were practicing sport or physical activity to improve their health (54%), fitness (43%), to relax (30%), to improve physical performance (27%), or to control their weight (25%). The top five reasons that were reported to be preventing Europeans from practicing sport more regularly were: lack of time (41%), lack of motivation or not interested (25%), disability or illness (14%), or the fact that they were already doing sports regularly (10%), in addition to the reason that it was too expensive (10%) (11).

The most popular motivators for sport and physical activity in the EC2U countries were: to improve fitness, to control weight, and to improve self-esteem (11). The main reason for not practicing sport and physical activity was the lack of time, which showed increasing trend as a barrier for physical activity especially in Germany and Finland.

C. Future global physical activity trends

In 2022, the WHO published the first [Global status report on physical activity](#) (7) to present a synthesis of global progress on implementation of the GAPP recommendations. The main findings were that the overall implementation has been too slow and only a little progress towards increasing population levels of physical activity were seen. The latest global estimates of the prevalence of physical inactivity showed that 1.4 billion adults (28% of the world's adult population) did not meet the recommended level of physical activity (7). A recent meta-analysis also revealed that globally only 20% of adolescents and adults meet the guidelines for combined aerobic and muscle-strengthening activities (13).

Unfortunately, the scenarios for future global physical activity trends are not very promising for the adults meaning that the global target of a 15% relative reduction between 2018 and 2030 will not be met without further actions (See Figure 3).

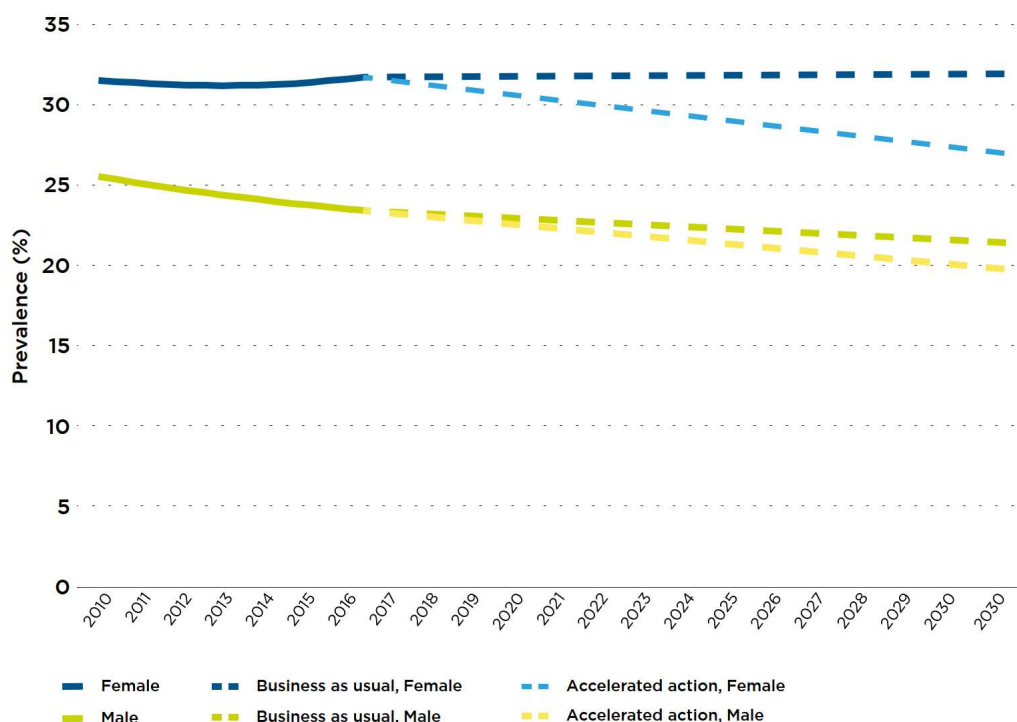


Figure 3. Two future scenarios for global physical activity trends – business as usual or the accelerated action to achieve the global targets for adults by 2030.

Source: [Global status report on physical activity 2022 \(who.int\)](https://www.who.int/news-room/fact-sheets/detail/global-status-report-2022)

