

2 Physical activity in Europe: Trends and patterns

Despite the health and well-being benefits of physical activity, many people in the European Union do not move enough. This chapter provides an overview of physical activity levels in Europe, and explores patterns and trends, such as differences across age, gender and socio-economic groups. It also looks at the impact that the COVID-19 pandemic has had on physical activity.

Key messages

- The prevalence of insufficient physical activity was already high before the COVID-19 pandemic: more than one in three adults did not meet the WHO physical activity guidelines, and almost half (45%) reported that they never exercise or play sport.
- Physical inactivity is also prevalent in adolescents, with less than one in five (17.6%) boys and one in ten (9.6%) girls across 27 EU Member States reporting to meet their WHO recommendation in 2018.
- Women and older people are less likely to do regular sports or exercise: among 15 to 24-year-olds, 73% of men participate at least weekly in sports or exercise, compared to 58% of women.
- People from lower socio-economic groups are less likely to exercise regularly (only 24% of people who consider themselves working class exercises regularly, versus 51% of upper-class people), but occupational physical activity is less common in higher socio-economic groups.
- Drivers of physical inactivity include urbanisation and economic development, environments that prioritise motorised travel, and a decrease in occupational and household physical activity.
- The COVID-19 pandemic further worsened the situation, with more than half of adults reporting a reduction in their frequency of physical activity.

More than one in three European adults does not do enough physical activity

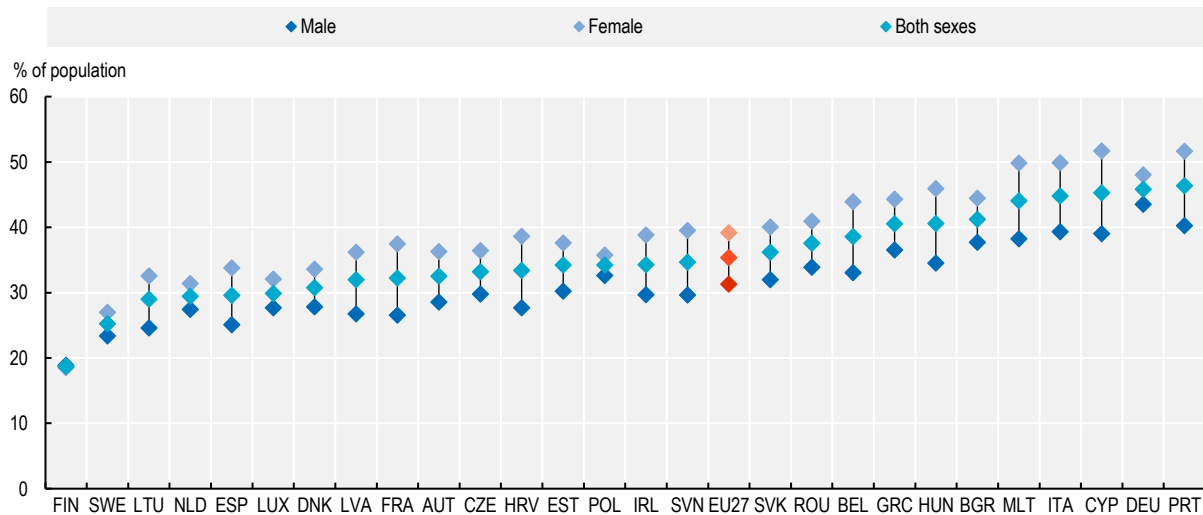
Despite the well-established benefits of leading a physically active lifestyle and the broader public health impact of reducing chronic disease risk and premature mortality, too many adults and children are insufficiently physically active across Europe. While different measurement approaches result in different estimates of the prevalence of insufficient physical activity (Box 2.1), most confirm that it is common.

The WHO combines and adjusts data on insufficient physical activity from different sources, to provide global estimates of the prevalence of insufficient physical activity. Based on this data, more than one in three (35.4%) adults in the 27 EU Member States were insufficiently active in 2016 (Figure 2.1). Insufficient physical activity was particularly prevalent in some Southern-European countries, while less frequent in Nordic countries.

This corresponds with the results of a large-scale study from 2012, which used the Global Physical Activity Questionnaire (GPAQ), and found that around one in three (34.8%) of European adults (aged 15 years or older) are insufficiently active (defined as less than 600 MET-minutes of physical activity per week, the WHO minimum recommendation) (Hallal et al., 2012^[1]). Also using the same GPAQ questionnaire, the national prevalence of insufficient physical activity (less than 600 MET-minutes of physical activity per week) was estimated to range from 10.1% to 43.6% in nine Eastern European and Central Asian countries (Armenia, Azerbaijan, Belarus, Georgia, Kyrgyzstan, Republic of Moldova, Tajikistan, Türkiye and Uzbekistan) between 2013 and 2017 (Whiting et al., 2021^[2]).

Figure 2.1. Prevalence of insufficient physical activity

Prevalence of insufficient physical activity (less than 150 minutes of moderate-intensity physical activity per week, or equivalent) among adults aged 18+ years, crude estimate (%), 2016



Source: WHO (2021^[3]), Prevalence of insufficient physical activity among adults aged 18+ years (crude estimate) (%), [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-insufficient-physical-activity-among-adults-aged-18-years-\(crude-estimate\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-insufficient-physical-activity-among-adults-aged-18-years-(crude-estimate)-(-)).

Box 2.1. Measuring physical activity in Europe

To establish accurate prevalence data and to monitor changes and trends in physical activity, valid, reliable and regular measures are required (Van Hecke et al., 2016^[4]). Physical activity can be measured either objectively or subjectively. Traditionally, physical activity is assessed by means of self-reported questionnaires. Across Europe, different questionnaires are used.

Global Physical Activity Questionnaire (GPAQ)

The GPAQ was developed by WHO for physical activity surveillance in countries. It collects information on physical activity participation in three domains as well as on sedentary behaviour, using 16 questions. The domains are: (1) activity at work, (2) travel to and from places, and (3) recreational activities (WHO, n.d.^[5]). The GPAQ is also part of the WHO STEPwise approach to NCD risk factor surveillance (STEPS) survey, often used in Eastern European and Central Asian countries (WHO, n.d.^[6]).

Eurobarometer questionnaire

The Special Eurobarometer survey on sport and physical activity has been conducted in the EU Member States since 2002 (European Commission, 2022^[7]). The Eurobarometer questionnaire comprises six items that ask about physical activity via the number of days of vigorous activity, moderate activity (excluding walking), and walking for at least 10 minutes in the last 7 days and the respective daily duration in order to assess the levels of physical activity according to the WHO's recommendations. It also asks about the frequency of exercising or playing sports, and of other physical activity such as cycling or gardening.

