

Coping with stress

- [Coping with stress](#)
- [Lesson plan \(English\)](#)
- [Lesson plan \(Polish\)](#)



[Link to lesson](#)

Before you start you should know

- nervous system controls and coordinates how all the organs in our body work;
- received information is analyzed and assessed in centres in encephalon and in spinal cord;
- reaction of the body depends on how the stimulus was assessed.

You will learn

- to list factors that cause stress;
- to list positive and negative consequences of stress;
- to present how we cope with stress;
- to explain the role of sleep in regenerating nervous system;

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Nagranie dźwiękowe abstraktu

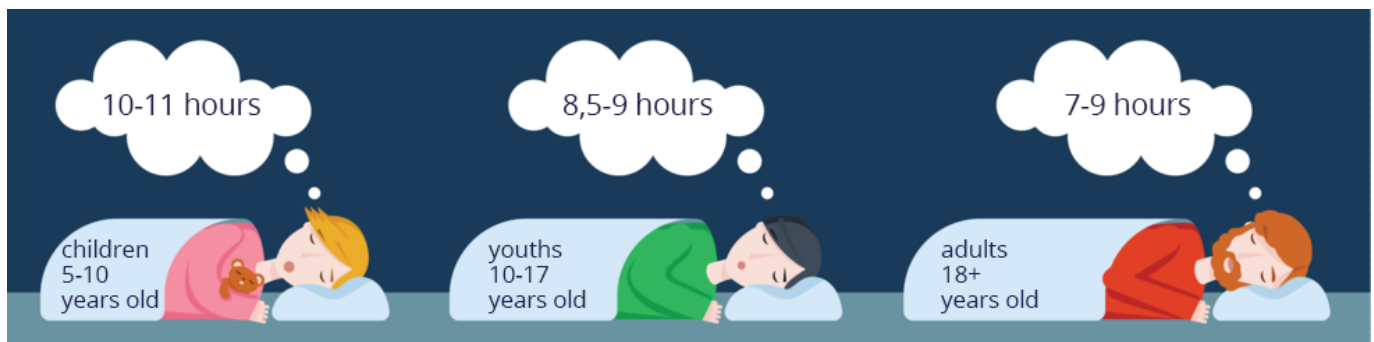
Rest is the key to success

If your body is constantly stimulated, it grows tired quickly, your ability to concentrate and think becomes worse. This is why rest is necessary, even during a day. You can rest in an active or passive way. Resting in an active way (especially outside) improves your condition, stimulates organs and systems to work, which is important especially in the case of those, which have been passive for a while. Musculoskeletal system is a great example – it usually is passive during your stay at school or when sitting in front of the TV.

A necessary form of rest is [sleep](#). When we sleep, the neural centres of the cortex stop analyzing and reacting to information they receive. This does not mean our brain stops

working completely. While sleeping, information is organized and deleted or stored in long-term memory. Thanks to this, newly gained knowledge may be recalled if needed, e.g. thanks to key words, smells or emotions which we experienced in a given situation. Nervous cells regenerate mainly at night. This is when energy reserves and new neural connections between cells are created.

The amount of sleep depends mainly on how old you are – as the years pass, we need less sleep. A newborn baby sleeps around 21 hours a day and its sleep is divided into parts. An adult sleeps around 7-8 hours. However, for regaining strength and proper body functioning it is not only important how long we sleep, but also the conditions which we sleep in. Comfortable sleep requires silence, darkness and lower temperature than during the day (18-20°C). In winter, when we use central heating, the air becomes dry, which is why it is important to have adequate air humidity in your house, by putting a water container on the radiator or by hanging a wet towel on it. It is also good to air the room before we go to sleep, and to eat our last meal about 2 hours before our bedtime.



Length of sleep depends on your age
Source: Anita Mowczan, licencja: CC BY 3.0.

Lack of sleep causes problems with conducting neural impulses, which slows down reaction to stimuli, makes it harder to focus and impairs the immune system. This is also the cause for being tired and having problems with concentration. Not sleeping at night, even if we do it to learn at the last minute or to have fun, lowers the ability to conduct information. A junior high school student should sleep 7-7.5 hours continuously. Preferably, it should be around 8-9 hours of sleep at night.