V. Physical activity recommendations

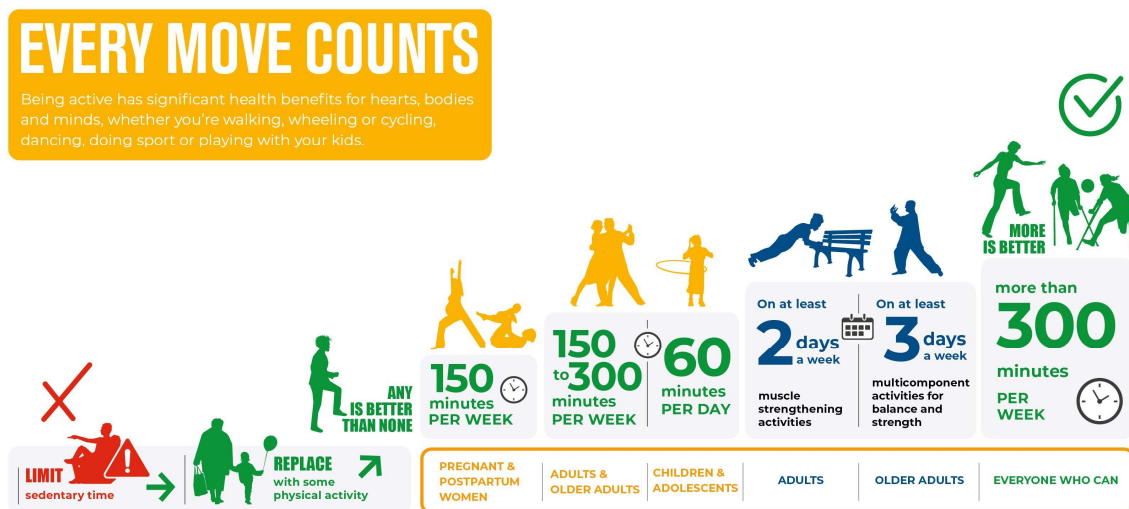
A. WHO Guidelines on physical activity and sedentary behavior

[The WHO Guidelines on physical activity and sedentary behavior](#) (6) provides evidence-based public health recommendations for children, adolescents, adults and older adults on the amount of physical activity required to offer significant health benefits and mitigate health risks (See Figure 4). The recommendations are provided on the associations between sedentary behaviour and health outcomes, as well as for subpopulations, such as pregnant and postpartum women, and people living with chronic conditions or disability. WHO's guidelines support all countries to implement the Global Action Plan for Physical Activity recommendations.

According to the WHO guidelines on physical activity and sedentary behavior (6) it is recommended that:

Children and adolescents (aged 5-17 years) should do at least an average of 60 minutes per day of moderate-to vigorous-intensity, mostly aerobic, physical activity, across the week. Vigorous-intensity aerobic activities, as well as those that strengthen muscle and bone, should be incorporated at least 3 days a week.

All adults (18-64 years) should undertake regular physical activity. Adults should do at least 150–300 minutes of moderate-intensity aerobic physical activity; or at least 75–150 minutes of vigorous-intensity aerobic physical activity; or an equivalent combination of moderate- and vigorous-intensity activity throughout the week, for substantial health benefits. Adults should also do muscle-strengthening activities at moderate or greater intensity that involve all major muscle groups on 2 or more days a week, as these provide additional health benefits.



WHO guidelines on physical activity and sedentary behaviour (2020).
For more information, visit: www.who.int/health-topics/physical-activity



Figure 4. WHO guidelines on physical activity and sedentary behavior (2020).

Source: [WHO guidelines on physical activity and sedentary behaviour](http://www.who.int/health-topics/physical-activity)

All older adults (aged 65 years and older) should undertake regular physical activity. Older adults should do at least 150–300 minutes of moderate-intensity aerobic physical activity; or at least 75–150 minutes of vigorous-intensity aerobic physical activity; or an equivalent combination of moderate- and vigorous-intensity activity throughout the week, for substantial health benefits. Older adults should also do muscle-strengthening activities at moderate or greater intensity that involve all major muscle groups on 2 or more days a week, as these provide additional health benefits. As part of their weekly physical activity, older adults should do varied multicomponent physical activity that emphasizes functional balance and strength training at moderate or greater intensity, on 3 or more days a week, to enhance functional capacity and to prevent falls.

Adults and older adults may increase moderate-intensity aerobic physical activity to more than 300 minutes; or do more than 150 minutes of vigorous-intensity aerobic physical activity; or an equivalent combination of moderate- and vigorous-intensity activity throughout the week for additional health benefits. Adults should limit the amount of time spent being sedentary (Figure 4). Replacing sedentary time with physical activity of any intensity (including light intensity) provides health benefits. The WHO guidelines on physical activity and sedentary behavior also includes recommendations **for pregnant and postpartum women, adults and older adults with chronic diseases, children, adolescents and adults living with disability** (6).

B. National physical activity recommendations

WHO recommends that all countries should establish and update national guidelines that cover all age groups and key subpopulations, such as older adults and people living with disability (10). WHO supports countries in maintaining up-to-date national physical activity guidelines by updating its global guidelines on physical activity and sedentary behavior across the life course in every 5–10 years.

