





# Physical activity

# Objectives

- You can identify factors that affect your physical activity and sleep.
- You can assess the significance of physical activity and sleep in terms of your health.
- You can provide justified suggestions about how to maintain health-promoting lifestyles and prevent those that endanger health.
- You can prepare a diverse plan to promote your health and well-being, taking into consideration the importance of physical activity, recovery and sleep in terms of maintaining the ability to study and work.
- You can realistically assess implementation of the plan and achievement of the goals.

# Lesson 1

Physical activity  
Benefits of physical activity  
Sedentary behaviour  
Physical activity  
recommendation



 SMART  
MOVES

# Discuss together

- What is physical activity?
- What kind of physical activity do you like?



# What is physical activity?

- Physical activity = all types of everyday activity, such as
  - games
  - physical activity during the school day
  - everyday activities during leisure time, such as physical activity and sport hobbies, housework
  - active movement from one place to another, for example, walking, cycling or by wheelchair

- **Physical activity** = all activity that consumes more energy than sedentary behaviour.

# Why should we be physically active?



[62 Smart Moves - All physical activity is a positive step - YouTube](#)

# What could physical activity do for you?





# The benefits of physical activity

Write down the benefits of physical activity on, for example, a Padlet wall. You can examine the topic from the following angles:

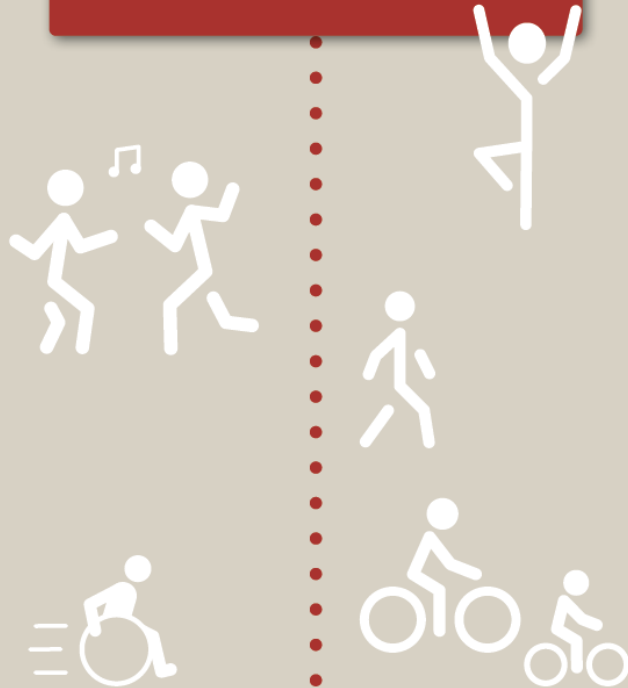
- physical well-being
  - psychological well-being
  - social well-being
  - learning
  - diseases
- 
- Complete the list together.
  - [More information in Finnish](#)



# Effects of physical activity

What is the time frame in which a beginner can expect to see effects?

**immediately**



## The brain and nervous system

- Concentration and attentiveness improve.
- Energy levels increase due to the following factors:
  - Nerve impulses increase and become more intense as neurotransmitter secretion increases.
  - Activity of the sympathetic nervous system responsible for activating the body increases.
  - Blood flow to the brain increases and the frontal lobe is activated.
- After physical activity, the calming parasympathetic nervous system is activated and the body relaxes, which can make it easier to fall asleep and may improve the quality of sleep.

## Muscles and metabolism

- Increased blood flow brings oxygen, glucose, and lipids to the muscles to fuel muscle work.
- Energy consumption increases, which has a positive effect on lipid and glucose levels.

## Respiratory and circulatory system

- Physical activity increases the heart rate, breathing rate and blood flow.
- After physical activity, the resting blood pressure decreases.

## Joints

- Metabolism is improved in the joint cartilage and surrounding supporting tissues. Synovial fluid lubricates the joint surfaces, and the range of motion of the joints increases.
- Pain may be relieved.

# The effects of regular physical activity

## within a couple of weeks



- **Mood** improves, stress, mild symptoms of depression and anxiety may be alleviated.
- **Sleep** may increase in duration and include fewer disruptions.
- **Muscle performance** improves as nerve impulses to the muscles become more efficient.
- **Balance**, agility, and coordination improve.
- Possible **musculoskeletal pain** is alleviated.

## within a few months



- **Brain functions** and well-being improve as the positive effects on the nervous system and blood vessels continue.
- **Basal metabolism** is enhanced, and fat cells lose fat.
- **Resting heart rate** and blood pressure decrease, heart muscle and respiratory muscle function improves, and lung and vascular function is enhanced. This will improve **endurance**.
- **Muscle strength** increases as size of the muscle cells grows.
- The risk of prolonged back pain is reduced.
- Movement maintains **functional capacity** and can ease other musculoskeletal pains.