While we sleep, the activity of our brain changes. The brain rests, then it becomes active. Based on this, we differentiate 2 main phases of sleep. The first phase, called **the phase of slow eye movement** (SEM), skeletal muscles relax, breath becomes regular, blood pressure and body temperature are lowered, the processes in cells happen at a slower pace and the sleep is the deepest. After the SEM phase, the second phase begins, called **the phase of rapid eye movement** (REM). This is when we start to dream. During REM phase, the blood pressure increases, just like the frequency of breaths and heartbeats, and then SEM happens again. Both phases create one sleep cycle that lasts around 90 minutes. With every next

cycle, SEM phase becomes shorted and REM becomes longer. Uninterrupted night sleep of an adult should last around 4-5 cycles.

Stress

Stress is something all of us experience and is a natural reaction of our body to the stimuli, both positive and negative. Stimuli which disturb the physical and mental balance of the organism are called **stressors**. These can be, for example: too high or too low outer temperature, raised body temperature (fever), infections, physical injuries, strong emotions, conflicts with the surroundings, fear (e.g. of a test), excitement before travel, etc.

The reaction of the body to factors that disturb the physical and mental balance has adaptive and protective character. As a result of the cooperation of the sympathetic nervous system and the hormonal nervous system, the body is mobilized to act. The level of adrenaline, also called the **stress hormone**, is increased, which causes typical reactions to stress: elevated blood pressure, higher heart beat frequency and breaths frequency, increased amount of blood flowing to the brain and the muscles, lowered amount of blood flowing to the intestine and widening of the pupils. Mild stress is necessary for the functioning of the body – it stimulates the body to work, allows us to concentrate, overcome obstacles and achieve our goals. With too little stress, the life activity decreases and we are less interested in the things we do, our body becomes less immune, we are bored and tired. Each of us feels stress differently.

Stressors that appear suddenly and in big force (e.g. the loss of a loved one) and those, which work on your body for a long time are very dangerous. Too strong or too long stress gradually causes problems with the functioning of the body. We get headaches, high blood pressure, heart problems, excessive sweating (especially of the palms), diarrhea or constipation, excessive appetite (the so-called stress-eating) or lack of appetite. Stomach wall cells produce too much hydrochloric acid, which leads to acid reflux and can cause ulcers. Our immune system doesn't work as it should, which leads to bacterial and viral infections. Skin reactions, mainly in form of a rash (also allergic reactions) happen very often. Increased psychological stress causes negative emotion with which we sometimes cannot cope.

The strength of the reaction depends mainly on the stressor, the age, gender, personality, our surroundings and experiences. Support of the family and friends allows us to cope with stress and counteracts its negative consequences. That is why:

- you should anticipate events, plan actions, come up with solutions that will allow you to avoid stressful situations;
- you should plan your tasks and duties for the next day and week and set priorities;
- instead of constantly thinking of your problems, you should pay attention to other, more pleasant things;
- you should look for positive aspects of stressful situations;

- you should learn relaxing techniques and use them;
- you should ease tension and negative energy during physical work or intense exercises;
- you should use the support of others.

Task 1

Look at the illustration below. Which causes of stress affect you most often? Do you know how to deal with them?

Causes of stress

Source: GroMar Sp. z o.o., licencja: CC BY-SA 3.0.

How stress influences our organism

Long-term stress destroys the organism. Traumatic events, requirements which cannot be met, conflicts with others lead to psychological problems like neurosis, depression and schizophrenia. The most common problem is **neurosis**. People who suffer from it very often have headaches, stomach aches, heart problems, are irritated, have problems with memory and concentration that make their lives difficult. Such people also have feeling of fear. Sometimes, they have obsessive thoughts which cannot be stopped, obsessive movements and actions, e.g. pulling at fingers, nail picking, playing with a pen, etc.