National physical activity guidelines represent a national consensus on the importance of physical activity (7). They outline the optimal duration, frequency and intensity of different types of physical activities, and the health benefits across the life-course, based on scientific evidence. National physical activity guidelines are used to inform national policy and action plans on physical activity and support policy development in other related areas, such as sport and recreation, physical education, and active transport. In 2021, just under half of all countries

world-wide (n=90, 46%) reported having national guidelines on physical activity (7). This ranges from almost three quarters (72%) of countries in the European Region to less than 10% of countries in the African Region. Figure 5 shows that there has been an increase in European countries reporting national guidelines on physical activity between 2019 and 2021.

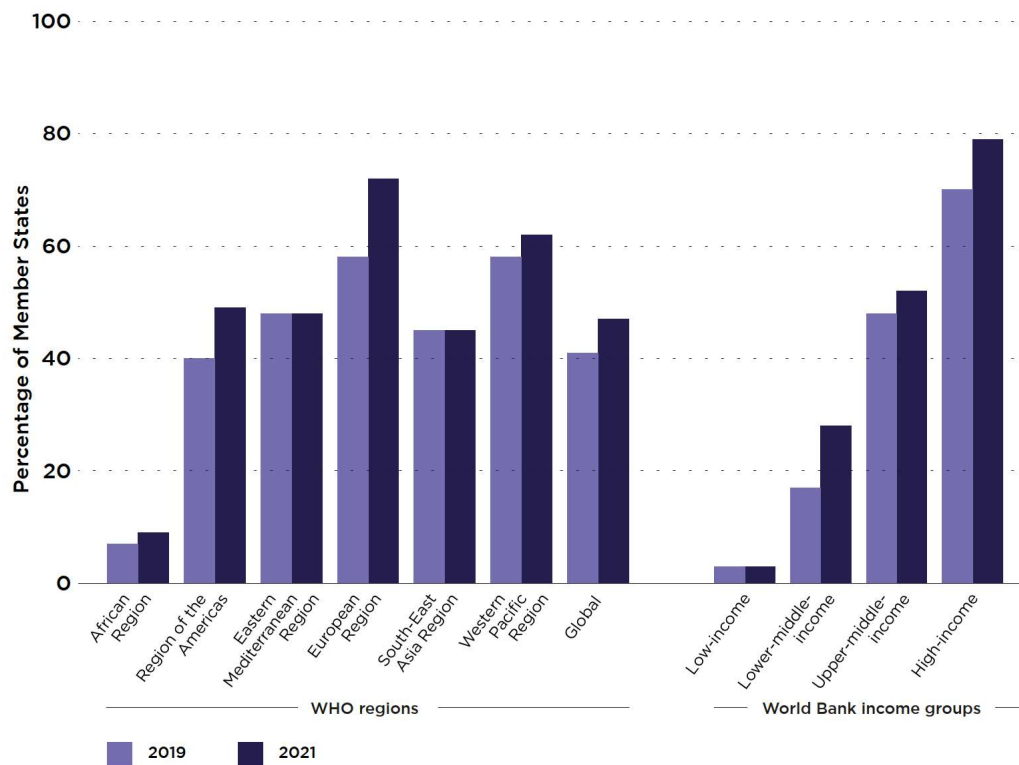


Figure 5. Proportion of countries world-wide having national guidelines on physical activity by region and income level, 2019 and 2021.

Source: [Global status report on physical activity 2022 \(who.int\)](https://www.who.int/news-room/fact-sheets/detail/global-status-report-on-physical-activity-2022)

C. Physical activity recommendations in the EC2U countries

Table 1 summarizes the content of the national recommendations for each EC2U country for which the national guidelines were available. Overall, it seems that all the EC2U countries, except Romania, have their national recommendation on physical activity (14). Majority of the recommendations are based on the [WHO's recommendation from year 2010](#) (15), but many countries have updated their recommendations to include sedentary behavior. Physical activity recommendations for very young (<5 years) and very old (>85 years) age groups as well as for postmenopausal women are not included in all national recommendations (Table 1).

Table 1. Contents of the national recommendations among the EC2U countries.

