

# Global surveillance of young people's physical activity

---

Dr Regina Guthold  
Maternal, Newborn, Child  
and Adolescent Health and  
Ageing Department  
WHO, Geneva



# Outline

- Health effects of physical activity and sedentary behaviour for young people
- WHO Guidelines on physical activity and sedentary behaviour
- Monitoring of the guidelines
- Do young people meet the guidelines?
- The Global Action Plan on Physical Activity 2018-2030: actions to increase young people's physical activity



# Health effects of physical activity & sedentary behaviour for young people

## Enough physical activity improves:

- Physical fitness
- Cardiometabolic health
- Bone health
- Cognitive outcomes

## Enough physical activity reduces:

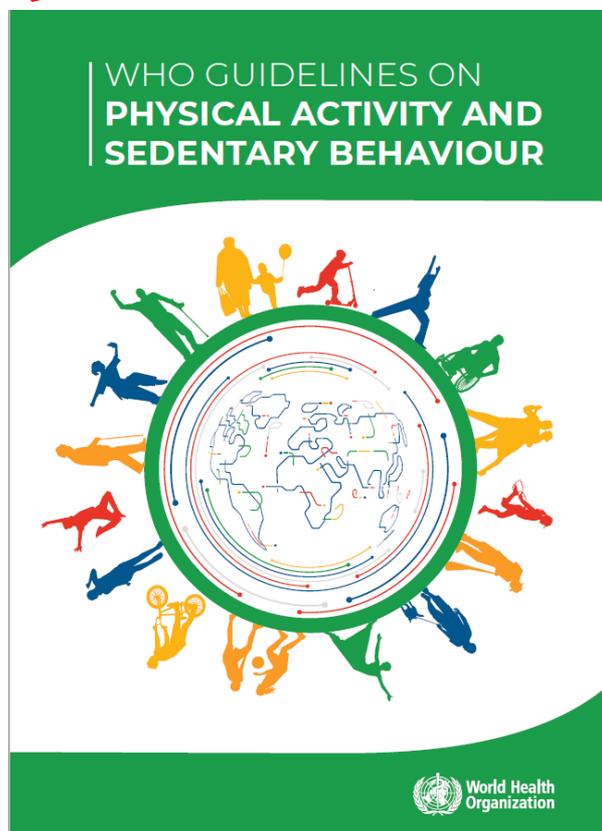
- Depression
- Adiposity

## Too much sitting negatively impacts:

- Physical fitness
- Cardiometabolic health
- Adiposity
- Sleep duration
- Behavioural conduct/pro-social behaviour

# WHO Guidelines on physical activity and sedentary behaviour

New - 2020



Guidelines for

- Children and adolescents aged 5-17 years
- Adults
- Older adults
- Population subgroups such as children and adolescents living with a disability

<https://www.who.int/publications/i/item/9789240015128>

# Guidelines for children and adolescents: moderate- to vigorous-intensity physical activity

At least



**60**

minutes a day



**moderate- to vigorous- intensity  
physical activity**, across the  
week; most of this physical activity  
should be aerobic.



# How are the guidelines assessed?

## Moderate- to vigorous-intensity activity



The next 4 questions ask about physical activity. Physical activity is any activity that increases your heart rate and makes you breathe hard. Physical activity can be done in sports, playing with friends, walking to school, or in physical education class. Some examples of physical activity are running, fast walking, biking, dancing, football, and COUNTRY SPECIFIC EXAMPLES.

Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, school activities, playing with friends, or walking to school. Some examples of physical activity are running, brisk walking, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football and surfing [country-specific examples can be given].

- During the past 7 days, on how many days were you physically active for a total of at least 60 minutes *per day*? ADD UP ALL THE TIME YOU SPENT IN ANY KIND OF PHYSICAL ACTIVITY EACH DAY.
  - 0 days
  - 1 day
  - 2 days
  - 3 days
  - 4 days
  - 5 days
  - 6 days
  - 7 days