Single-item measure (SIM)

The SIM uses a past-week recall period asking about the number of days with at least 30 minutes of physical activity with an intensity that raises the breathing rate, including sport, exercise, walking, and cycling for recreation, but excluding household and work-related physical activity (Milton, Bull and Bauman, 2010^[8]).

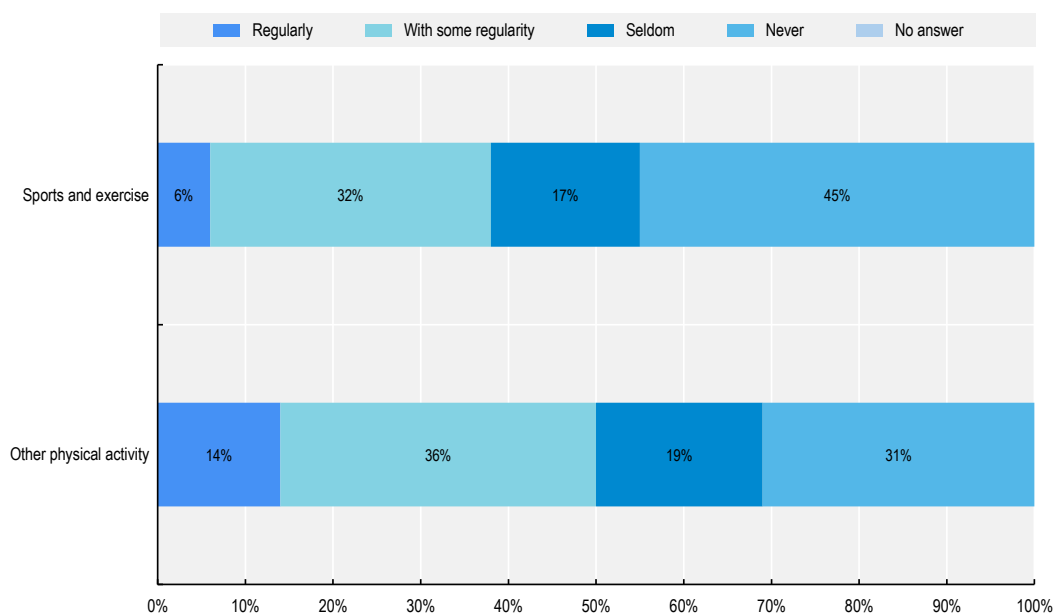
The choice of the measuring instrument largely affects survey outputs, and using the Eurobarometer questionnaire can result in more favourable PA prevalence data compared to using other instruments (Stassen et al., 2021^[9]). For example, estimating the prevalence of achieving the recommended physical activity levels by a single-item measure or by the Eurobarometer questionnaire led to almost a three times difference within the same sample (SIM 31.3% vs. Eurobarometer 87.5%).

At national level, data on physical activity are provided by national surveys that differ in the applied methodology and definitions of “physically active”. Therefore, between-countries comparison is difficult. Most of these national surveys are based on questionnaires, but in some cases more objective assessment methods (e.g. pedometers or accelerometers) are also being used. Data on physical activity levels from national sources is available in the **HEPA country factsheets** which are regularly published on the WHO website (WHO, 2021^[10]).

Data from the latest Eurobarometer survey reported that, in 2022, four in ten (38%) adults in the EU exercise or play sport at least once a week, including 6% who do so at least five times per week (Figure 2.2) (European Commission, 2022^[7]). Almost half of the respondents (45%) claimed that they never exercise or play sport. In addition, half of respondents (50%) reported to do other physical activities, such as cycling, dancing or gardening, at least once a week, while 31% never do this kind of activity at all.

Figure 2.2. Physical activity in the European Union

Proportion of adults who reported doing sport and exercise, or other physical activity, regularly, with some regularity, seldom and never, weighted average for EU27, 2022



Note: Questions asked were: “How often do you exercise or play sport?” and “How often do you engage in other physical activity such as cycling from one place to another, dancing, gardening, etc.?”; regularly: at least 5 times a week; with some regularity: at least once a week; seldom: less than once a week. Source: European Commission, (2022^[7]), Special Eurobarometer SP525: Sport and physical activity, <https://europa.eu/eurobarometer/surveys/detail/2668>.

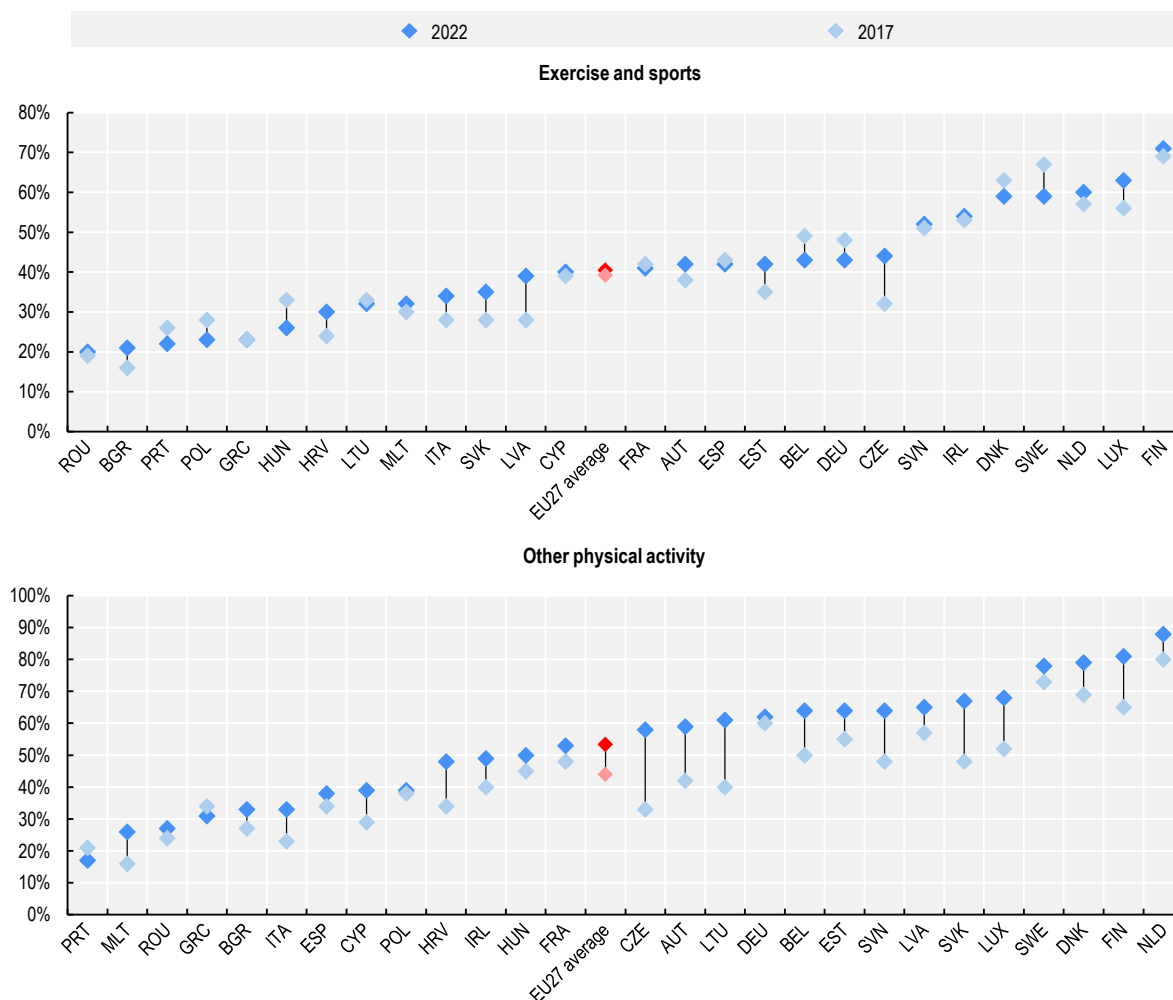
Only four in ten adults exercise regularly, with low rates in women, the elderly and lower socio-economic groups