The disease that affects more and more people, both adults and children, is **depression** also called mood disease. It is accompanied by a feeling of sadness and hopelessness, lack of appetite, insomnia, problems concentrating and inability to act. Sometimes, people who suffer from depression have suicidal thoughts.

People suffering from mental diseases should not be alone. Support of friends and family, help of a psychiatrist and therapist can restore the balance and help such people find the sense of their life and the happiness.

Exercise 1

Source: domena publiczna.

Exercise 2

Highlight what may be the result of stress.

- sweating hands
- diarrhea
- palpitations
- abdominal pain
- toothache
- tearing eyes

Summary

- The appropriate length of sleep and the time we go to sleep, a good rest and making sure that our bodies function properly, especially when it comes to acquiring knowledge.
- In stressful situations our body initiates a series of reactions that mobilize it, e.g. by tensing the muscles.
- Optimal level of stress motivates us to act; when we have too much stress, the physical and mental balance of our organism is disturbed.
- Too much stress can cause diseases.

Keywords

stress, stressor, sleep

Glossary

sleep

Nagranie dostępne na portalu epodreczniki.pl

Nagranie dźwiękowe słówka

sen – cyklicznie pojawiający się stan układu nerwowego, w którym następuje czasowy brak świadomości i bezruch

stress

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Nagranie dźwiękowe słówka

stres – reakcja organizmu na działanie czynnika zaburzającego stan równowagi psychicznej i fizycznej

stressors

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Nagranie dźwiękowe słówka

stresory – czynniki wewnętrzne lub zewnętrzne wywołujące stres

Lesson plan (English)

Topic: Stress management

Author: Elżbieta Szedzianis

Target group

7th grade students of an eight-year elementary school

Core curriculum

9. Nervous system Student:

4) presents methods of dealing with stress;

5) justifies the meaning of sleep in the correct functioning of the nervous system.

Lesson aim

The students will describe the causes and effects of stress.

Key Success Criteria

- you will describe stress that is beneficial and the one that is not beneficial;
- you will list the causes of stress and explain their individual character;
- you will list the effects of stress that influence the functioning of the organism and the mental health;
- you will describe how sleep influences our wellbeing.

Key competences

- communicating in the mother tongue;
- communicating in a foreign language;
- Mathematical competence and basic competences in science and technology;
- digital competence;
- learning to learn;
- Social and civic competences.

Methods/forms of work:

Preemptive strategy, mind map, debate, drawing of a comic.

Individual work, work in pairs, group work.

Teaching measures:

- abstract;

- interactive whiteboard or traditional blackboard;
- tablets/computers;
- sheets of white A3 paper for every student;
- coloring markers;
- worksheets;
- metodnik (type of a teacher's book).

Before the lesson

One week before the class, the teacher informs the students that they will participate in a class on stress. He asks them to read the abstract and other materials that talk about stress.

The students should pay attention to the following issues:

- beneficial and dangerous stress;
- causes of stress and their individual character;
- effects of stress that influence the functioning of the organism and the mental health;
- how sleep influences our wellbeing.

Lesson plan overview (Process)

Introduction

The teacher shows the problems the students were supposed to read about before the class. He asks the students to assess how prepared they are for the lesson using metodnik books.

Realization

1. The teacher hands out sheets of paper and markers. He encourages the students to prepare mind maps on the topic of stress. He reminds them the rules of creating a mind map and asks the students to include in their maps not only the information they obtained while preparing for this lesson, but also their personal feelings and impressions. The students work for 15 minutes, and then in pairs they talk about their work.
2. The teacher presents an interactive illustration titled "The causes of stress". He comments on it and asks the students to define, on a scale 1 to 10, their stress level caused by the situations presented on the illustration ("1" means some stress, whereas "10" means a very strong stress"). The students complete their worksheets (Attachment no. 1). Then, each student presents a way of reducing stress caused by a specific thing by drawing a comic strip.
3. The teacher writes down the following statement on the board: "A 13-year-old kid does not need a lot of sleep". On the right side of the board he writes down a positive statement: "Yes, because...", and on the left side - a negative statement: "No, because...". He then divides the students

into two groups. The task of the students in the first group is to prepare arguments that support the statement written on the board.