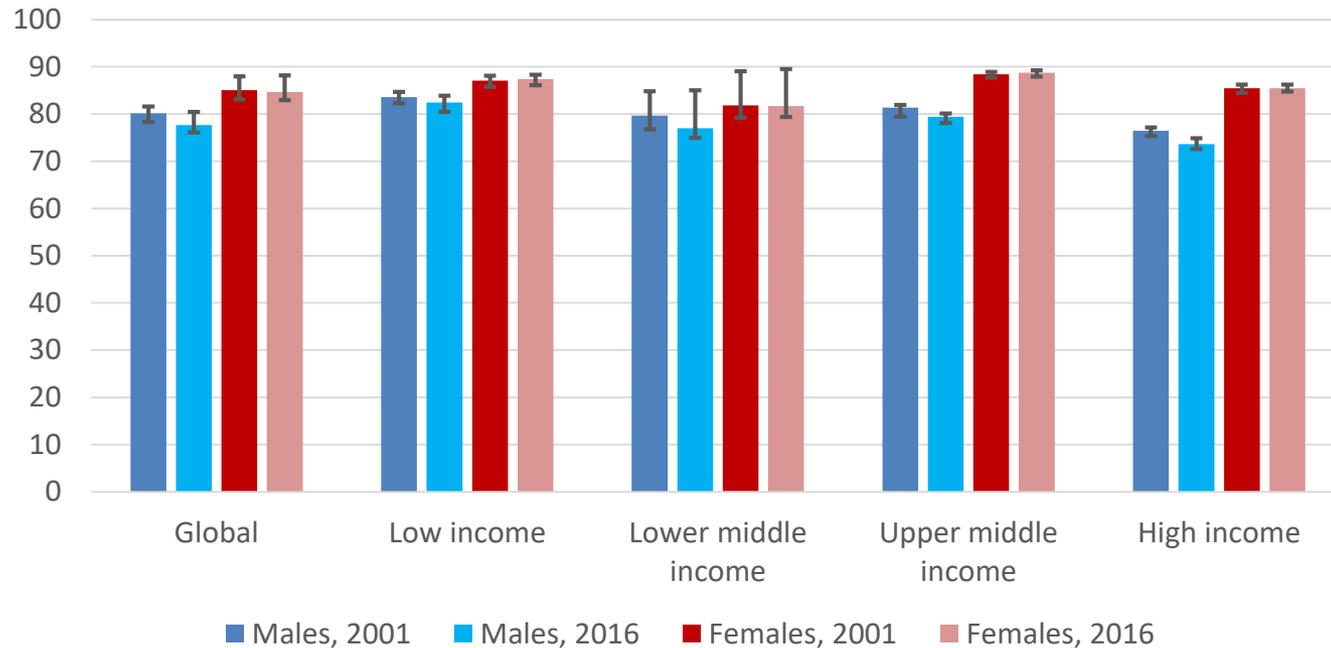
**MQ13** Over the **past 7 days**, on how many days were you physically active for a total of at least **60 minutes** per day?  
 Please **add up** all the time you spent in physical activity each day.

0 days	1 day	2 days	3 days	4 days	5 days	6 days	7 days
<input type="radio"/>							

*NOTE: some countries have national surveys with similar questions*

<https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey>  
<http://www.hbsc.org/>

# Do young people meet the guidelines? Moderate- to vigorous-intensity activity



Prevalence of **NOT** meeting the guidelines among school going adolescents, 11-17 years, 2001 and 2016 (data from 146 countries).

- About 4 in 5 adolescents do NOT meet guidelines
- Prevalence high across all income groups
- Situation hasn't improved since 2001, particularly in girls

[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(19\)30323-2/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(19)30323-2/fulltext)

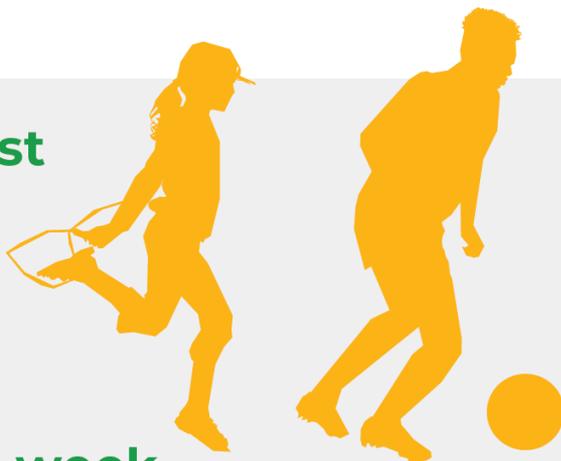
# Guidelines for children and adolescents: vigorous-intensity physical activity



On at least

3

days a week

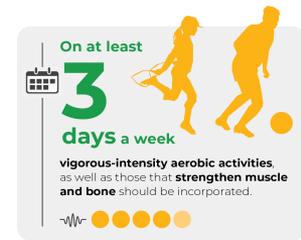


**vigorous-intensity aerobic activities**,  
as well as those that **strengthen muscle  
and bone** should be incorporated.