On average, four in ten adults in the EU exercise regularly, but there is considerable variation across countries. While in Finland more than two-thirds of adults does sport or exercise weekly, in other countries this is one in five (Figure 2.3). Nordic countries also see higher rates of participation in other forms of physical activity, like cycling or gardening. Generally, countries with high participation in sport and exercise also see high participation in other forms of physical activity. Notable exceptions are the Slovak Republic and Latvia, which have below average levels of sport and exercise but higher participation in other forms of physical activity, while in Ireland the opposite is true.

While participation in sports and exercise changed little between 2017 and 2022 on average in the EU, weekly participation in other forms of physical activity increased – with the EU average going from 44% to 53% (Figure 2.3). Some countries saw considerable increases in the amount of physical activity practiced by adults. In the Czech Republic, the percentage of people practicing sports weekly increased by 12 percentage points while other physical activity increased by 25 percentage points. In Austria, Lithuania, Slovenia, Slovak Republic, Luxembourg and Finland participation in other forms of physical activity also increased considerably. Portugal on the other hand saw participation in both forms of physical activity decrease, while participation in sports and exercise decreased notably in Poland, Hungary, Belgium, Germany, Denmark and Sweden.

Figure 2.3. Physical activity trends in adults

Proportion of adults who reported doing sport and exercise, or other physical activity, at least once a week, in 2017 and 2022



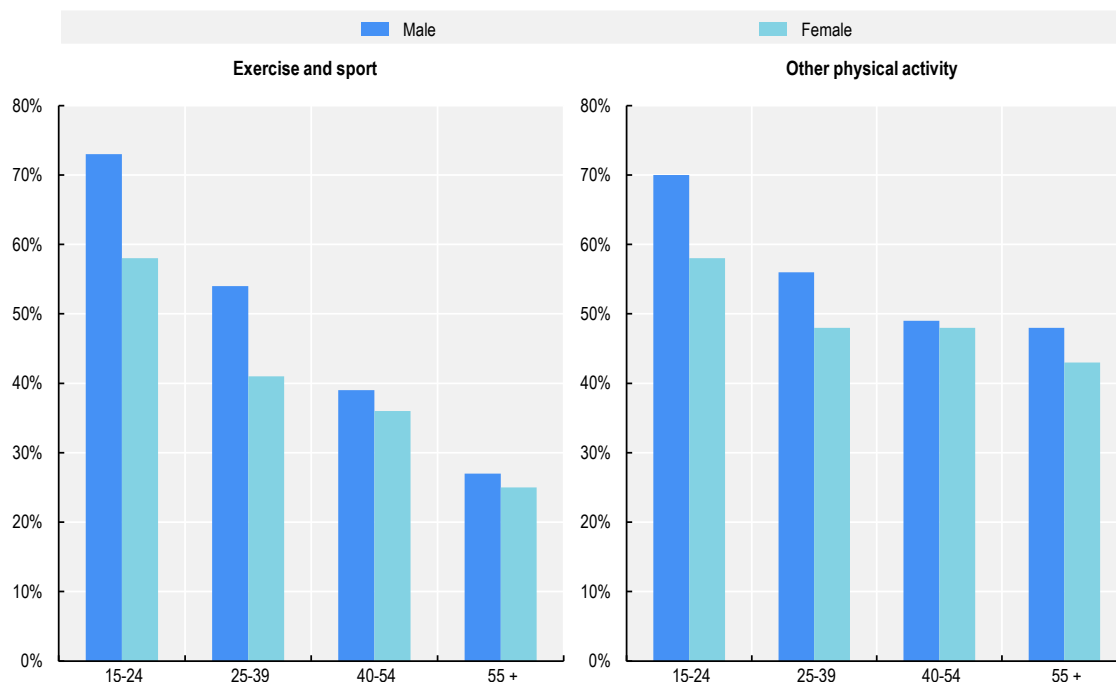
Note: Questions asked were: “How often do you exercise or play sport?” and “How often do you engage in other physical activity such as cycling from one place to another, dancing, gardening, etc.?”; EU27 average is not weighted.

Source: European Commission, (2022^[7]), Special Eurobarometer SP525: Sport and physical activity, <https://europa.eu/eurobarometer/surveys/detail/2668>.

Physical activity becomes less frequent with age, as only one in four adults in the EU above the age of 55 years participates in sport or exercise at least once a week (Figure 2.4). Across all age groups, fewer women than men participate in sport and exercise. Especially in the youngest age group of 15 to 24-year-olds, the difference between sexes is large: 73% of men participate at least weekly in sport or exercise, compared to 58% of women. While for other forms of physical activity the difference between age groups and sexes is less pronounced, young men remain the most active.

