

Task #1 - AgeSuit

With increasing age, movement restrictions often appear, which make everyday situations significantly more difficult. The exercise serves to simulate some of these limitations, primarily limited joint mobility and decreased muscle strength.

Please note that this is not about overcoming these limitations with your own strength. Of course, a healthy person can work against the barriers simulated here, but that is not the purpose of the exercise. Instead, feel where the limitation is and accept it. Try to do everyday situations with these limitations.

Tasks:

1. Read the AgeSuit instructions and explanations (additional documentation)
2. Put on the AgeSuit with the help of the supervisor. Make sure the individual parts fit correctly. Decrease/increase weight in jacket and pants as needed
3. Try different everyday situations, e.g.
 - Getting up from lying down
 - Tie the laces
 - Picking up an object off the ground
 - Climbing stairs – Walking a long distance
 - Using a mobile phone
4. To test hearing limitations:
 - Ask another student if he can stand behind you and say something - can you understand him?
 - Have him flip the coin without looking where. Can you figure out where the coin fell?
5. Reflect on what you have experienced
 - Think about which areas of life are severely restricted?
 - What tools exist, what new technical developments could help?

Task #2 – Tremor-compensation-tool

The exercise with the tremor compensation tool is intended to demonstrate the application of technology that can facilitate daily computer use by relatively simple means when the patient has tremors.

Tasks:

1. Familiarize yourself with the installation and operation of the Jitter Compensation Tool (additional documentation)

2. Open the program and familiarize yourself with the various settings

Simulate hand tremors during the exercise.

3. Set all three supports to "active" individually and then together.

Try the following activities:

- Internet navigation (e.g. opening a search engine, clicking on search results)
- Creating some slides in Powerpoint
- Playing a minigame that requires mouse movement during the game (selection of minigames: <https://poki.cz/minigames>)

4. Change the intensity of the supports

5. Evaluate the tool

- What support do you find useful?
- Is the USB key solution ideal? What other solutions are there?
- In your opinion, how was the individual support technically implemented?

Task #3 – tremor simulator – Tremor Explorer

There are 2 gloves with a vibration device, which are designed to simulate shaking with both hands. This can occur spontaneously in old age or as a result of a disease such as Parkinson's disease and significantly complicates the daily life of the patient.

The purpose of the exercise is to give you a sense of limitation.

Pay attention: This is a purely mechanical simulation of a tremor. Because it doesn't directly affect your muscle movements, you'll be able to work against these vibrations and thus minimize tremors. For the exercise, it is necessary that you do not work against the vibration, but relax the muscles in the forearm so that the tremor can be transferred to your hand.

Tasks:

1. Read instructions on how to put on and use Tremor Explorer (additional documentation)
2. Put the gloves on both hands according to the instructions, ask for help from another student. (If you want, you can put the cotton gloves under the Tremor Explorer gloves. This additionally simulates reduced sensitivity in age)
3. Attach the battery case to your belt
4. Start the device and set the desired intensity
5. Try different activities, e.g.
 - Pouring cornflakes from a plastic bowl into a small glass
 - Scooping cornflakes onto a spoon
 - Drawing/writing on the board/on paper
 - Mouse control on PC
6. Reflect on what you have experienced
 - Think about which areas of life are severely limited by tremors?
 - How does the patient perceive it?
 - What technical aids do you know that reduce the effects of tremors?
 - Do you have any other ideas for possible tools?

Task #4 – vision problems in old age

A typical problem in old age are various visual defects. The main goal of the task is to show how limiting partial vision loss is. The simulation glasses can be worn over regular glasses.

1. Read the information sheet on visual impairment in old age (additional documentation)
2. Try different glasses. Pay attention to how the glasses make you feel.
 - Do you feel confident in the activities you undertake?
 - Can you do the activity as fast as you can without glasses?

For example, try:

- What can you see on the phone with this limitation, what can you read on the screen or can you read the Factsheet?
- Are there specific evasive movements that you automatically make to see something (look sideways, move closer...)?

You can also walk down the hall, but always take off your glasses when you go up the stairs.

3. Try to manage other everyday situations with different visual impairments
 - a normal conversation with the person standing across from you,
 - tying shoes
 - lifting an object from the floor
 - PC orientation – open and read various websites, write texts, etc.

4. Glasses Hemianopia:

How big is your field of vision compared to the situation without glasses?

Stand in the marked spot with your glasses and ask a friend to place an object at the edge of your field of vision. Take off your glasses and see how much field of vision you've lost. Have your friend stand just outside this line of sight and ask them to throw the ball. Can you catch him? Take off your glasses and see where your friend was standing. What effect could this have on everyday situations such as road traffic?

5. Think about what technical aids exist and how technological advances in the future can help patients cope with everyday life with poor eyesight