# How are the guidelines assessed?

## Vigorous-intensity activity



MQ14 Outside school hours: how often do you usually exercise in your free time so much that you get out of breath or sweat?

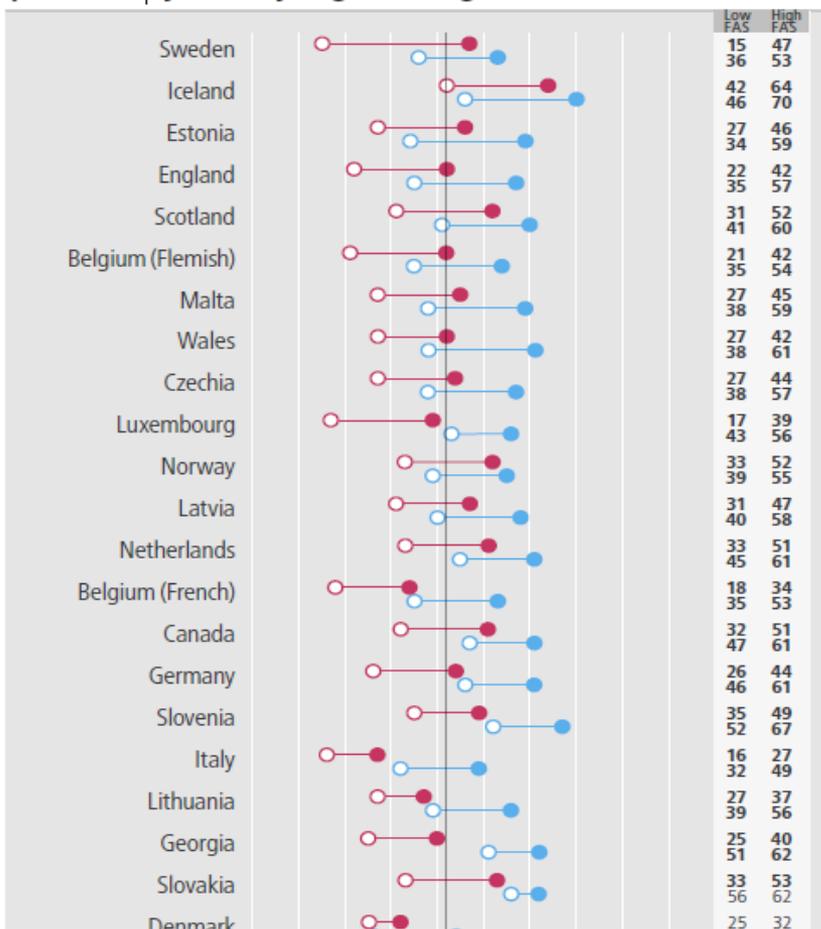
- Every day
- 4 to 6 times a week
- 2 to 3 times a week
- Once a week
- Once a month
- Less than once a month
- Never

- Vigorous-intensity activity is less frequently assessed in international and national surveys as compared to moderate-to-vigorous-intensity activity
- Questions are less standardized

# Do young people meet the guidelines? Vigorous-intensity activity



Prevalence by family affluence:  
vigorous physical activity four or more times  
per week by country/region and gender



- Participation lower in girls, and lower in poorer families
- Reported data don't match WHO guidelines (4+ times/week vs 3+ times/week)