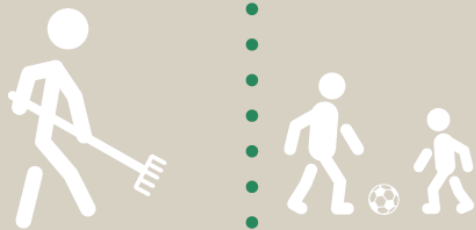
# The effects of regular physical activity

within six months



- Functional connections between brain structures are reinforced.
- **Stress tolerance** improves.
- **Blood lipid levels** improve.
- **Glucose metabolism** is enhanced.
- **Blood pressure** decreases as the condition and function of the arteries improve.
- **Immune system** function is boosted.

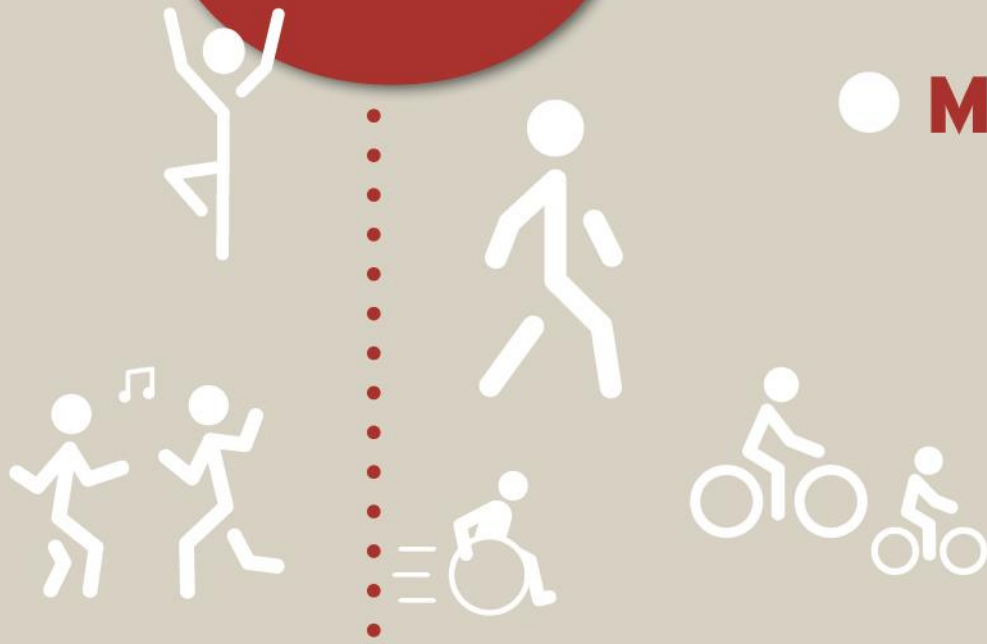
in the future



- **The brain** continues to undergo functional and structural changes that improve thinking and memory functions and reduce the risk of memory disorders.
- **The risk of many other diseases** is reduced. These include: cardiovascular diseases, type 2 diabetes, musculoskeletal conditions, many cancers such as bowel, breast, and prostate cancer
- **Weight management** becomes easier.
- **Bones** get stronger.
- The positive effects of exercise on **intestinal bacteria** will be reflected in overall health.
- **The need for medication** may decrease.

# Effects of physical activity

## Immediate



- **The brain and nervous system**
- **Muscles and metabolism**
- **Respiratory and circulatory system**
- **Joints**

# The effects of regular physical activity

within  
a couple of  
weeks



● **Mood**

● **Sleep**

● **Muscle performance**

● **Balance**

● **Musculoskeletal system**

# The effects of regular physical activity

within  
a few  
months

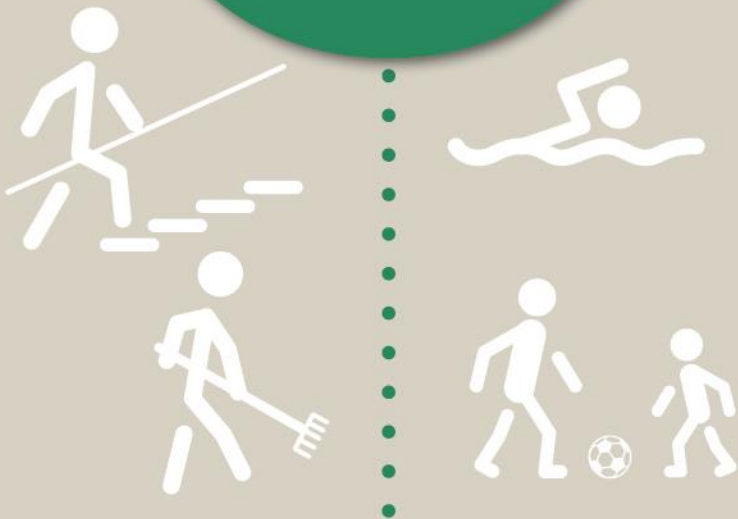


in addition to previous effects

- Brain function
  - Basal metabolism
- Resting heart rate
  - Aerobic fitness
- Muscle strength
  - Functional capacity

