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# WEEK I

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HOW IS STRESS RELATED TO THE NERVOUS SYSTEM?

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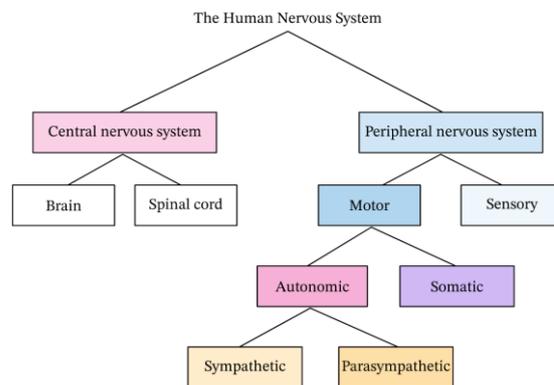
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## STRESS AND THE BRAIN

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The somatic nervous system is the part of the nervous system that controls the motor function of the skeletal muscles and thus the voluntary and reflex actions of the body. In simple terms, it regulates the functions that serve the active relationship with the external world.

The autonomic nervous system (VNS, autonomic nervous system).



The autonomic nervous system (VNS) controls many vital bodily functions. These include, for example, breathing, digestion and metabolism. Higher-level centers in the brain and hormones control the autonomic nervous system.

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## SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM

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HOW IS THE NERVOUS SYSTEM RELATED TO THE BRAIN?

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The sympathetic nervous system controls our organs with regard to an actual or perceived situation of tension or exertion. It puts our body in fight-or-flight readiness and makes it more efficient.

The counterpart of the sympathetic nervous system is the parasympathetic nervous system. It is often called the rest or recovery nerve because this nervous system is responsible for regeneration, metabolism and the build-up of reserves ("rest-and-digest").

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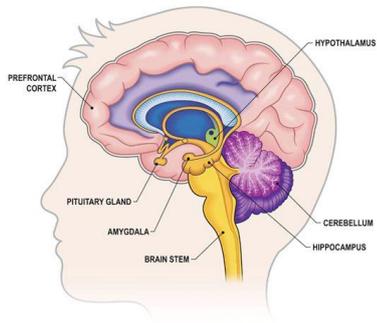
## STRESS AND THE BRAIN

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The **THALAMUS** is a filter of the cerebral cortex. All incoming information is pre-processed here before it is fed to the cerebral cortex. In the process, the thalamus decides which of the incoming information is so important for the organism at the moment that it should enter consciousness. This is why the thalamus is also called the "gateway to consciousness".

**HYPOTHALAMUS:** It ensures that our body temperature remains constant and regulates food intake. The hypothalamus influences our emotional and sexual behavior and determines when we sleep and when we are awake. It is also an important control

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organ within the hormonal system, regulating when and how much of a hormone is produced.

The **HIPPOCAMPUS** is the working memory of our brain and the switching point between short and long term memory.

When the **AMYGDALA** takes over, we are trimmed to deal with immediate danger and our system switches to fight, flight or rigor mortis.

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## STRESS PATTERNS - SELF-OBSERVATION

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**When** do I feel stressed  
(Stressor)

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**How** do I react when I am  
stressed?

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**WHAT THOUGHTS DO I HAV**  
**UNDER STRESS?**

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**WHAT DO I FEEL IN THE BOD**

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**What** feelings do I have under  
stress?

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## BREATHING

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### STRAW BREATHING

Breathe in deeply through your nose. Hold your breath for a moment. Then exhale very slowly through the mouth, as if you were exhaling through a straw.

### BELLY BREATHING

First exhale as if you were breathing on a mirror: "HHHAAA". Then close your mouth while exhaling. Keep your throat unchanged and produce the exact same sound, now with your mouth closed. Make sure that the sound originates in the throat and not in the nose. Now maintain the shape of your throat during inhalation. The same rushing sound is now created during inhalation as well. This breathing is also called Ujjaii breathing.

### BOX BREATHING



Imagine a box. Now "draw" each side with each inhalation and exhalation. That is, start in the bottom, left corner and inhale slowly while counting to 4 and imagining the first, upgoing, left side of the box. Hold your breath and count to 4 again while imagining the top, horizontal side of the box. Exhale again, counting to 4, and now draw the right side of the box with your imagination. Finally, hold your breath again and count to 4 while drawing the lower, horizontal side of the box in your mind's eye. Then start again from the beginning: 4-4-4-4. (If you are uncomfortable holding your breath, you can imagine a rectangle and only hold your breath counting to two on the "short sides".

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## MINDFULNESS EXERCISES FOR EVERYDAY LIFE

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### USE THE NON-DOMINANT HAND

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Use the non-dominant hand every day for some common tasks, such as brushing teeth or combing hair. Or eat part of each meal with the non-dominant hand. Or why not try writing with the non-dominant hand?

### MINDFUL DRIVING

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Bring mindfulness into your driving. Pay attention to all body movements, car movements, sounds, habit patterns, and thoughts related to driving. (If you're not a driver, you can also bring attention to bicycling or riding on a bus or train).

### WAITING

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Every time you have to wait, in line, in front of the computer, on the phone, or in a traffic jam: use that time to do a mindfulness exercise, such as: Pay attention to your breath! Observe where the breath is strongest: Nostrils, chest, belly and then repeat internally: I breathe in, I breathe out.

### PAY ATTENTION TO TREES

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Pay attention to the trees around you, the shapes, the different sizes, the way they branch, the colors, the leaves, etc. Don't start analyzing, just take note of the trees. Be aware of them.

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## TIPS FOR MEDITATION

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1. Non-judgmental: Leave everything as it is. This does not mean that you don't care. On the contrary, only when you accept a thing as it is, can you make clear decisions.
2. Not ambitious: you don't have to achieve anything. The goal is only to perceive.
3. Accept: What comes, that comes.
4. Be patient
5. Show confidence: With time, you begin to believe in the change.
6. Keep an open mind: see everything as if it were the first time.
7. Be curious: There is always something to discover.
8. Let go: Be able to let go of thoughts, impulses and feelings. They come and go.
9. Be loving and kind: treat yourself like a good friend.
10. Do not react.

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## HOMEWORK – WEEK 1

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### BREATHING EXERCISE

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I will practice the following breathing exercise daily at home:

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### MEDITATION

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I will practice the following meditation daily at home after the

breathing exercise: \_\_\_\_\_,

approximately at this time: \_\_\_\_\_.

I will practice the 1-minute meditation at least 2 times a day in the office. I will remind myself by:

### MOMENTS OF SILENCE

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\_\_\_\_\_  
\_\_\_\_\_

I will eat ONE meal mindfully.

I will practice this routine task mindfully (p.5):

### MINDFUL DURING THE DAY

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