<http://www.hbsc.org/publications/international/>

% vigorous PA 4+ times/week

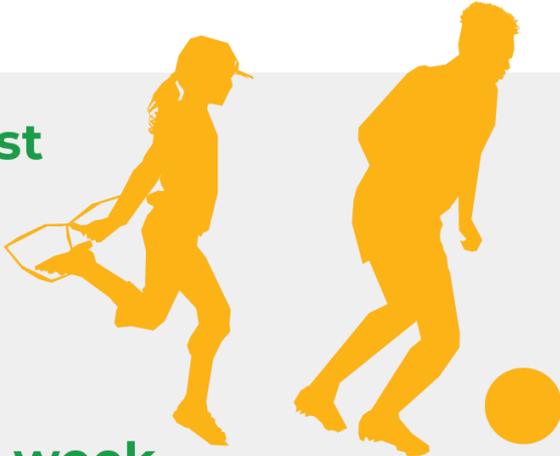
# Guidelines for children and adolescents: strengthening activities

On at least

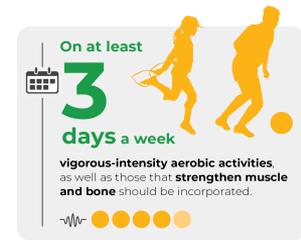
**3**

days a week

**vigorous-intensity aerobic activities,**  
as well as those that **strengthen muscle  
and bone** should be incorporated.



# How are the guidelines assessed? Strengthening activities



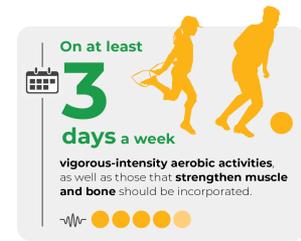
During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weightlifting?

- A. 0 days
- B. 1 day
- C. 2 days
- D. 3 days
- E. 4 days
- F. 5 days
- G. 6 days
- H. 7 days



- New core question in the GSHS (used to be in the 'expanded' list)
- Global data availability extremely weak