TARGET GROUP	FINLAND	FRANCE	GERMANY	ITALY	PORTUGAL	SPAIN
Children (<5 years)	X	X	X			X
Children (5–17 years)	X	X	X	X	X	X
Adults (18–64 years)	X	X	X	X	X	X
Older adults (≥65 years)	X	X	X	X	X	X
Frail and very older adults (≥85 years)		X	X	X		X
Pregnant and breastfeeding women	X	X	X	X	X	X
People with disabilities	X	X	X	X	X	X
People with chronic diseases	X	X	X	X	X	X
Postmenopausal women	X	X				
BEHAVIORAL RECOMMENDATIONS						
Moderate physical activity	X	X	X	X	X	X
Vigorous physical activity	X	X	X	X	X	X
Muscle strengthening exercise	X	X	X	X	X	X
Balance	X	X		X	X	X
Sedentary	X	X	X	X	X	X
Sleep	X	X				

Source: [Physical activity factsheets for the 28 European Union Member States of the WHO European Region](#)

1. Finland

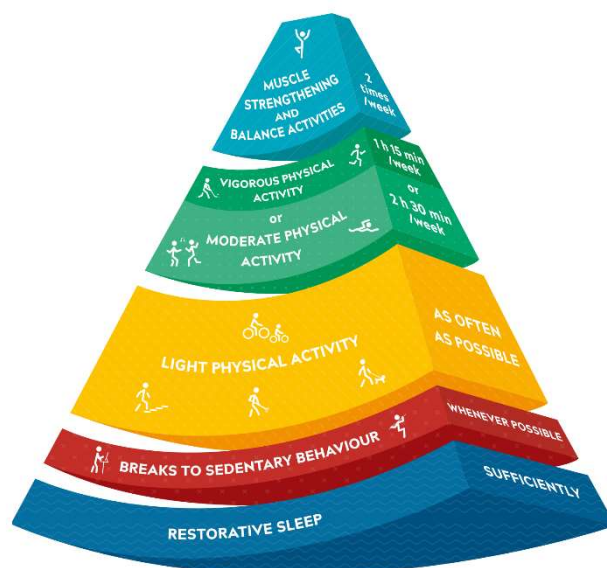
The [Finnish national recommendations](#) are based on the WHO guidelines on physical activity and sedentary behavior (2020). There are altogether six versions of the physical activity recommendations for different target groups: children and adolescents aged 7 to 17 years, working-age adults, elderly people over the age of 65, adults with functional limitations, pregnant persons and persons at less than a year after delivery.

HOW MUCH PHYSICAL ACTIVITY IS GOOD FOR YOU (ADULTS)?

Even short bouts of physical activity count. All activity that increases your heart rate is beneficial.

Moderate physical activity for health:

- At least 2 h 30 min per week
- Physical activity is moderate, if you are able to talk despite shortness of breath.
- You will achieve the same health benefits in a shorter length of time, when you increase the intensity of your activity.



Vigorous physical activity for fitness:

- At least 1 h 15 min per week
- Physical activity is vigorous, if talking is difficult due to shortness of breath.

Muscle strengthening and balance activities to enhance physical functioning

- Use your large muscle groups and challenge your balance more than normal. Move your way: climbing stairs, heavy gardening, group exercises, gym, ball games. At least 2 times per week.

Restorative sleep (sufficiently), Breaks to sedentary behavior (whenever possible), light physical activity (as often as possible).

2. France

[The national recommendations on physical activity in France](#) are based on WHO's global recommendations on physical activity for health (2010) as well as recommendations from the National Security Agency for Health Food, The Environment and Work (ANSES), the National Cancer Institute, and the National French Institute for Research and Science in Medicine (INSERM) Collective Expertise Center.

KEY RECOMMENDATIONS (FOR ADULTS):

At least 30 minutes of dynamic physical activity per day

Additional recommendations:

- A little physical activity is good, more is even better.
- For more health benefits, it is recommended to do muscle strengthening activities twice a week twice a week to strengthen your muscles, flexibility and balance.

There are many opportunities to be active:

- In your daily activities (take the stairs, walk or cycle)
- By practicing a sport or recreational physical activity (swimming, ball games, gardening ball games, gardening, etc.)
- If you resume or start sport, it is advisable to do so gradually.

Do not sit for too long: take the time to walk a little every two hours.

- Take time to walk a little every 2 hours.

Additional recommendations:

- Even if you already do at least 30 minutes of dynamic physical activity per day, it is beneficial to also reduce the time spent sitting.
- At work, if you can, consider walking a little every 2 hours.
- Outside of work, limit the amount of time spent sitting as much as possible: For example, watch out for screen time.

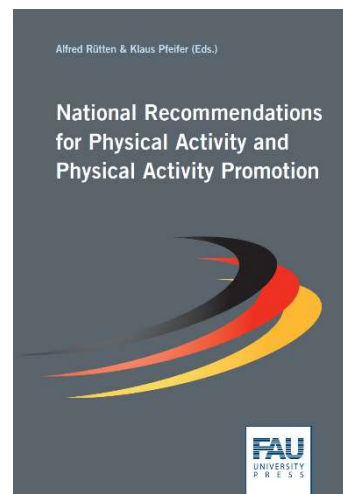


3. Germany

[The national recommendations on physical activity in Germany](#) are based on WHO 2010 recommendations. The recommendations apply to healthy adults aged between 18 and 65. They also apply to adults with chronic diseases that do not restrict mobility (e.g., hypertension or type 2 diabetes) for whom there are no specific contraindications for physical activity.