# The effects of regular physical activity

**within six months**



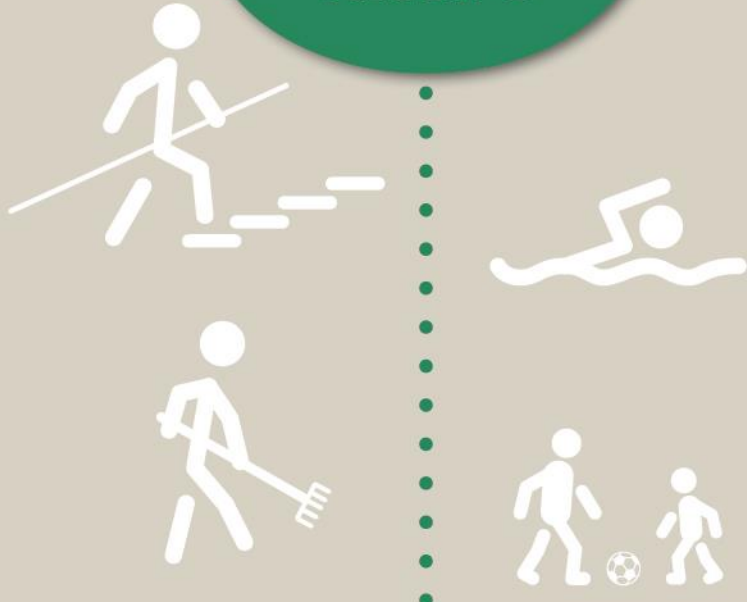
in addition to previous effects

- **Stress tolerance**
- **Blood lipid levels**
- **Glucose metabolism**
- **Blood pressure**
- **Immune system**



# The effects of regular physical activity

in the future



in addition to previous effects

- **Thinking and memory functions**
- **The risk of many other diseases**
  - **The need for medication**
- **Weight management**
  - **Bones**
- **Intestinal bacteria**

## Discuss together

- How do long periods of sitting or other sedentary behaviour affect your body and mind? How do you feel afterwards?
- Studies show that students sit for an average of 9–10 hours per day. How much time do you think you spend sitting?



# Sedentary behaviour is like poison for your body

- Long periods of sedentary behaviour are a real physical challenge for our bodies. They may expose people to various symptoms in the musculoskeletal system, such as neck and shoulder area symptoms.
- Long periods of sedentary behaviour are also a health risk in terms of developing various cardiac and metabolic diseases.

# How do long periods of sitting or sedentary behaviour affect our health?

- Sitting slows the blood circulation in your body, also in the brain. It can also cause headache and slow your thinking.
- Sitting causes monotonous strain on the body and may lead to aches and tension in, for example, the neck-shoulder area and in the back.
- Your joints may become stiff.
- A lifestyle of sitting puts strain on the lower back structures and slows their metabolism. You may feel this as stiffness or a throbbing sensation.
- Sitting causes swelling in the legs because blood flow from the veins to the heart slows down.

# It's always a good idea to take breaks in sedentary behaviour

- All physical activity is a positive step!
- It's important to take breaks in sitting during lessons– this keeps both mind and body alert throughout the lesson.
- Plan your own exercise breaks or try an exercise break from a video.
- Start using the [BREAK PRO exercise break application](#)
- What would be pleasant ways for the whole group to reduce sedentary behaviour and increase movement during the school day? Choose one of these and make it a habit!



[62 Smart Moves - Boxing gets your body moving - YouTube](#)

# Physical activity recommendation for 7–17-year-olds



Physical activity recommendation for children and adolescents – Pyy and Aida's day

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# Active quiz

- Stand up.
- March in place between the answers.

1. How many hours of moderate and vigorous physical activity is recommended for 7–17-year-olds each day?

- A) 1 h
- B) 2 h
- C) 3 h

- Answer by doing the same number of **burpees** (go to the push-up position and then jump up) that corresponds to the hours.





# Correct answer

1. How many hours of moderate and vigorous physical activity is recommended for 7–17-year-olds each day?

- A) 1 h
- B) 2 h
- C) 3 h

You should get at least one hour of moderate or vigorous physical activity each day.



2. According to the recommendation, how many times per week should 7–17-year-olds be physically active in order to improve endurance?

- A) 2 times
- B) 3 times
- C) 4 times

- Answer by doing one **squat** for each physical activity session.