# Do young people meet the guidelines? Strengthening activities



## UNITED STATES

### CDC Healthy Schools

- In 2017, 51.1% of high school students participated in muscle strengthening exercises (e.g., push-ups, sit-ups, weight lifting) on 3 or more days during the previous week.<sup>9</sup>

<https://www.cdc.gov/healthyschools/physical-activity/facts.htm>

## UNITED KINGDOM

Assessing population levels of physical activity and sedentary behaviour in the UK - what we do currently and recommendations for future approaches.

### Summary Document

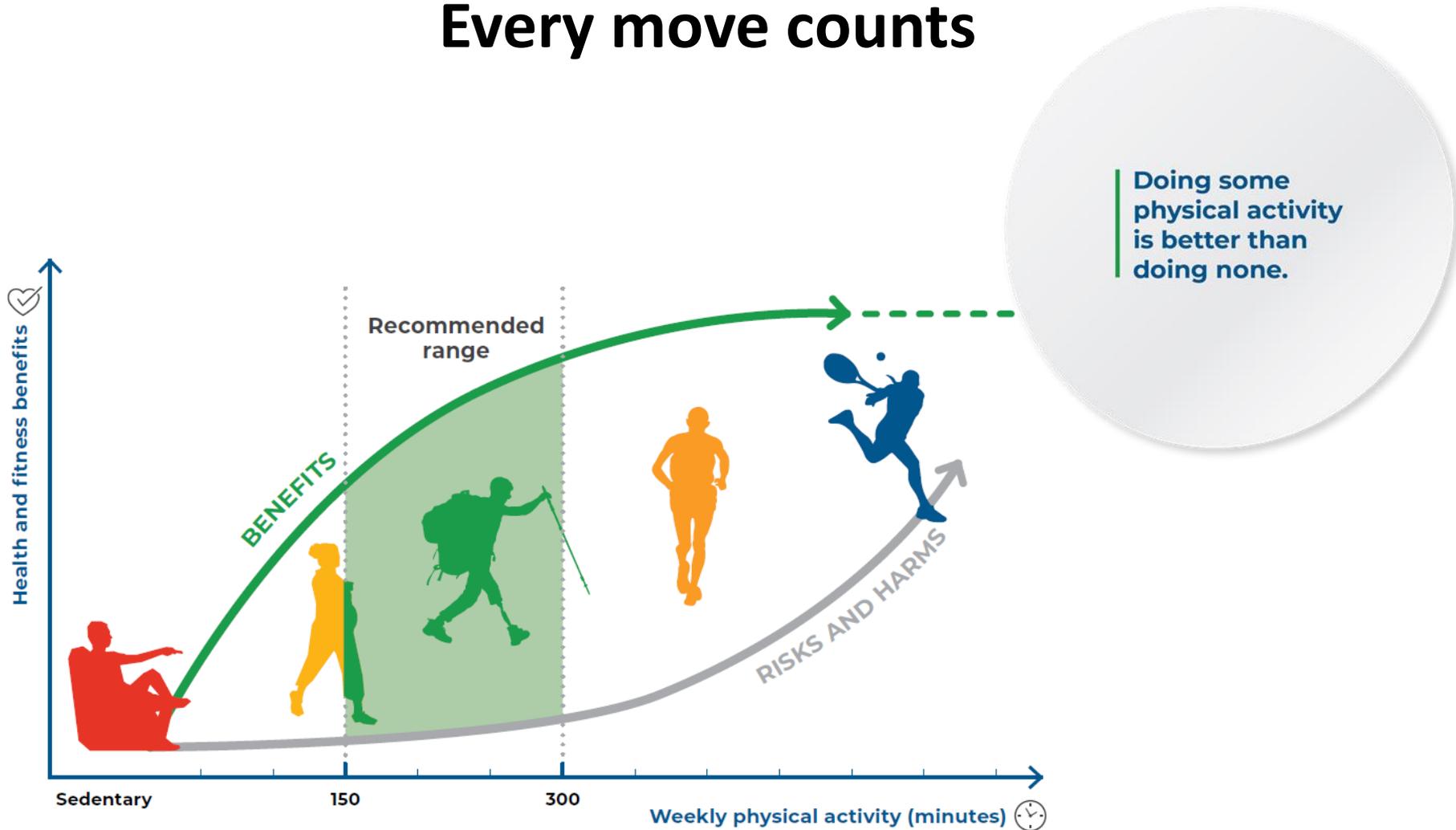
*Tessa Strain, Karen Milton, Philippa Dall, & Martyn Standage, for the Implementation and Surveillance Group and the UK physical activity guidelines review group. May 2018.*