The students in the other group are looking for arguments against the statement.

4. They compare their arguments and give suggestions that refer to the length of sleep.

Summary

5. The teacher asks the students to finish the sentence: "During this lesson, I have learned...".

6. The students use the metodnik books to assess the knowledge they gained on stress and comment their different perspectives on stress at the beginning and at the end of the class.

Homework

Make at home a note from the lesson using the sketchnoting method.

Attachment No 1

Worksheet

CAUSES OF STRESS	STRESS LEVEL
INSOMNIA	
VIOLENCE AGAINST PEERS	
TOO MANY CLASSES	
EXAMS	
TOO MUCH TO LEARN	
BEING EXCLUDED FROM THE GROUP	
PARENTS FIGHTING	
BEING LATE FOR SCHOOL	
MY OWN ILLNESS OR ILLNESS OF A FAMILY MEMBER	

Appendix_nr_1

Plik o rozmiarze 169.92 KB w języku polskim

The following terms and recordings will be used during this lesson

Terms

sleep

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Texts and recordings

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working completely. While sleeping, information is organized and deleted or stored in long-term memory. Thanks to this, newly gained knowledge may be recalled if needed, e.g. thanks to key words, smells or emotions which we experienced in a given situation. Nervous cells regenerate mainly at night. This is when energy reserves and new neural connections between cells are created.

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- Too much stress can cause diseases.

Lesson plan (Polish)

Temat: Radzimy sobie ze stresem

Autor: Elżbieta Szedzianis

Adresat

Uczeń klasy VII szkoły podstawowej.

Podstawa programowa

9. Układ nerwowy. Uczeń:

4) przedstawia sposoby radzenia sobie ze stresem;

5) uzasadnia znaczenie snu w prawidłowym funkcjonowaniu układu nerwowego.

Cel lekcji

Uczniowie opisują przyczyny i skutki stresu.

Kryteria sukcesu

- opisziesz stres korzystny i niekorzystny;
- podasz przyczyny stresu i wyjaśnisz ich indywidualny charakter;
- wymienisz skutki stresu wpływające na funkcjonowanie organizmu i samopoczucie psychiczne;
- opisziesz wpływ snu na dobre samopoczucie.

Kompetencje kluczowe

- porozumiewanie się w języku ojczystym;
- porozumiewanie się w językach obcych;
- kompetencje matematyczne i podstawowe kompetencje naukowo-techniczne;
- kompetencje informatyczne;
- umiejętność uczenia się;
- kompetencje społeczne i obywatelskie.

Metody/formy pracy

Strategia wyprzedzająca, mapa myśli, debata, rysowanie komiksu.

Praca indywidualna, praca w parach oraz praca w grupach.

Środki dydaktyczne

- abstrakt;

- tablica interaktywna lub tradycyjna;
- tablety/komputery;
- arkusze papieru w formacie A3 dla każdego ucznia;
- kolorowe pisaki;
- karta pracy;
- metodniki.

Przed lekcją

Tydzień przed zajęciami nauczyciel informuje uczniów, że wezmą udział w lekcji poświęconej stresowi i prosi podopiecznych, żeby zapoznali się z treścią abstraktu oraz innymi źródłami podejmującymi temat stresu.

Uczniowie powinni zwrócić uwagę na następujące problemy:

- stres korzystny i niekorzystny;
- przyczyny stresu i ich indywidualny charakter;
- skutki stresu wpływające na funkcjonowanie organizmu i samopoczucie psychiczne;
- wpływ snu na dobre samopoczucie.

Fazy lekcji

Wstępna

Nauczyciel wyświetla zagadnienia, o których uczniowie mieli przeczytać przed lekcją. Prosi podopiecznych, żeby ocenili swoje przygotowanie do zajęć, korzystając z metodników.