To maintain and promote health comprehensively, the following minimum recommendations apply (for adults):

- Adults should have moderate-intensity aerobic physical activity for at least 150 minutes/week where possible (e.g., 5 x 30 minutes/week) or at least 75 minutes/week of vigorous-intensity aerobic physical activity or aerobic physical activity in a corresponding combination of both intensities and should group the overall activity in at least 10-minute individual units distributed over days and weeks (e.g., at least 3 x 10 minutes/day on five days per week)
- Adults should also have muscle-strengthening physical activity at least two days per week
- Adults should avoid long and uninterrupted sitting times and should regularly interrupt sitting with physical activity where possible
- Adults can achieve further health effects if they increase the volume and/or intensity of physical activity above the minimum recommendations



4. Italy

[Physical activity recommendations in Italy](#) are based on WHO's recommendations (2010) and WHO's guidelines on physical activity and sedentary behaviour (2020).

5. Portugal

Refer to the [Portuguese version](#) of the WHO guidelines on physical activity and sedentary behaviour (2020).

6. Romania

According to our best knowledge and [the Physical Activity factsheets for the 28 European Union member states of the WHO European region](#), Romania has no national recommendations on physical activity.

7. Spain

[The Spanish national recommendations on physical activity](#) are based on the WHO guidelines on physical activity and sedentary behavior (2020). Their recommendation includes moderate intensity physical activity 150-300 min/week or vigorous physical activity 75 -150 min/week or a combination of these both. In addition, to get more benefits, it is recommended to do moderate intensity physical activity over 300 min or vigorous physical activity over 150 min/week. The recently updated recommendations include separate recommendations for children of different ages: under 1, 1-2, 3-4 and 5-17 years. Also, specific recommendations have been added for pregnant women.



Source: [Ministerio de Sanidad - Profesionales - ESTRATEGIA DE PROMOCION Y PREVENCION - ACTIVIDAD FISICA - SEDENTARISMO](#)

VI. Call for action and examples of initiatives

To support countries, states, cities, towns and villages ready to respond to the physical inactivity, [International Society for Physical Activity and Health \(ISPAH\)](#) (16) has outlined eight investments that work for physical activity, are supported by good evidence of effectiveness, and have worldwide applicability. These [eight investments](#) (17) can be readily mapped against the framework for action in the Global Action Plan on Physical Activity and its four strategic objectives to reduce physical inactivity (Figure 6).



Figure 6. Eight investments that work for physical activity according to the International Society for Physical Activity and Health.

Source: [8 Investments - ISPAH](#)

In summary, the eight investments include:

- A. **Whole-of-school programmes:** engaging school communities, providing students with multiple physical activity opportunities, benefiting academic achievement and classroom behavior
- B. **Active travel:** supportive transport policies, including demand for active travel, multiple co-benefits for the sustainable development goals

- C. **Active urban design:** supportive and equitable policies, local amenities that create places for people, makes being active more appealing
- D. **Healthcare:** physical activity promotion by health professionals, prevention of disease, management of disease
- E. **Public education, including mass media:** transmitting clear message, reaching large populations, raising awareness of physical activity's importance
- F. **Sport and recreation for all:** equitable access to both formal and informal sport, across the lifespan, contributing to many of the sustainable development goals
- G. **Workplaces:** opportunities to be active embedded into the day, physical, mental and social benefits, reducing absenteeism and burnout
- H. **Community-wide programmes:** combining approaches to physical activity promotion, similar to a systems-based approach, co-benefits to society beyond health

A. Whole-of-school programmes

The Global Action Plan on Physical Activity states the need to strengthen the implementation of whole-of-school programmes to improve student's physical activity opportunities (10). Programmes that engage school communities to provide students with multiple physical activity opportunities throughout the day may have benefits for academic achievement and classroom behaviour. Policies and systems need to be developed to support the implementation of high-quality programmes to increase the likelihood that whole-of-school programmes are effective at changing overall physical activity in children and young people.

A whole-of-school approach to physical activity involves: prioritizing regular, high quality, physical education classes; providing suitable physical environments and resources to support structured and unstructured physical activity throughout the day (e.g., play and recreation before, during and after school); supporting active travel to school programmes; and enabling these actions through supportive school policies and by engaging staff, students, parents and the wider community (17). There is some scientific evidence that school-based physical activity interventions are effective in increasing physical activity from five to 45 min more per day, reducing time spent watching television from five to 60 min less per day, and increasing maximal oxygen uptake or aerobic capacity, reflecting physical fitness level of an individual among children and adolescents aged 6 to 18 (18).