### Child Muscle Strengthening Activities

- Currently not measured by any survey.

<https://www.bristol.ac.uk/media-library/sites/sps/documents/cmo/uk-physical-activity-guidelines-surveillance-report.pdf>

# Guidelines for children and adolescents: Every move counts



# Guidelines for children and adolescents: sitting time

## LIMIT

the amount of time spent being sedentary, particularly recreational screen time.



Note: No threshold defined due to limited evidence on how much sitting is too much

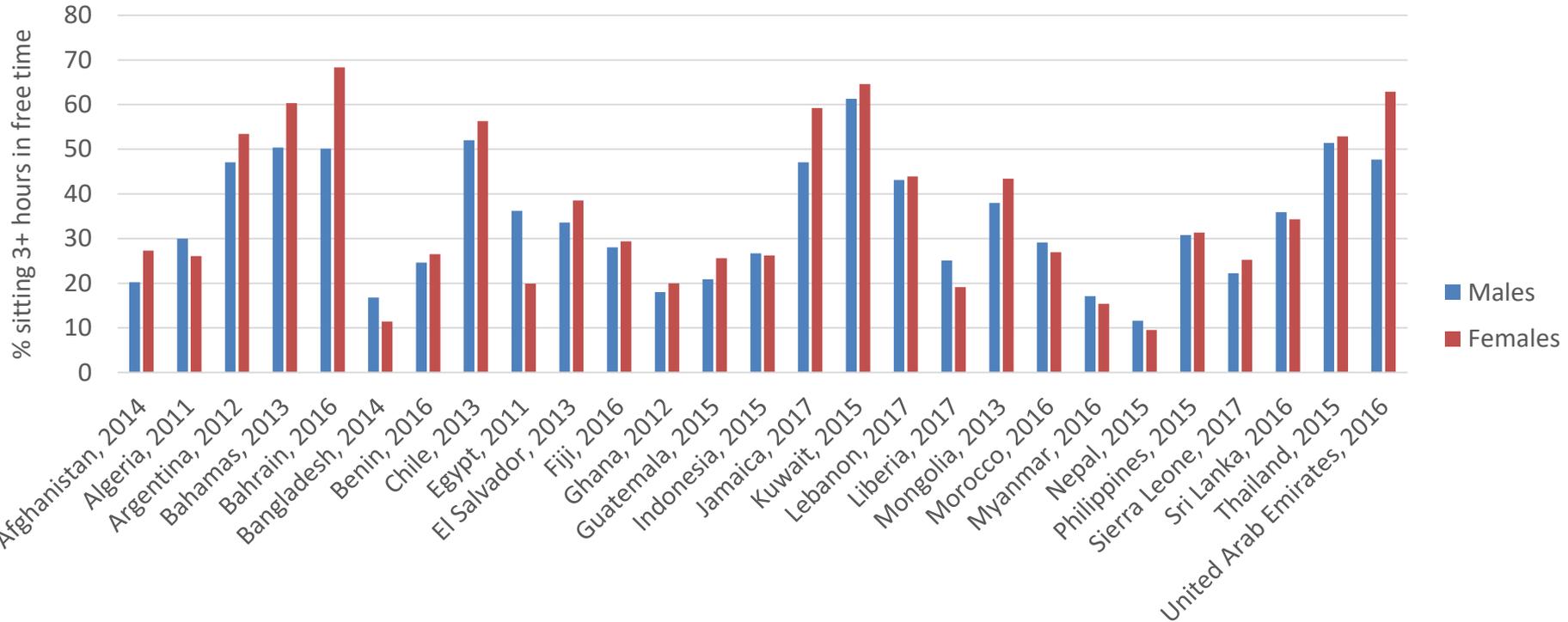


# Do young people meet the guidelines?

## Sitting time

**LIMIT**

the amount of time spent being sedentary, particularly recreational screen time.



% sitting 3+ hours in free time among students, 13-15 years, Global School-based Student Health Survey, selected countries

- Wide range in prevalence across countries
- Time spent sitting at school/for homework not considered
- No exact match with guidelines

<https://www.who.int/ncds/surveillance/gshs/en/>

# Objective physical activity measurement in young people

- Physical activity can also be measured objectively, using devices that capture movement (called ‘accelerometers’)
- Allows to track physical activity at different intensities, sitting behaviour, and sleep
- Several (mostly high-income) countries have measured physical activity objectively among young people at a national level (e.g. US, Canada, Norway)
- Global data availability still weak



# Global Action Plan on Physical Activity 2018-2030 (GAPPA)



- Requested by WHO Member States
- Developed through a worldwide consultation process involving governments and stakeholders from many sectors

## Vision

**More active people  
for a healthier world.**



## Target

**A 15% relative  
reduction in the  
global prevalence of physical  
inactivity in adults and in  
adolescents by 2030.**



# Four objectives: 20 policy actions

**1** **CREATE ACTIVE SOCIETIES**  
SOCIAL NORMS AND ATTITUDES



4

6

**3** **CREATE ACTIVE PEOPLE**  
PROGRAMMES AND OPPORTUNITIES



Total  
**20**  
Policy  
Actions

**2** **CREATE ACTIVE ENVIRONMENTS**  
SPACES AND PLACES



5

5

**4** **CREATE ACTIVE SYSTEMS**  
GOVERNANCE AND POLICY ENABLERS



# Objective 1: Create active societies



## STRATEGIC OBJECTIVE

Create a paradigm shift in all of society by enhancing knowledge and understanding of, and appreciation for, the multiple benefits of regular physical activity, according to ability and at all ages.

### *Examples for actions:*

- *Proper training for teachers to understand the value of promoting physical activity*
- *Engaging young people in organization of regular free mass participation initiatives*

«Increase young people's knowledge around the benefits of physical activity»



# Objective 2: Create active environments



## STRATEGIC OBJECTIVE

Create and maintain environments that promote and safeguard the rights of all people, of all ages, to have equitable access to safe places and spaces, in their cities and communities, in which to engage in regular physical activity, according to ability.

### *Examples for actions:*

- *Create the space for safe walking and cycling to school*
- *Improve provision of public open space*

«Create environments for young people that make it easy to be active»



# Objective 3: Create active people



## STRATEGIC OBJECTIVE

Create and promote access to opportunities and programmes, across multiple settings, to help people of all ages and abilities to engage in regular physical activity as individuals, families and communities.