Figure 2.4 Physical activity by age and sex

Proportion of adults who reported doing sport and exercise, or other physical activity, at least once a week, weighted average for EU27, 2022



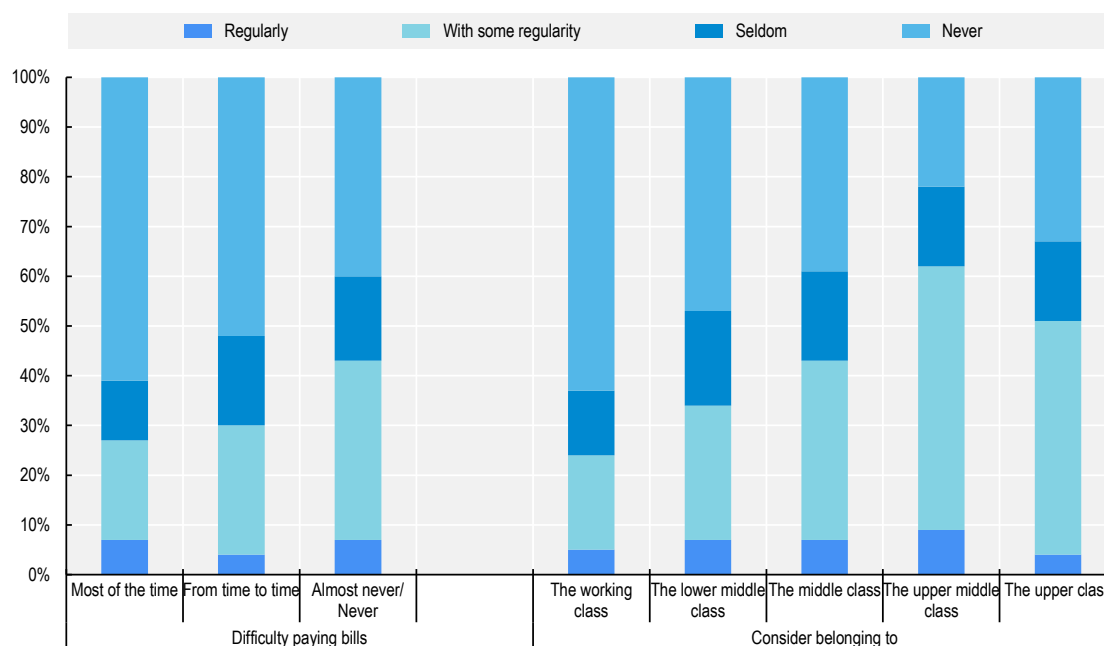
Note: Questions asked were: “How often do you exercise or play sport?” and “How often do you engage in other physical activity such as cycling from one place to another, dancing, gardening, etc.?”

Source: European Commission, (2022^[7]), Special Eurobarometer SP525: Sport and physical activity, <https://europa.eu/eurobarometer/surveys/detail/2668>.

Looking at Eurobarometer data for EU Member States, there is a clear socio-economic gradient. Adults who almost never have difficulty paying bills engage in sport and exercise more frequently than adults who often have difficulties paying (Figure 2.5). Similarly, only 24% of people who consider themselves working class exercise at least once a week, versus 51% of people who consider themselves upper class. However, the pattern is different when considering other types of physical activity. People with a high socio-economic status tend to be more physically active during leisure-time compared to those with low socio-economic position, while occupational physical activity is more prevalent among the lower socio-economic groups (Beenackers et al., 2012^[11]; Stalsberg and Pedersen, 2018^[12]).

Figure 2.5. Sport or exercise in adults by socio-economic group

Proportion of adults who reported doing sport and exercise regularly, with some regularity, seldom and never, by socio-economic group, weighted average for EU27, 2022



Note: Questions asked were: “How often do you exercise or play sport?”; regularly: at least 5 times a week; with some regularity: at least once a week; seldom: less than once a week.

Source: European Commission, (2022^[7]), Special Eurobarometer SP525: Sport and physical activity, <https://europa.eu/eurobarometer/surveys/detail/2668>.

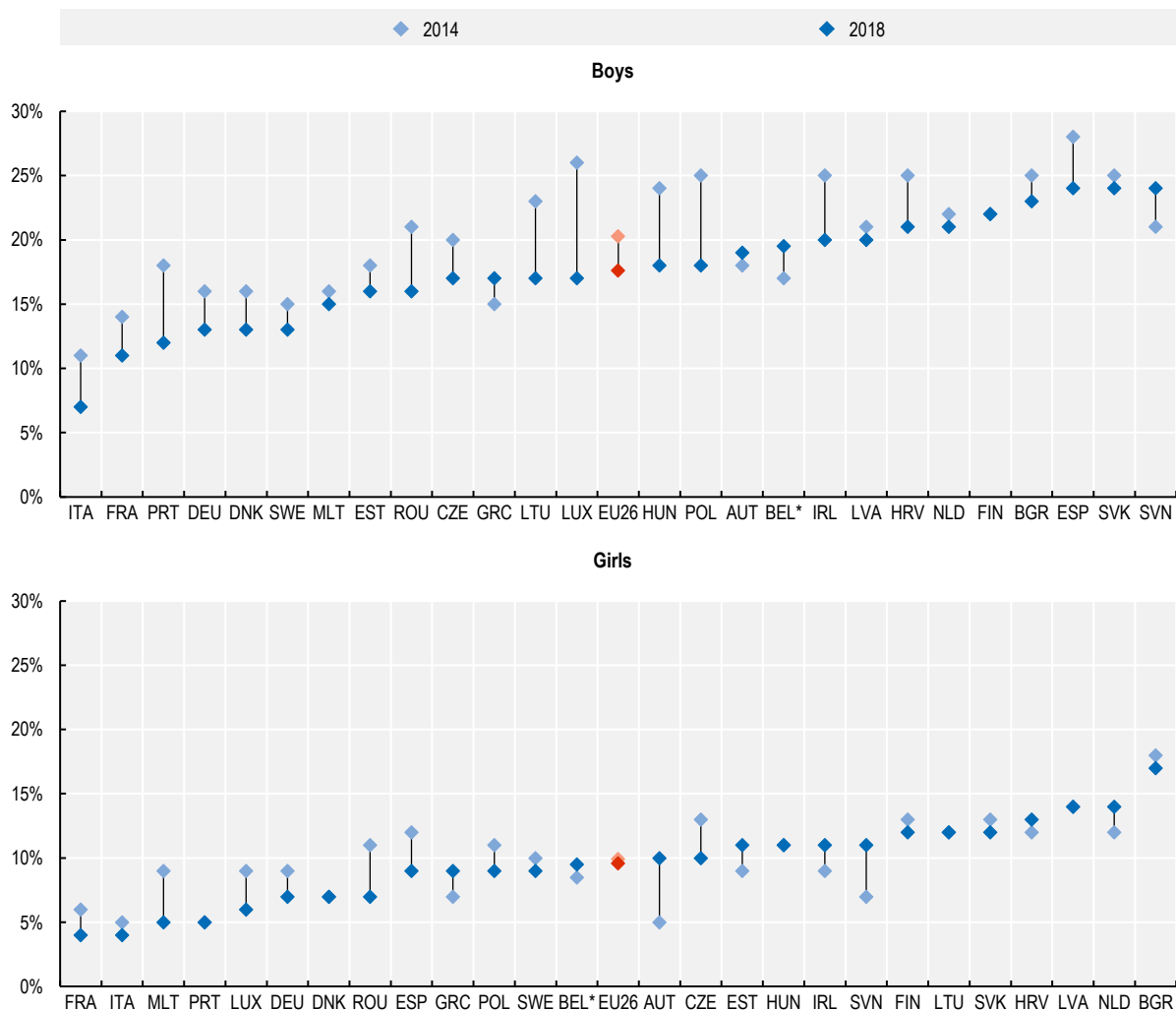
Few adolescents meet WHO recommended physical activity levels