[Schools on the Move](#) is an ongoing whole-of-school program in Finland. More than 90% of Finnish schools participate in the programme. The objective of the programme is to increase physical activity among school-age children by making the school culture more active in various ways. In the Schools on the Move, 77% of the pupils participate actively in physical activity during the school day. In the 2000s, positive developments have been seen in the amount of physical activity among Finnish children of comprehensive school age.



Another excellent example of the whole-of-school programmes is the [Scuola Attiva](#) reaching 50 % of total primary school pupils in Italy. Scuola Attiva program has different objectives, for example promoting healthy lifestyles among students, teachers and families and increase children's active time with innovative proposals such as active breaks. It aims expansion of active time for children, who are placed at the centre of the project by providing 4 hours of activity per week in primary schools: two hours of motor activity in the gymnasium, 20 minutes per day of active breaks and 60 minutes of leisure time activities.

B. Active travel

Travel is integral to everyone's daily lives, whether it is moving between home and work, meeting friends and peers, to do the shopping, and for many other reasons. Because travel takes up a relatively large proportion of people's daily time, integrating more physical activity into transportation is a practical and sustainable way to increase daily physical activity (17). Designing cities so they support walking, cycling and public transportation instead of driving requires a considerable change in thinking in many countries where cities have been, and still are, designed in a car-centric way. Shorter (<5km) car trips can often be replaced by bicycling, if safe and well-connected infrastructure for cycling is available. Increasing active transportation will provide many co-benefits such as improved air quality, reduced traffic congestion, and reduced carbon dioxide emissions.

For example, [The U-Bike Portugal](#) aims to promote soft mobility, in particular cycling, in the academic communities. The U-Bike Portugal project aims to promote sustainable mobility by promoting the use of electric and conventional bicycles in academic communities to raise awareness and motivate the university population and the population in general to adopt active and healthy lifestyles.

C. Active urban design

According to the United Nations, majority of the world's population live in urban areas. The built environment elements, such as a good public transportation and more parks, most likely effect physical activity behaviour by providing the availability of opportunities for recreational activity (19). There is scientific evidence that by creating new infrastructure for walking, cycling, and public transportation a positive effect on physical activity behavior can be seen (20). In addition, better access to relevant neighbourhood destinations (e.g., local stores, services, transit stops), availability of sidewalks, and well-connected streets can facilitate walking (21). Therefore, cities are recommended to actively pursue compact and mixed-use urban designs that encourage a transport modal shift away from private motor vehicles towards walking, cycling, other forms of mobility involving the use of wheels (including wheelchairs, scooters and skates), and public transport (17). Urban and transport planning and design can also directly and indirectly affect non-communicable diseases, traffic injuries, and other adverse health and environmental outcomes (22). WHO's booklet [Promoting physical activity and active living in urban environments: the role of local governments](#) (23) gives the best available evidence on physical activity in the urban environment and makes suggestions for policy and practice based on that evidence.

D. Healthcare

Healthcare professionals come into contact with large proportions of the population. The Global Action Plan on Physical Activity states the need to strengthen pre- and in-service training of health professionals (including doctors, nurses, and other allied health professionals) to increase knowledge and skills (10). Health professionals should be competent to undertake assessment and provide brief advice and/or counselling on physical activity in routine practice. It is also

important that health professionals are aware of appropriate local opportunities so they can advise patients on how to increase their activity levels (17).

In Finland, the health care professionals are offered a template of [physical activity prescription for adults](#) as a tool for physical activity promotion among patients. Physical activity promotion in healthcare should focus on both primary and secondary prevention. Policies and systems need to be developed to support the integration of physical activity into routine care, including financing of clinical preventive services and dissemination of tools for assessing, advising and following-up patients.

[Positive parenting](#) is a well-developed intervention in the Spanish Health Promotion and Prevention Strategy. Positive parenting targets parents and guardians of children aged 0-3 years and health professionals and covers four areas: parental bonding, healthy diets, physical activity and active play and rest and sleep. The intervention includes online open, free training for mothers, fathers



and other people with parenting functions. To ensure equity, online training is also proposed to health professionals so that they can deliver the intervention to groups face-to-face.



[HAPPY BONES](#) project promotes physical activity for women aged 50-65 years by offering an innovative exercise protocol to involve them in a moderate physical activity and as a consequence, strengthen personal resources to do a physical activity necessary for their well-being. The objectives are to promote an innovative exercise protocol for osteopenic/osteoporotic sedentary women, to train teachers and experts in physical education with specific skills in the participating countries in order to standardize the osteoporosis exercise protocol, and to follow the adherence to the training protocol.