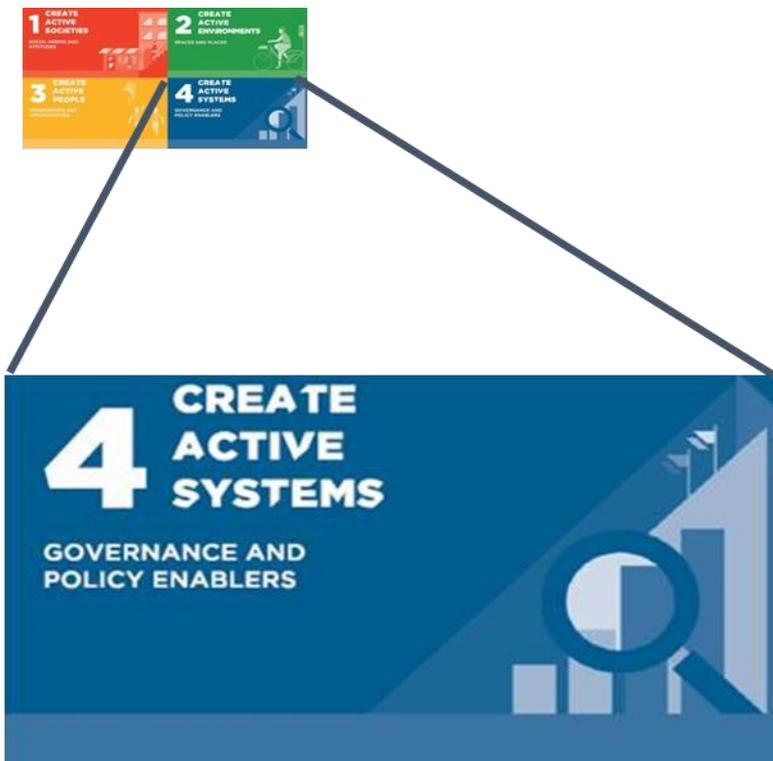
### *Example for action:*

- *Strengthen provision of good-quality physical education and more positive experiences and opportunities for active recreation, sports and play*

«Create plenty of opportunities for young people to be active»



# Objective 4: Create active systems



## STRATEGIC OBJECTIVE

Create and strengthen leadership, governance, multisectoral partnerships, workforce capabilities, advocacy and information systems across sectors to achieve excellence in resource mobilization and implementation of coordinated international, national and subnational action to increase physical activity and reduce sedentary behavior.

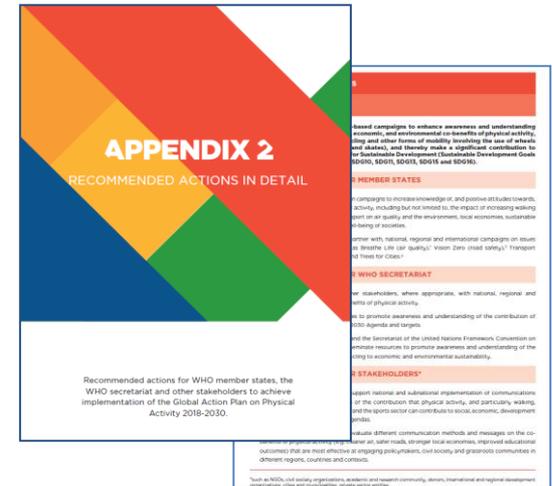
### *Example for action:*

- *Education and health sectors to co-lead implementation of health/physical activity promoting schools*

«Create an entire system that makes it easy at all levels for young people to be active»

# GAPPA & ACTIVE

- Many more specific actions for different stakeholders in [Appendix 2](#), grouped under the 4 objectives
- Collectively, they form a «**whole system approach**» to increasing physical activity opportunities
- «**ACTIVE** – a technical package for increasing physical activity» provides guidance on how to implement this approach
- **WHO** supports countries with implementation



<https://apps.who.int/iris/bitstream/handle/10665/275415/9789241514804-eng.pdf>

# Summary

- Few young people meet the WHO guidelines on 60+ minutes of moderate to vigorous physical activity daily
- Need for more and better data on vigorous-intensity activities, muscle and bone strengthening activities, and sedentary behaviour
- More and better data will be important for targeted action
- The GAPPA offers a menu of actions to promote physical activity
- ACTIVE provides guidance on how to implement these actions





# THANK YOU!