# Correct answer

2. According to the recommendation, how many times per week should 7–17-year-olds be physically active in order to improve endurance?

- A) 2 times
- B) 3 times**
- C) 4 times

7–17-year-olds should be physically active in a way that improves endurance at least 3 times per week.



3. According to the recommendation, how many times per week should 7–17-year-olds be physically active in a way that strengthens muscles and bones?

- A) 1 time
- B) 2 times
- C) 3 times

- Answer by doing one **push-up** for each physical activity session.



# Correct answer

3. According to the recommendation, how many times per week should 7–17-year-olds be physically active in a way that strengthens muscles and bones?

- A) 1 time
- B) 2 times
- C) 3 times**

7–17-year-olds should be physically active in a way that strengthens muscles and bones at least 3 times per week.



4. It's a good idea to take breaks in sedentary behaviour, for example, by walking around or taking an exercise break.

A) Correct

B) Incorrect

- If you answer A), do 10 side stretches.  
If you answer B), do 10 squat jumps.



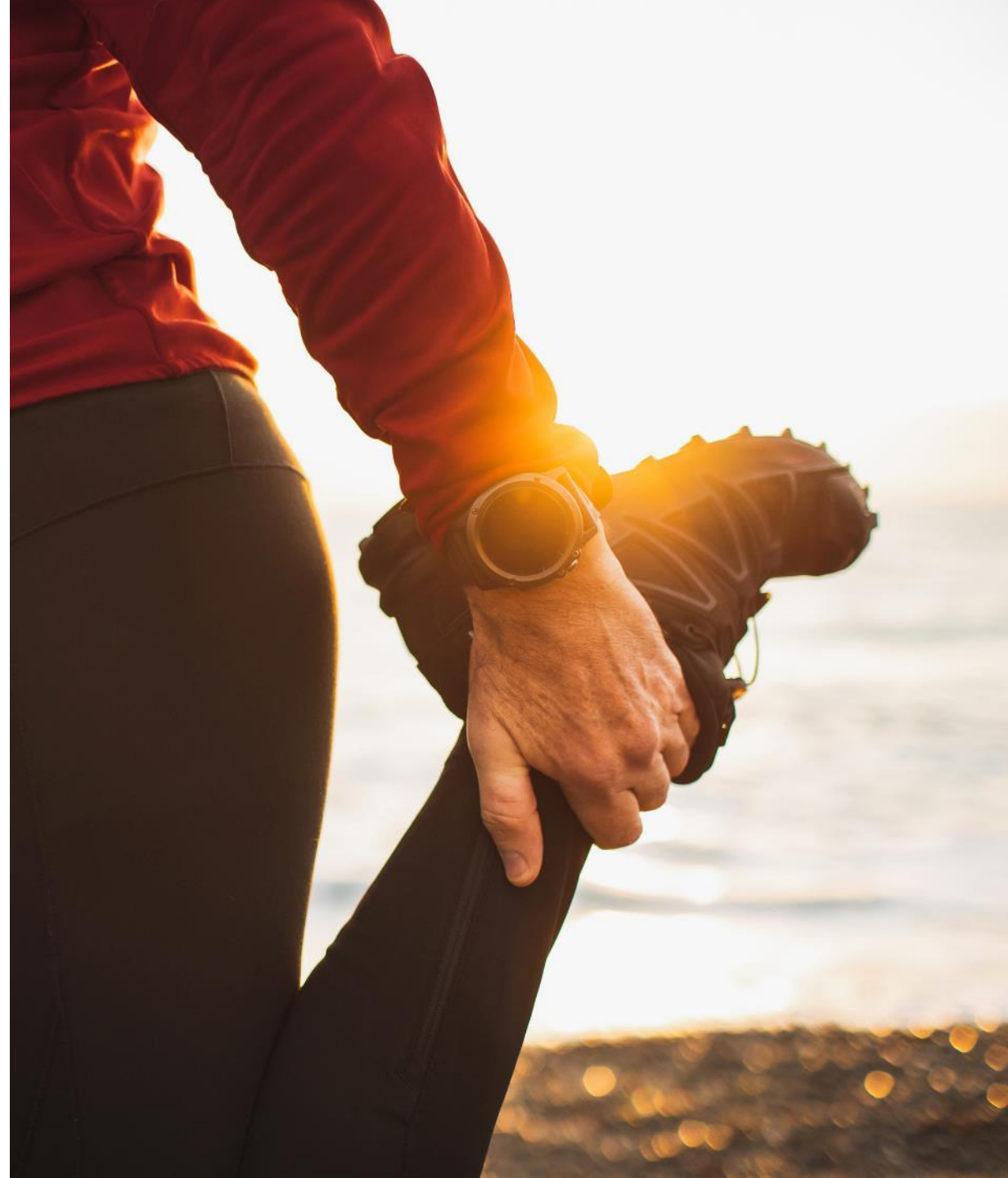
# Correct answer

4. It's a good idea to take breaks in sedentary behaviour, for example, by walking around or taking an exercise break.

**A) Correct**

B) Incorrect

It's a good idea to take breaks during long periods of sedentary behaviour in order to remain alert.