E. Public education, including mass media

Public education campaigns that transmit clear messages about physical activity can reach large populations and increase awareness of the importance of physical activity. Public education can involve print, audio and electronic media, digital and social media, outdoor billboards and posters, public relations, point of decision prompts, and mass-distribution of information (17). Best practice communication campaigns and community campaigns to enhance awareness and understanding are identified in the Global Action Plan on Physical Activity (10). For example, in Finland 10th of May is [The Exercise Day of Your Dreams](#). The Exercise Day of Your Dreams is the day for all kinds of movement during a work or school day, in local clubs, associations and fitness centers, and a possibility to join in to organized training sessions with your friends at sports venues or local nature. The idea is based on the *Move for Health Day*, the event that was created in 2002 by the WHO to promote physical activity.

Mass media provide an effective way to transmit consistent and clear messages about physical activity to large populations. There is scientific evidence to support that mass-media has a role in the promotion of physical activity (24). In recent years, there has been a rapid expansion of social and digital media, internet, and other uses of wearable devices. These communications are often interactive, they may be linked to specific programmes, they can be tailored to demographic segments, linked to hand-held or wearable devices, and can respond to objective and personalised data in cost-effective ways (17). Latest scientific evidence suggest that social media can be used by policy makers, professionals, organisations and/or researchers to elicit positive changes to physical activity and diet-related behaviours (25).

F. Sport and recreation for all

Promoting sport for all is a central policy recommendation in the Global Action Plan on Physical Activity and contributes to many of the sustainable development goals (10). Equitable access to formal and informal sporting opportunities across the lifespan will increase participation in sport and bring e.g., social benefits. High-quality delivery can be achieved by the diversification of the sporting workforce and enhancing the capability and capacity of delivery organisations, or via mass events that engage whole communities. Sport and recreation opportunities must target audiences where the need may be greatest or participation rates may be lower (including women and girls, people with disabilities, older adults and culturally linguistic and diverse groups) as well as fostering positive experiences (17).

The National Action Plan [IN FORM](#), German national initiative aims to promote healthy diet and sufficient physical activity. To date, almost 200 projects have been supported by the German Federal Ministry of Food and Agriculture and the Federal Ministry of Health under the IN FORM initiative. In the future years, the project concentrates on disseminating their findings and results to facilitate the dialogue between policy-makers, industry, the science community and civil society with regard to all questions concerning a healthy lifestyle.

G. Workplaces

The Global Action Plan on Physical Activity states the need to enhance provision of, and opportunities for, physical activity programmes and promotion in workplace environments that facilitate people of all abilities to be physically active (10). The workplace is one of the most opportune settings for health promotion among working aged adults as most adults spend at least one third of their day at work. Physical activity can be promoted by designing workplace environments that promote incidental physical activity, by supporting active commuting, via physically active social activities, and/or providing employees with paid time for exercise or by having an active work culture (e.g., walking meetings) (17). In addition, among office workers sit-stand desks, either alone or in combination with information and counselling, have been shown to reduce workplace sitting at short-term by on average 100 minutes per eight-hour workday compared to sit-desks (26). Workplace-based physical activity programmes which include opportunities to be active embedded throughout the day will have physical, mental, and social benefits, while also reducing absenteeism and burnout (17).

[The Workplaces on the Move](#) is a Finnish program that strengthens the significance of physical activity in the Finnish working life. The program has recently launched recommendation for physical activity promotion at work. The recommendations have three levels, each of which increases the level of activity and the benefits achieved: Level 1, a baseline that motivates personnel to be more physically active; Level 2, physical activity, e.g., in forms of active breaks, is integrated to working days; Level 3, management is human-oriented, personnel are involved, supervisors are trained and the promotion of well-being at work is systematic (See Figure 7). More examples of workplace initiatives can be found in the [Promoting physical activity in the workplace: current status and success stories from the European Union Member States of the WHO European Region](#) report (27).