Realizacyjna

1. Nauczyciel rozdaje arkusze papieru i kolorowe pisaki. Zachęca uczniów, żeby sporządzili mapy myśli na temat stresu. Przypomina zasady tworzenia map i prosi podopiecznych, żeby na mapach uwzględnili nie tylko informacje, które zdobyli, przygotowując się do lekcji, ale także własne odczucia i doświadczenia. Uczniowie pracują przez kwadrans, a następnie w parach omawiają swoje prace.
2. Nauczyciel prezentuje ilustrację interaktywną „Przyczyny stresu”. Komentuje ją i prosi uczniów, żeby określili w skali od 1–10 swój poziom stresu, wywołany przed przedstawioną na ilustracji sytuację (liczba „1” oznacza niewielki stres, a liczba „10” – bardzo silny stres). Uczniowie wypełniają karty pracy (zał. nr 1). Następnie każdy uczeń przedstawia w formie komiksu sposób zredukowania poziomu stresu wywołanego wybranym stresorem.
3. Nauczyciel zapisuje na tablicy tezę: „Nastolatek w wieku 13 lat nie potrzebuje dużej ilości snu”. Po prawej stronie tablicy zapisuje zdanie twierdzące: „Tak, ponieważ...”, po lewej – zdanie przeczące: „Nie, ponieważ...”. Dzieli klasę na dwie grupy. Zadaniem uczniów

z pierwszego zespołu jest przygotowanie argumentów popierających widniejącą na tablicy tezę. Uczniowie z drugiego zespołu zbierają kontrargumenty.

4. Uczniowie porównują argumenty i formułują zalecenia odnoszące się do długości snu.

Podsumowująca

1. Nauczyciel prosi uczniów, żeby dokończyli zadanie: „Na dzisiejszej lekcji dowiedziałem się...”
2. Uczniowie za pomocą metodników oceniają swoją wiedzę na temat stresu i komentują różnice w postrzeganiu tego zagadnienia na początku i na końcu lekcji.

Praca domowa

Wykonaj w domu notatkę z lekcji metodą sketchnotingu.

Załącznik nr 1

Karta pracy

PRZYCZYNA STRESU	POZIOM STRESU
BEZSENNOŚĆ	
PRZEMOC ZE STRONY RÓWIEŚNIKÓW	
ZA DUŻO ZAJĘĆ POZALEKCYJNYCH	
EGZAMIN	
ZA DUŻO NAUKI	
WYKLUCZENIE Z GRUPY	
KŁÓTNIE RODZICÓW	
SPÓŹNIENIE DO SZKOŁY	
CHOROBA WŁASNA LUB BLISKIEJ OSOBY	

Załącznik nr 1

Plik o rozmiarze 34.36 KB w języku polskim

W tej lekcji zostaną użyte m.in. następujące pojęcia oraz nagrania

Pojęcia

sleep

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Teksty i nagrania

[Nagranie dostępne na portalu epodreczniki.pl](#)

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The amount of sleep depends mainly on how old you are – as the years pass, we need less sleep. A newborn baby sleeps around 21 hours a day and its sleep is divided into parts. An adult sleeps around 7-8 hours. However, for regaining strength and proper body functioning it is not only important how long we sleep, but also the conditions which we sleep in. Comfortable sleep requires silence, darkness and lower temperature than during the day (18-20°C). In winter, when we use central heating, the air becomes dry, which is why it is important to have adequate air humidity in your house, by putting a water container on the radiator or by hanging a wet towel on it. It is also good to air the room before we go to sleep, and to eat our last meal about 2 hours before our bedtime.

Lack of sleep causes problems with conducting neural impulses, which slows down reaction to stimuli, makes it harder to focus and impairs the immune system. This is also the cause for being tired and having problems with concentration. Not sleeping at night, even if we do it to learn at the last minute or to have fun, lowers the ability to conduct information. A junior high school student should sleep 7-7.5 hours continuously. Preferably, it should be around 8-9 hours of sleep at night.