5. You can increase your own physical activity with everyday physical activity, such as walking or cycling to school and hobbies more often or choosing to use the stairs instead of taking the lift.

A) Correct

B) Incorrect

- If you answer A), do 10 side-to-side body rotations.

If you answer B), rotate your hands 10 times.





# Correct answer

5. You can increase your own physical activity with everyday physical activity, such as walking or cycling to school and hobbies more often or choosing to use the stairs instead of taking the lift.

**A) Correct**

B) Incorrect

Being active whenever you can will make you feel better.



# Physical activity recommendation for 7–17-year-olds

- [Read more](#)
- You can use the prepared [presentation material](#)



# Light, moderate and vigorous physical activity

- With a pair, find the difference between light, moderate and vigorous physical activity.
- Use different sources, for example:
  - [Recommendation on physical activity for children and adolescents aged 7–17 years](#)
  - [Physical fitness and work ability – Smart Moves \(in Finnish\)](#)



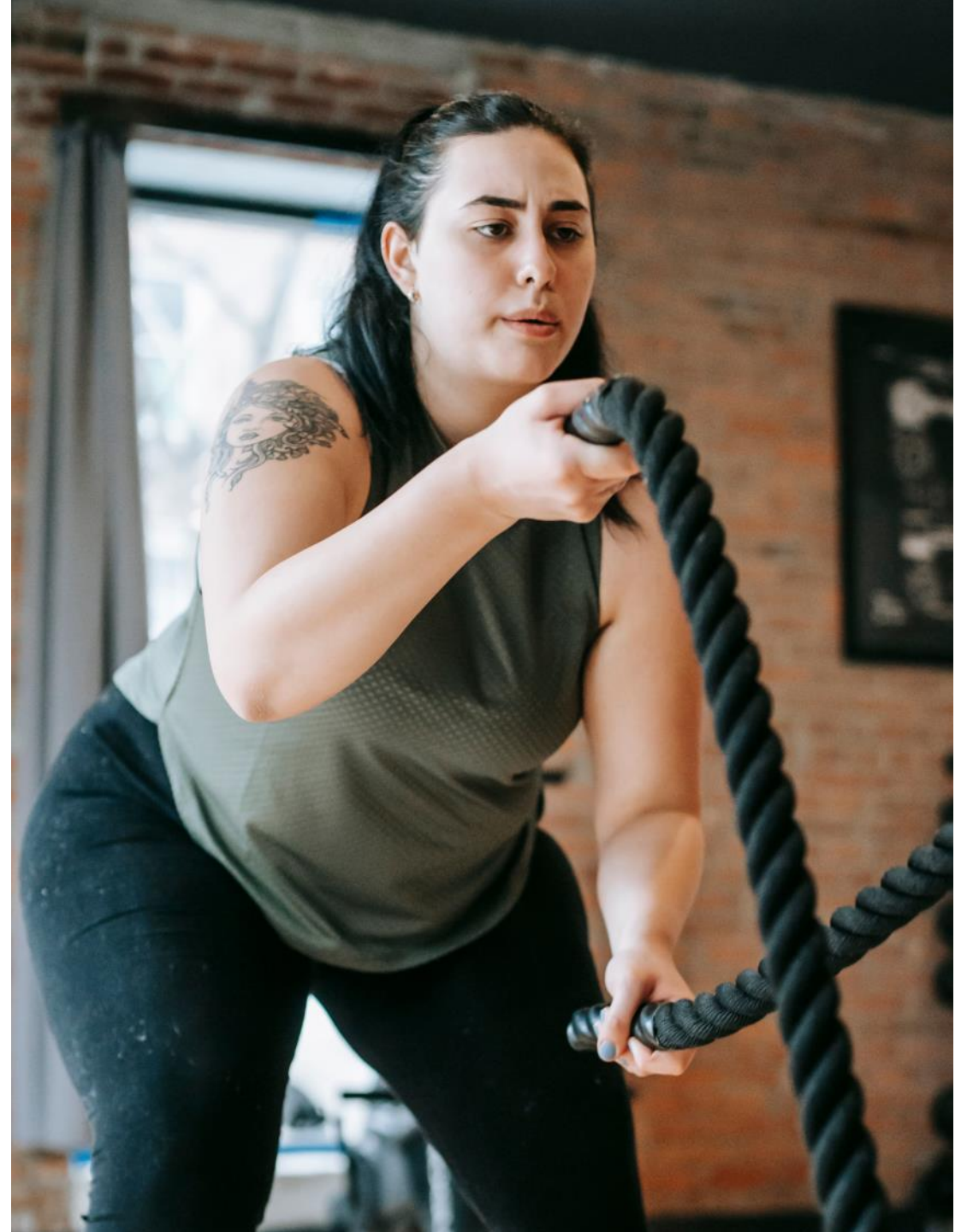
# Physical activity to improve endurance