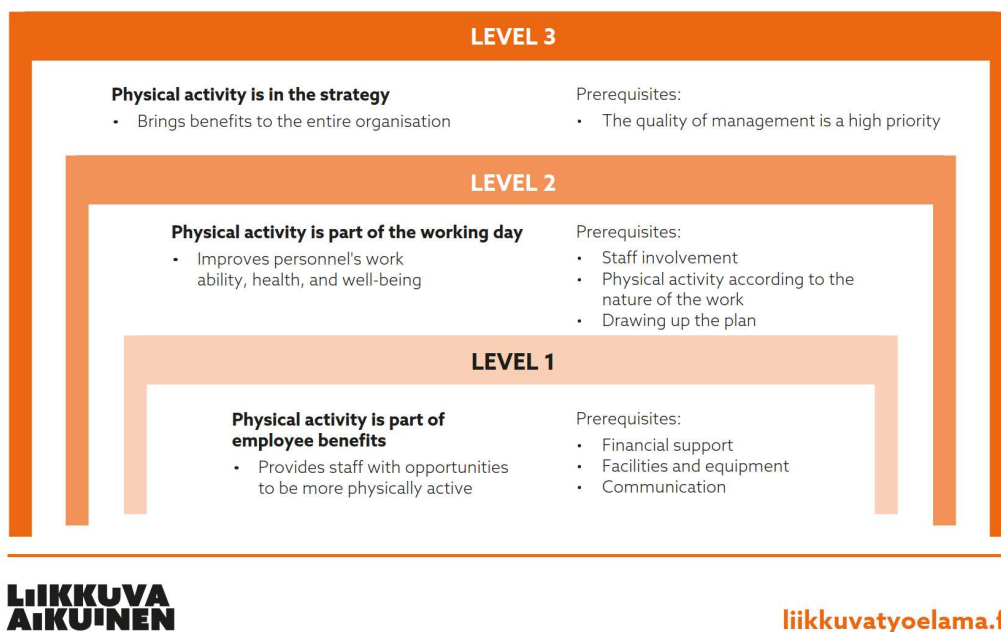


Figure 7. Recommendations for physical activity promotion at work.

Source: [Recommendations for physical activity promotion at work - Liikkuva työelämä \(liikkuvatyoelama.fi\)](https://liikkuvatyoelama.fi)

H. Community-wide programs

Community-wide programmes offer more than one approach to tackle physical inactivity for a population as they operate at a series of levels to impact on behaviour. These levels reflect systems-based approaches and look to change policies, e.g., to improve the built environment and provide programmes. Effective components of community-wide programmes include a mix of mass media, other communication strategies (e.g., posters, websites), individual counselling by health professionals, and settings-based programmes (e.g., healthcare or schools) (17). These combinations of policy, environment and programmes are more effective to increase population levels of physical activity as they target different types of physical activities, work, active travel and recreation.

National [Young Health Programme](#) is reaching youth from 300 settlements across Romania. The programme includes classroom training and extra-curricular activities, adapted to hybrid learning for young people aged 15-19, across the country. The objectives of the Young Health Programme at first two phases were to develop a national educational programme to create healthy lifestyle behaviours among adolescents and open 420 school sports clubs (Phase I), and to provide 10,000 high school students nationwide with practical health education (Phase II). Between Phase I and Phase II, more than 63,800 young people have been reached since the start of the programme. Overall, 100 high schools in 70 cities have participated, generating national media coverage across Romania. In a survey of students who took part in the programme, 87% correctly identified the most frequent cardiovascular diseases. The number of students who practised sport for four to eight hours a week increased by 10%. In the current third phase, programme aims to improve the awareness, knowledge and positive attitude towards preventive health among young people.



The Finnish [Adults on the Move](#) program exists to inspire the working-age people who do not move enough for their health. The aim is to encourage them to be more active and to enjoy it while improving their health. Two main tasks in strategy are to increase physical activity at work and to provide high-quality physical activity counselling via municipality's well-being services, health care, municipal sports services, and the activities of local organisations.

VII. Conclusions

High prevalence of physical inactivity is causing large health and economic burden world-wide. WHO's Global Action Plan on Physical Activity (GAPPA) target for a 15% relative reduction in physical inactivity by the year 2030. The GAPPA vision is to have *more active people for a healthier world*. However, despite of the strategies and resources, the recent WHO Global Status on Physical activity report suggests that the GAPPA goal may not be achieved as the global progression has been too slow.

Lack of time and lack of motivation are reported to be the main barriers for physical activity. To tackle this, the current WHO guidelines on physical activity and sedentary behavior state that *every minute (of physical activity) counts*. These recommendations should motivate people to be active at any time they have the possibility to move. The easiest way to increase daily physical activity is to add daily steps and break up prolonged sitting by standing up. It is never too late to start exercising and little activity is always better than no activity.

This report has presented excellent and feasible examples of European programmes and initiatives aiming to increase physical activity. They indicate that it is possible to influence on physical activity in all age groups, in different environments, such as at schools and work places, where people spend many hours of their day as well as during transportation. In addition, social and digital media, internet, and wearable devices are shown to be cost-effective ways to change physical activity behaviour. However, new programs, interventions and other actions, such as updated national recommendations and building environments that support physical activity are still needed for promoting physical activity for all. Physical activity has multiplicative health, social and economic benefits, and investment in actions to increase physical activity will also contribute to achieving the Sustainable Development Goals.

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