While we sleep, the activity of our brain changes. The brain rests, then it becomes active. Based on this, we differentiate 2 main phases of sleep. The first phase, called **the phase of slow eye movement** (SEM), skeletal muscles relax, breath becomes regular, blood pressure and body temperature are lowered, the processes in cells happen at a slower pace and the sleep is the deepest. After the SEM phase, the second phase begins, called **the phase of rapid eye movement** (REM). This is when we start to dream. During REM phase, the blood pressure increases, just like the frequency of breaths and heartbeats, and then SEM happens again. Both phases create one sleep cycle that lasts around 90 minutes. With every next cycle, SEM phase becomes shorter and REM becomes longer. Uninterrupted night sleep of an adult should last around 4-5 cycles.

Stress is something all of us experience and is a natural reaction of our body to the stimuli, both positive and negative. Stimuli which disturb the physical and mental balance of the organism are called stressors. These can be, for example: too high or too low outer temperature, raised body temperature (fever), infections, physical injuries, strong emotions, conflicts with the surroundings, fear (e.g. of a test), excitement before travel, etc.

The reaction of the body to factors that disturb the physical and mental balance has adaptive and protective character. As a result of the cooperation of the sympathetic nervous system and the hormonal nervous system, the body is mobilized to act. The level of adrenaline, also called the **stress hormone**, is increased, which causes typical reactions to stress: elevated blood pressure, higher heart beat frequency and breaths frequency, increased amount of

blood flowing to the brain and the muscles, lowered amount of blood flowing to the intestine and widening of the pupils. Mild stress is necessary for the functioning of the body – it stimulates the body to work, allows us to concentrate, overcome obstacles and achieve our goals. With too little stress, the life activity decreases and we are less interested in the things we do, our body becomes less immune, we are bored and tired. Each of us feels stress differently.

Stressors that appear suddenly and in big force (e.g. the loss of a loved one) and those, which work on your body for a long time are very dangerous. Too strong or too long stress gradually causes problems with the functioning of the body. We get headaches, high blood pressure, heart problems, excessive sweating (especially of the palms), diarrhea or constipation, excessive appetite (the so-called stress-eating) or lack of appetite. Stomach wall cells produce too much hydrochloric acid, which leads to acid reflux and can cause ulcers. Our immune system doesn't work as it should, which leads to bacterial and viral infections. Skin reactions, mainly in form of a rash (also allergic reactions) happen very often. Increased psychological stress causes negative emotion with which we sometimes cannot cope.

The strength of the reaction depends mainly on the stressor, the age, gender, personality, our surroundings and experiences. Support of the family and friends allows us to cope with stress and counteracts its negative consequences. That is why:

- you should anticipate events, plan actions, come up with solutions that will allow you to avoid stressful situations;
- you should plan your tasks and duties for the next day and week and set priorities;
- instead of constantly thinking of your problems, you should pay attention to other, more pleasant things;
- you should look for positive aspects of stressful situations;
- you should learn relaxing techniques and use them;
- you should ease tension and negative energy during physical work or intense exercises;
- you should use the support of others.

Long-term stress destroys the organism. Traumatic events, requirements which cannot be met, conflicts with others lead to psychological problems like neurosis, depression and schizophrenia. The most common problem is **neurosis**. People who suffer from it very often have headaches, stomach aches, heart problems, are irritated, have problems with memory and concentration that make their lives difficult. Such people also have feeling of fear. Sometimes, they have obsessive thoughts which cannot be stopped, obsessive movements and actions, e.g. pulling at fingers, nail picking, playing with a pen, etc.

The disease that affects more and more people, both adults and children, is **depression** also called mood disease. It is accompanied by a feeling of sadness and hopelessness, lack of appetite, insomnia, problems concentrating and inability to act. Sometimes, people who suffer from depression have suicidal thoughts.

People suffering from mental diseases should not be alone. Support of friends and family, help of a psychiatrist and therapist can restore the balance and help such people find the sense of their life and the happiness.

- The appropriate length of sleep and the time we go to sleep, a good rest and making sure that our bodies function properly, especially when it comes to acquiring knowledge.
- In stressful situations our body initiates a series of reactions that mobilize it, e.g. by tensing the muscles.
- Optimal level of stress motivates us to act; when we have too much stress, the physical and mental balance of our organism is disturbed.
- Too much stress can cause diseases.