- Vigorous physical activity improves endurance and cardiovascular function
- Vigorous physical activity
  - produces greater health impacts in the body than lighter physical activity
  - strengthens the heart muscle
  - improves blood circulation
  - increases oxygen use efficiency



# Physical activity to strengthen your muscles and bones

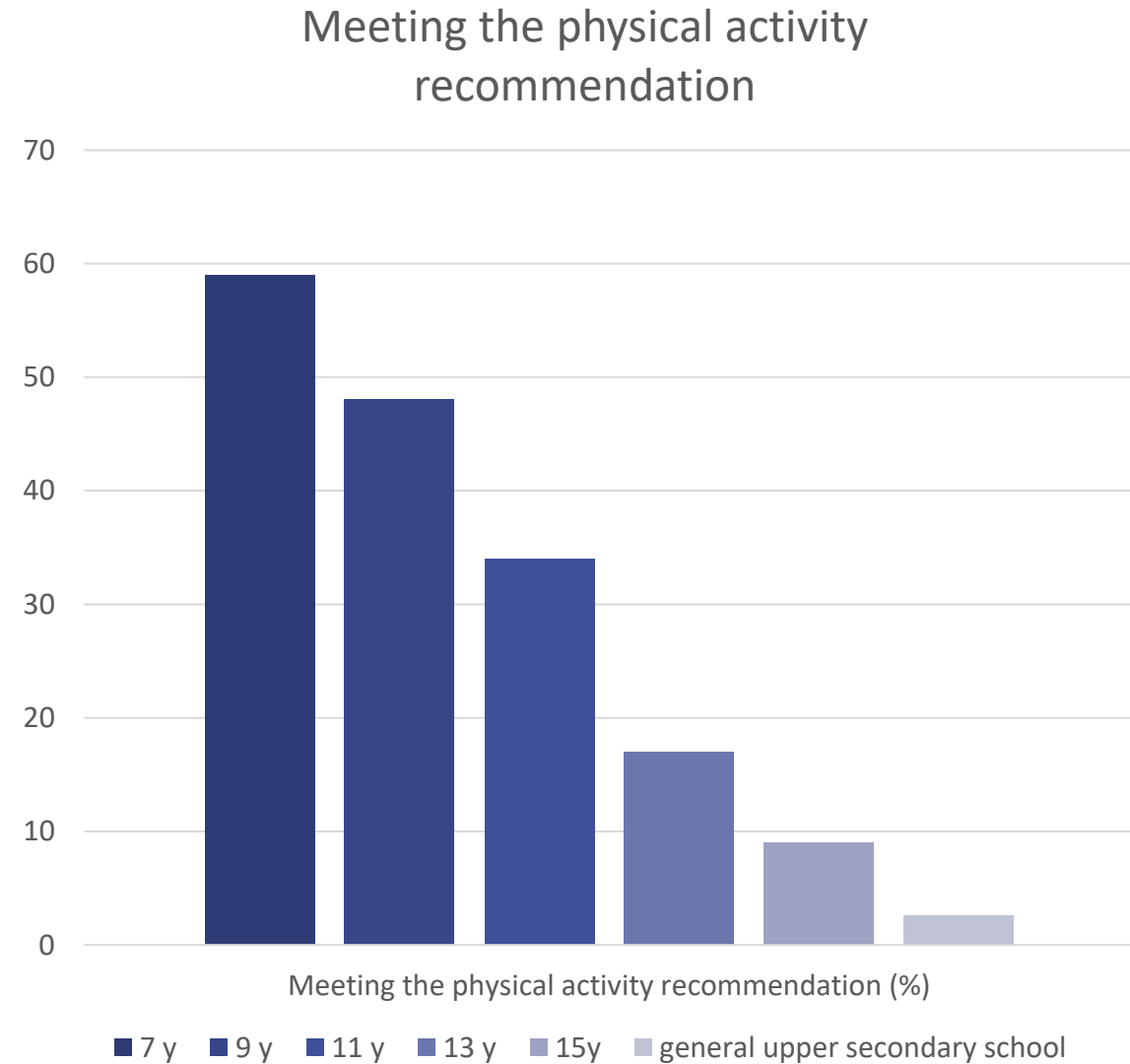
- This type of physical activity is important in order to develop and maintain muscular fitness.
  - for example, body weight training, gym workouts and group fitness, stair climbing
- Different types of jumps and quick directional changes strengthen the bones.
  - For example, gym classes and fast-paced ball games
- The bones of people who are physically active contain more minerals and have a stronger structure in comparison to people who are less active.