Low physical activity is also common among adolescents, particularly among girls: across 26 EU Member States only 17.6% of boys and 9.6% of girls reported meeting the WHO recommendation of at least one hour of moderate to vigorous physical activity daily in 2018 (Figure 2.6). Italy, France and Portugal report some of the lowest levels of physical activity among adolescents, while it is relatively high in the Slovak Republic, Slovenia, the Netherlands and Bulgaria. In Spain, boys do better compared to the EU average than girls, and vice versa in Estonia and Lithuania.

Between 2014 and 2018 there was a decrease in physical activity levels for boys: the proportion of boys engaging in at least one hour of moderate to vigorous physical activity per day decreased from 20.3% to 17.6% (Figure 2.6). The largest change was in Luxembourg (from 26% to 17%) and Poland (25% to 18%). While there was no large change for girls, their level of physical activity was already much lower – at 9.6% in 2018. In some countries physical activity in girls decreased (both Malta and Romania saw a 4 percentage point decrease), while in others it increased (most notably in Austria and Slovenia, where there was a 5 and 4 percentage point increase, respectively).

Figure 2.6. Physical activity trends in adolescents

Proportion of 15-year-olds who report at least one hour of moderate to vigorous physical activity daily, in 2014 and 2018



Note: * unweighted average of Wallonia and Flanders.

Source: WHO (2020_[13]), Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. <https://apps.who.int/iris/handle/10665/332104>.

As in adults, physical activity rates in children and adolescents decline with age: while on average 24% of children aged 11 reported at least one hour of moderate to vigorous physical activity daily, this decreased to 19% at age 13, and 15% at age 15 (WHO, 2020_[13]). Younger children are even more active: a recently published study that involved more than 150 000 children aged 6-9 years from 25 European countries using data from the WHO European Childhood Obesity Surveillance Initiative (COSI) in 2015-17 found that 79% were actively playing for more than one hour each day, 46% were members of a sport or dancing club, 50% walked or cycled to school each day, 60% engaged in screen time for less than two hours per day, and 85% slept for 9-11 per night as recommended (Whiting et al., 2020_[14]).

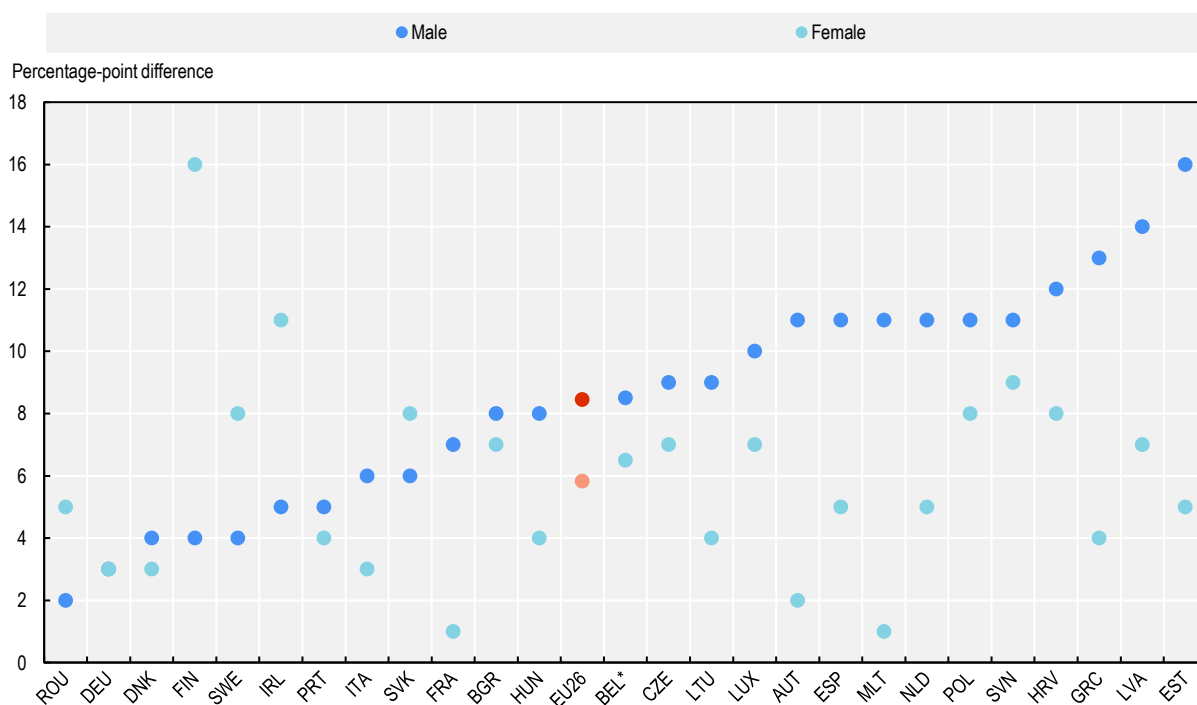
In many countries there is a socio-economic gradient, where higher affluence is associated with higher levels of physical activity in adolescents (Figure 2.7) (WHO, 2020_[13]). This gradient is larger for boys than for girls in most countries, and on average in 26 EU Member States, the proportion of boys from highly affluent families who meet the physical activity guidelines is 8 percentage points higher than boys from

less affluent families. Physical activity among girls from affluent families is on average 6 percentage points higher than among girls from less affluent families.