# Research data on the physical activity of young people

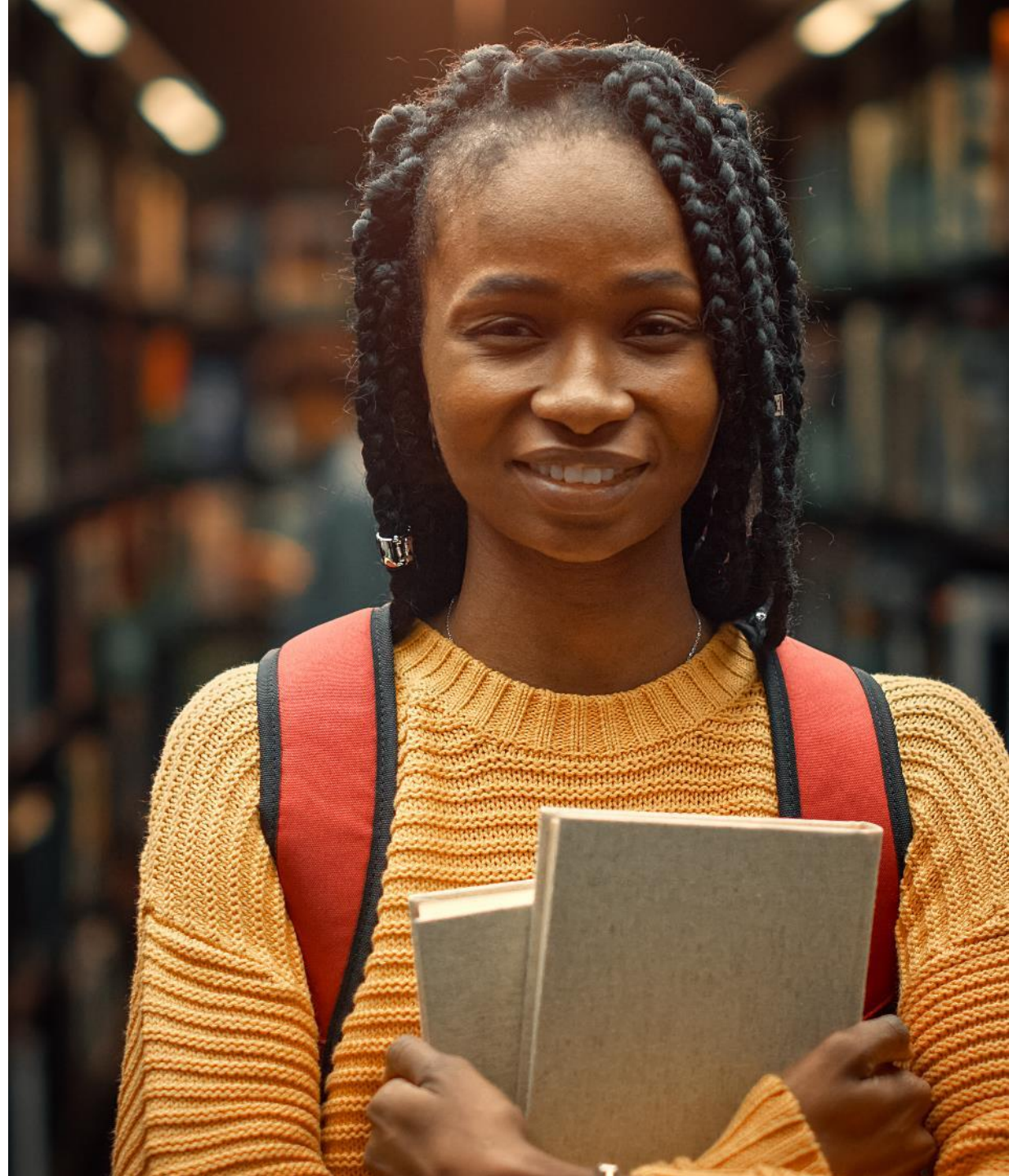
## LIITU report 2020 & LIITU report 2022

- What are the reasons for physical activity or lack of physical activity?
- What would inspire young people to be physically active?



# Diary

- Record your physical activity and sleep for one week using the paper or electronic diary template: [Diary for monitoring physical activity and sleep - UKK-instituutti \(ukkinstituutti.fi\)](https://www.ukkinstituutti.fi)
- After one week has passed, check your habits using the online physical activity questionnaire.




## Lesson 2

My physical activity

Physical activity and safety

Physical activity and working  
life



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# My physical activity

Compare your habits to the physical activity recommendation:

- Physical activity questionnaire for **people under 18:**
  - [PA Questionnaire - UKK Institute \(ukkinstituutti.fi\)](https://ukkinstituutti.fi)
- Assess your activity -online app for **people over 18:**
  - [Assess your activity online app](#)





# My sleep during the week

- Look at the bar graph showing how much you sleep in the online questionnaire summary view.
- Independent reflection:
  - Did you wake up in the morning feeling rested and alert?
  - What comes to mind regarding the amount of sleep you get?



# Plan for the future

- Independent reflection:
  - 1. Compare your habits with the physical activity recommendation.** Which areas of the physical activity recommendation do you think you're already doing well in? What do you want to maintain?
  - 2. Choose a development goal.** Is there an area in which you would like to see a change? What could you do to improve the situation?
  - 3. Make a plan.** Can you think of one small act that would help you reach your goal?



# Make a plan for increasing physical activity or sleep

Fill in the planning template: [Plan for improving physical activity or sleep](#)  
- [UKK-instituutti \(ukkinstituutti.fi\)](#)

# SMART goals

1. S = Specific
2. M = Measurable
3. A = Achievable
4. R = Relevant
5. T = Time-bound

# Brain break!



[Smart Moves: Brain break \(hands\) - YouTube](#)

# Physical activity and safety

## Can physical activity have negative effects?

- Go to the [Smart Moves](#) website (in Finnish) and look for answers to the following questions:
  - What causes acute injuries, stress-related injuries and overtraining?
  - How can injuries be prevented during physical activity?
  - What factors enhance recovery in physically active people?



# First aid and treatment of sports injuries

- The guidelines for first aid and treatment related to sports injuries have been updated.
- The previous ICE first aid guidelines (ice-compression-elevation) have been replaced by the new PEACE guidelines.
- A completely new element in the recommendation for treating sports injuries is the LOVE guidelines for rehabilitation measures in the days following first aid.
- Learn more about the new guidelines and then play the [ActionTrack game](#), which includes an assignment folder on first aid and treatment of sports injuries.
- [More information about treating sports injuries](#) in Finnish



**PEACE & LOVE**

## SPORT-RELATED INJURY

immediate care after the injury	subsequent management after the first days
<p><b>P</b> <b>PROTECT</b></p> <p><b>Protection</b> Avoid activities and movements that increase pain during the first few days after injury.</p>	<p><b>L</b> <b>LOAD</b></p> <p><b>Load</b> Let pain guide your gradual return to normal activities. Your body will tell you when it's safe to increase load.</p>
<p><b>E</b> <b>ELEVATE</b></p> <p><b>Elevation</b> Elevate the injured limb higher than the heart as often as possible.</p>	<p><b>O</b> <b>OPTIMISM</b></p> <p><b>Optimism</b> Condition your brain for optimal recovery by being confident and positive.</p>
<p><b>A</b> <b>AVOID</b></p> <p><b>Avoid anti-inflammatories</b> Avoid taking anti-inflammatory medications as they reduce tissue healing. Avoid icing.</p>	<p><b>V</b> <b>VASCULARISATION</b></p> <p><b>Vascularisation</b> Choose pain-free cardiovascular activities to increase blood flow to repairing tissues.</p>
<p><b>C</b> <b>COMPRESS</b></p> <p><b>Compression</b> Use elastic bandage or taping to reduce swelling.</p>	<p><b>E</b> <b>EXERCISE</b></p> <p><b>Exercise</b> Restore mobility, strength and proprioception by adopting an active approach to recovery.</p>
<p><b>E</b> <b>EDUCATE</b></p> <p><b>Education</b> Your body knows best. Avoid unnecessary passive treatments and medical investigations and let nature play its role.</p>	

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# Physical activity and working life

# Occupational capacity



- In addition to solid job-related skills, an employee needs occupational capacity in order to cope with working in their profession.
- Watch the Smart Moves video "[Virtaa ja voimaa tulevalle ammattilaiselle](#)" (Energy and strength for professionals).

# Reflect

- What kind of occupational capacity is needed in your field?
- Does your future job involve heavy physical work, a lot of standing or a lot of sitting?
- Read [the tips on break exercises for vocational students](#)
- Ergonomics can be used to plan a work environment that does not put excess strain on the body. See more:
  - [Ergonomics tips](#) for people doing heavy physical work (in Finnish)
  - [Ergonomics tips](#) for standing workers (in Finnish)
  - [Ergonomics tips](#) for for sitting and standing workstations (in Finnish)




# How can a person maintain health-promoting lifestyles and prevent those that endanger health?

- Based on the WHO health promotion model, consider examples of actions that could promote physical activity among the population.
  - Build healthy public policy to promote physical activity
  - Create supportive environments for health and physical activity
  - Re-orient health services
  - Strengthen community action for health
  - Develop personal skills
- Or a reflection assignment on how to increase physical activity and reduce sedentary behaviour at workplaces and educational institutions

# Thank you!



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