However, the socio-economic gradient for adolescents needs to be interpreted with caution. A systematic review on social patterning of physical activity in adolescents found that while on a whole the results showed that adolescents with higher socio-economic status are more physically active than those with lower socio-economic status, the findings were far from uniform across studies, and a large number found no or the opposite effect (Stalsberg and Pedersen, 2010_[15]).

Figure 2.7. Physical activity in children and adolescents by socio-economic group

Percentage point difference in prevalence of reporting at least one hour of moderate to vigorous physical activity daily between low and high family affluence groups, for children and adolescents aged 11, 13, and 15, in 2018



Note: * unweighted average of Wallonia and Flanders; a value of 5 means that the proportion of children from affluent families who are physically active (e.g. 25%) is 5 percentage points higher than the proportion of children from low affluence families (e.g. 20%).

Source: WHO (2020_[13]), Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. <https://apps.who.int/iris/handle/10665/332104>.

Insufficient physical activity is driven by economic development, urbanisation, environmental and occupational factors

Similar to obesity, insufficient physical activity is related to rapid economic development (Kohl et al., 2012_[16]). This is particularly evident and of concern in low- and middle-income countries, where occupational, domestic, and transport-related physical activities contribute more to overall energy expenditure than leisure time or recreational activities. Increasing urbanisation and rapid economic development have been linked to reductions in domestic and occupational physical activity in adults, as well as increased television viewing in children (Kohl et al., 2012_[16]; Ng and Popkin, 2012_[17]; Dearth-Wesley, Popkin and Ng, 2014_[18]).

Evidence is mounting to suggest a causal relationship between the built environment and people's physical activity behaviours, particularly active transport (e.g. biking, walking). People living in more “walkable” environments that are safe and attractive are more prone to active transport and have higher levels of physical activity (Mackett and Brown, 2011^[19]). Opting for a compact urbanisation that prioritises the needs of pedestrians is much better for promoting physical activity than environments that prioritise motor vehicles. Choosing active transportation is not only a personal decision. How cities are designed and the efficiency of their transport network are key in favouring or hampering active transport, and thereby, the levels of physical activity.

Currently, occupational physical activity is still the largest contributor of adults' weekly physical activity (Ng and Popkin, 2012^[17]). However, different types of jobs result in different degrees of activity, and some occupations such as office jobs are associated with a significant amount of sitting time. These types of jobs have increased considerably over the last decades: while in the early 1960s almost half of private industry occupations in the United States required at least moderate intensity physical activity, now less than one in five demand this level of activity (Church et al., 2011^[20]). It is estimated that in France less than one in four men (22.9%) and less than one in eight women (11.9%) occupied moderate or vigorous intensity jobs in 2009 (Graf and Cecchini, 2019^[21]).

It is important to note that some evidence suggests that work-related physical activity may not have the same mental health benefits as leisure-time physical activity. One systematic review found that while leisure-time physical activity and transport physical activity both had a positive association with good mental health, work-related physical activity was negatively associated with mental health (White et al., 2017^[22]). However, another European study found that doing any level of physical activity in any domain was associated with a lower prevalence of moderate, moderate-severe, and severe depressive symptoms (Cocker et al., 2021^[23]).

Physical activity decreased during the COVID-19 pandemic

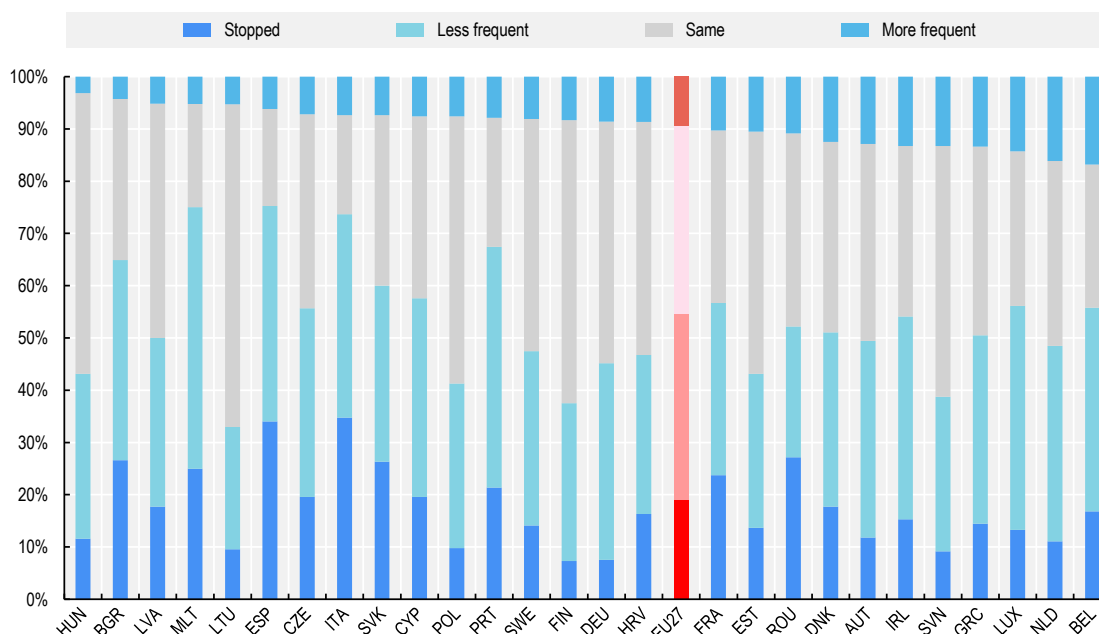
In March 2020, the world started experiencing an extraordinary change due to the COVID-19 pandemic. Governments in Europe responded to the COVID-19 outbreak with various measures intended to slow down the transmission of the virus. These nation-wide restrictions, particularly the closure of schools, parks, playgrounds and recreational facilities, reduced the possibilities for maintaining an active and healthy lifestyle. On average physical activity levels appear to have dropped, despite some people increasing their physical activity.

One systematic review conducted mid-2020 found that, of 26 studies (which include studies from Italy, Spain, Croatia, Germany and Greece) that measured the change in the amount of time spent being physically active by adults, all but one reported overall decreases in physical activity level pre- versus post-COVID-19 lockdown (Stockwell et al., 2021^[24]). A multinational survey across 14 countries (including 7 EU Member States: Austria, France, Germany, Italy, the Netherlands, Switzerland, and Spain) found that self-reported moderate to vigorous activity as well as vigorous activity in adults declined, by 41% and 42% respectively, during COVID-19 restrictions (Wilke et al., 2021^[25]). While the study found no major differences between men and women, young and old participants saw greater decreases in physical activity than middle-aged people.

While there are signs that in some cases lockdown actually encouraged exercise and the development of new routines, this does not appear to make up for the overall loss in physical activity. A large number of studies show that while some people increased their physical activity during lockdown, a larger proportion saw a decrease in their activity levels (Stockwell et al., 2021^[24]). Similarly, the Eurobarometer study found that while 9% of respondents increased their physical activity level, more than half reduced their physical activity – with 34% being active less frequently and 18% stopped being active completely (European Commission, 2022^[7]).

Figure 2.8. Changes in physical activity due to COVID-19

Reported change in the frequency of physical activity during the COVID-19 pandemic, percentage of respondents



Note: Base for 100% reflects all respondents that selected one of the four statements (stopped, less frequent, same, more frequent).

Source: European Commission, (2022^[7]), Special Eurobarometer SP525: Sport and physical activity, <https://europa.eu/eurobarometer/surveys/detail/2668>.

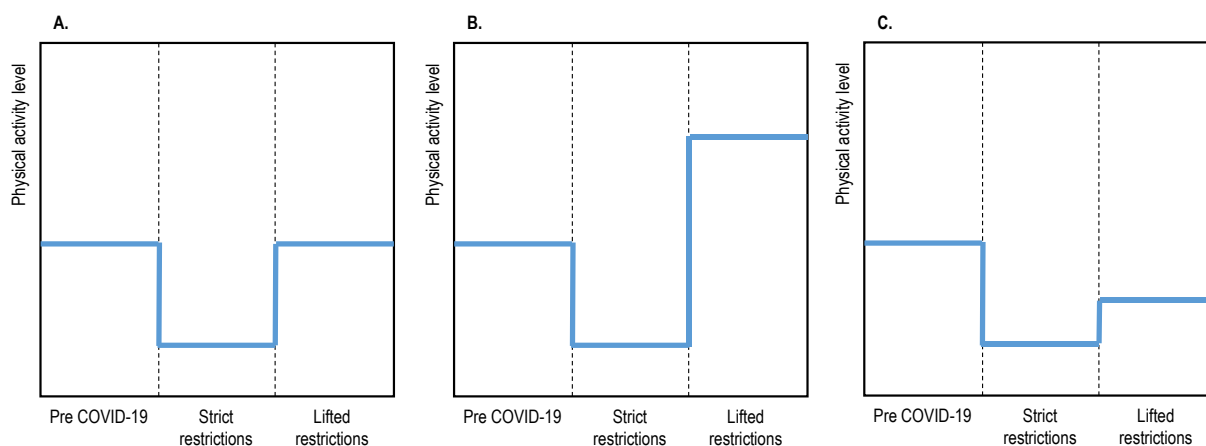
For children and adolescents, results are not straightforward. While some studies reported a decline in physical activity (Paterson et al., 2021^[26]), others found that the amount of physical activity did not change (Kovacs et al., 2021^[27]). However, many studies that looked at the type of physical activity agreed that the characteristics of sport and exercise changed and shifted towards less intensive activities such as walking and cycling. This may explain the drop in cardiorespiratory fitness documented in some countries since the outbreak of the pandemic (Jurak et al., 2021^[28]; Jarnig, Jaunig and van Poppel, 2021^[29]). In addition, studies consistently reported increases in screen time and sedentary behaviour – also linked to the use of remote and online learning.

One thing that we do not know currently is what lasting effects the pandemic will have on behaviour patterns once life returns to normal. Theoretically, three scenarios are possible (Figure 2.9):

- people get back to their pre-COVID-19 physical activity level,
- people become more physically active as they need to get back to normal or, even, they are willing to get engaged in as much activity as possible, or,
- people become less physically active as they have incorporated a less active standard in their daily routine.

In the Eurobarometer study, only 7% of respondents report plans to be more physically active after the COVID-19 pandemic ends (European Commission, 2022^[7]). Urgent actions are needed to counteract this problem and to ensure that the low levels of physical activity caused by the COVID-19 pandemic and related restrictions do not become the new normal.

Figure 2.9. Theoretical patterns of change in physical activity level due to the COVID-19 pandemic



References

- Beenackers, M. et al. (2012), “Socioeconomic inequalities in occupational, leisure-time, and transport related physical activity among European adults: A systematic review”, *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 9/1, p. 116, <https://doi.org/10.1186/1479-5868-9-116>. [11]
- Church, T. et al. (2011), “Trends over 5 Decades in U.S. Occupation-Related Physical Activity and Their Associations with Obesity”, *PLoS ONE*, Vol. 6/5, <https://doi.org/10.1371/JOURNAL.PONE.0019657>. [20]
- Cocker, K. et al. (2021), “Is all activity equal? Associations between different domains of physical activity and depressive symptom severity among 261,121 European adults”, *Depression and Anxiety*, Vol. 38/9, pp. 950-960, <https://doi.org/10.1002/DA.23157>. [23]
- Dearth-Wesley, T., B. Popkin and S. Ng (2014), “Estimated and forecasted trends in domain specific time-use and energy expenditure among adults in Russia”, *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 11/1, <https://doi.org/10.1186/1479-5868-11-11>. [18]
- European Commission (2022), *Special Eurobarometer SP525 : Sport and physical activity*, <https://europa.eu/eurobarometer/surveys/detail/2668> (accessed on 23 September 2022). [7]
- Graf, S. and M. Cecchini (2019), “Current and past trends in physical activity in four OECD countries: Empirical results from time use surveys in Canada, France, Germany and the United States”, *OECD Health Working Papers*, No. 112, OECD Publishing, Paris, <https://doi.org/10.1787/22cad404-en>. [21]
- Hallal, P. et al. (2012), “Global physical activity levels: surveillance progress, pitfalls, and prospects”, *The Lancet*, Vol. 380/9838, pp. 247-257, [https://doi.org/10.1016/s0140-6736\(12\)60646-1](https://doi.org/10.1016/s0140-6736(12)60646-1). [1]

- Jarnig, G., J. Jaunig and M. van Poppel (2021), “Association of COVID-19 Mitigation Measures With Changes in Cardiorespiratory Fitness and Body Mass Index Among Children Aged 7 to 10 Years in Austria”, *JAMA Network Open*, Vol. 4/8, p. e2121675, <https://doi.org/10.1001/jamanetworkopen.2021.21675>. [29]
- Jurak, G. et al. (2021), “A COVID-19 Crisis in Child Physical Fitness: Creating a Barometric Tool of Public Health Engagement for the Republic of Slovenia”, *Frontiers in Public Health*, Vol. 9, <https://doi.org/10.3389/fpubh.2021.644235>. [28]
- Kohl, H. et al. (2012), “The pandemic of physical inactivity: global action for public health”, *The Lancet*, Vol. 380/9838, pp. 294-305, [https://doi.org/10.1016/s0140-6736\(12\)60898-8](https://doi.org/10.1016/s0140-6736(12)60898-8). [16]
- Kovacs, V. et al. (2021), “Physical activity, screen time and the COVID-19 school closures in Europe – An observational study in 10 countries”, *European Journal of Sport Science*, pp. 1-10, <https://doi.org/10.1080/17461391.2021.1897166>. [27]
- Mackett, R. and B. Brown (2011), *Transport, Physical Activity and Health: Present knowledge and the way ahead*, UCL, http://www.cege.ucl.ac.uk/research/projects?sq_content_src=%2BdXJsPWh0dHAIM0EIMkYlMkZ3d3cyLmNIZ2UudWNsLmFjLnVrJTJGcmVzZWZyY2giMkZSZXNQcm9qRGV0LmFzcCUzRkIEJTNEMTc0JmFsbD0x (accessed on 25 October 2021). [19]
- Milton, K., F. Bull and A. Bauman (2010), “Reliability and validity testing of a single-item physical activity measure”, *British Journal of Sports Medicine*, Vol. 45/3, pp. 203-208, <https://doi.org/10.1136/bjsm.2009.068395>. [8]
- Ng, S. and B. Popkin (2012), “Time use and physical activity: a shift away from movement across the globe”, *Obesity Reviews*, Vol. 13/8, pp. 659-680, <https://doi.org/10.1111/j.1467-789x.2011.00982.x>. [17]
- Paterson, D. et al. (2021), “Exploring the impact of COVID-19 on the movement behaviors of children and youth: A scoping review of evidence after the first year”, *Journal of Sport and Health Science*, <https://doi.org/10.1016/j.jshs.2021.07.001>. [26]
- Stalsberg, R. and A. Pedersen (2018), “Are Differences in Physical Activity across Socioeconomic Groups Associated with Choice of Physical Activity Variables to Report?”, *International Journal of Environmental Research and Public Health*, Vol. 15/5, p. 922, <https://doi.org/10.3390/ijerph15050922>. [12]
- Stalsberg, R. and A. Pedersen (2010), “Effects of socioeconomic status on the physical activity in adolescents: a systematic review of the evidence”, *Scandinavian Journal of Medicine & Science in Sports*, Vol. 20/3, pp. 368-383, <https://doi.org/10.1111/j.1600-0838.2009.01047.x>. [15]
- Stassen, G. et al. (2021), “Questionnaire choice affects the prevalence of recommended physical activity: an online survey comparing four measuring instruments within the same sample”, *BMC Public Health*, Vol. 21/1, <https://doi.org/10.1186/s12889-020-10113-9>. [9]
- Stockwell, S. et al. (2021), *Changes in physical activity and sedentary behaviours from before to during the COVID-19 pandemic lockdown: A systematic review*, BMJ Publishing Group, <https://doi.org/10.1136/bmjsem-2020-000960>. [24]

- Van Hecke, L. et al. (2016), "Variation in population levels of physical activity in European children and adolescents according to cross-European studies: a systematic literature review within DEDIPAC", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 13/1, <https://doi.org/10.1186/s12966-016-0396-4>. [4]
- White, R. et al. (2017), "Domain-Specific Physical Activity and Mental Health: A Meta-analysis", *American Journal of Preventive Medicine*, Vol. 52/5, pp. 653-666, <https://doi.org/10.1016/j.amepre.2016.12.008>. [22]
- Whiting, S. et al. (2020), "Physical Activity, Screen Time, and Sleep Duration of Children Aged 6–9 Years in 25 Countries: An Analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017", *Obesity Facts*, pp. 1-13, <https://doi.org/10.1159/000511263>. [14]
- Whiting, S. et al. (2021), "Physical inactivity in nine European and Central Asian countries: an analysis of national population-based survey results", *European Journal of Public Health*, Vol. 31/4, pp. 846-853, <https://doi.org/10.1093/eurpub/ckab028>. [2]
- WHO (2021), *2021 physical activity factsheets for the European Union Member States in the WHO European Region*, World Health Organization Regional Office for Europe, <https://apps.who.int/iris/handle/10665/345335>. [10]
- WHO (2021), *Prevalence of insufficient physical activity among adults aged 18+ years (crude estimate) (%)*, [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-insufficient-physical-activity-among-adults-aged-18-years-\(crude-estimate\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-insufficient-physical-activity-among-adults-aged-18-years-(crude-estimate)-(-)) (accessed on 1 February 2021). [3]
- WHO (2020), *Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 2. Key data.*, World Health Organization Regional Office for Europe, <https://apps.who.int/iris/handle/10665/332104>. [13]
- WHO (n.d.), *Global Physical Activity Questionnaire (GPAQ) Analysis Guide*, <http://www.who.int/chp/steps/GPAQ/en/index.html> (accessed on 29 January 2021). [5]
- WHO (n.d.), *STEPwise Approach to NCD Risk Factor Surveillance (STEPS)*, <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps> (accessed on 22 October 2021). [6]
- Wilke, J. et al. (2021), "A Pandemic within the Pandemic? Physical Activity Levels Substantially Decreased in Countries Affected by COVID-19", *International Journal of Environmental Research and Public Health* 2021, Vol. 18, Page 2235, Vol. 18/5, p. 2235, <https://doi.org/10.3390/IJERPH18052235>. [25]



From:
Step Up! Tackling the Burden of Insufficient Physical Activity in Europe

Access the complete publication at:

<https://doi.org/10.1787/500a9601-en>

Please cite this chapter as:

OECD/World Health Organization (2023), "Physical activity in Europe: Trends and patterns", in *Step Up! Tackling the Burden of Insufficient Physical Activity in Europe*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/1d229f1f-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.