

## Stretching



### Introduction

Our bodies and brains communicate with each other through chemical and electric signals. This means that when we feel stressed our muscles can tense up. The tension in our muscles then sends signals back to our brains that they are tense, which can increase our level of mental stress. We can break this cycle in the mind using mindfulness, visualization or grounding exercises, or we can break it in the body with exercises like breathing, stretches or progressive muscle relaxation (PMR). This handout will talk about stretching.

We can break the cycle of muscular tension and anxiety by paying attention to our posture and stretching our bodies.

The vagus nerve is one of the main lines of communication between the brain and the body. It runs along the spine and connects with every organ and many muscle groups. The vagus nerve is key to the autonomic nervous system which controls our automatic responses, and can signal our sympathetic response (high alert, fight/flight) and our parasympathetic response (relax, “rest & digest”). When our muscles are tense this contributes to keeping our vagus nerve in the high alert, sympathetic state, which has health and wellbeing impacts for our minds and our bodies. Stimulating the vagus nerve to move into parasympathetic shuts down the inflammatory activity within our organs and helps our bodies and minds to calm down and return to a more healthful state. We can do this with some simple stretches, focused on the neck and shoulders.

We can break the cycle of muscular tension and anxiety by paying attention to our posture and stretching our bodies.

First of all, paying attention to our posture can help. When we are in a sympathetic response we tend to push our heads forward and to hunch our shoulders. Noticing that we are sitting or standing like this, and taking a moment to make sure that our heads and necks are aligned over our shoulders can help shift the stress signals our body is sending our brain. If you are having a hard time sensing whether your head is aligned with your shoulder, you can lie on your back on a flat, firm surface and let your head rest, making sure that your chin is straight, not pointed up towards the sky or tucked down towards your feet. If you want, you can interlace your fingers behind your head around base of skull, hold your head stable, and pull gently to give more space to your neck.

Once you have brought your head into alignment, try a few of the following exercises. Learning new movements always takes some practice before they feel comfortable. Start by trying between one and three per day, and once you gain comfort with those, add a new exercise.

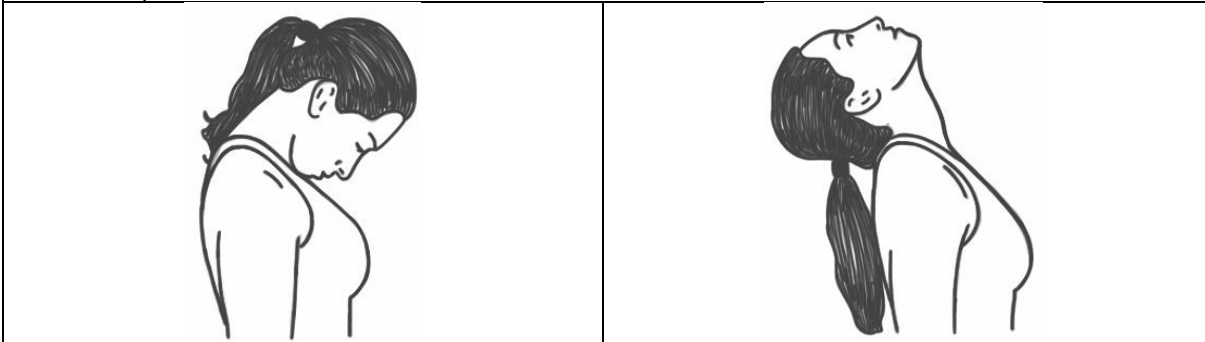


### Steps

#### Move 1: Neck Extension and Flexion

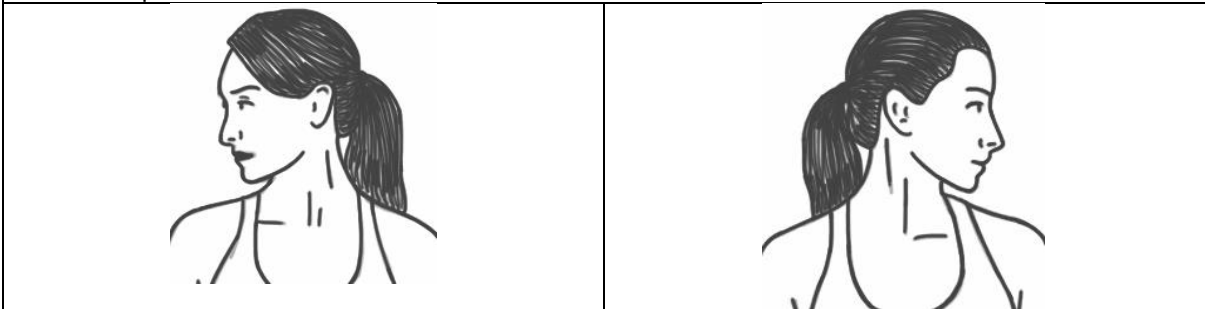
1. Stand straight, preferably facing a wall.
2. Look straight ahead at the wall and then slowly tilt your head backward (without arching your back), so that your eyes move up the wall to the ceiling.
3. Try to hold for five seconds.
4. Slowly tilt your head back, with your eyes following the wall until you are in your original neutral position.

5. Now slowly tilt your head downward, allowing your eyes to follow the wall until you are looking at the floor near your feet.
6. Try to hold for five seconds.
7. Now slowly tilt your head up, with your eyes following the wall until you are back in your neutral position.
8. Do 5 repetitions.



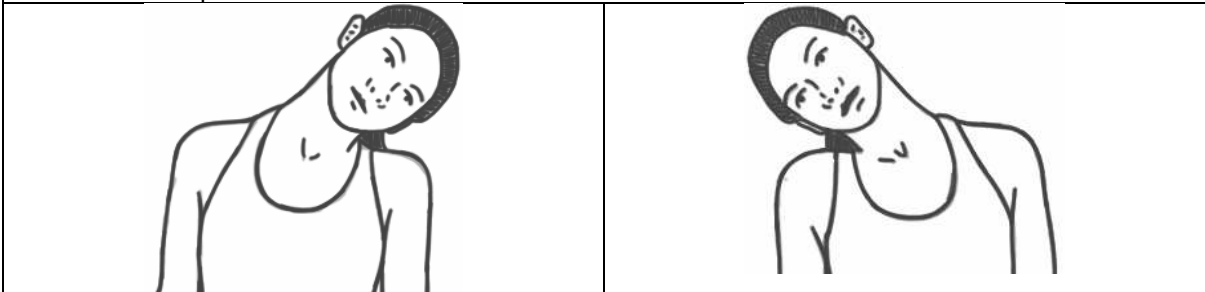
#### Move 2: Neck Rotation

1. Keeping your shoulders facing forward.
2. Slowly turn your head to the right.
3. Hold for 5 seconds.
4. Repeat on the left side.
5. Do 5 repetitions.



#### Move 3: Lateral Extension

1. Start by keeping your head straight and aligned.
2. Try to avoid tipping your shoulders as you slowly tilt your head to the right
3. You may find it helpful to add a little pressure by placing your right hand on your left temple and applying a gentle stretch.
4. Hold for five seconds.
5. Repeat on the left side.
6. Do 5 repetitions.



#### Move 4: Tilted Forward Flexion

1. Tilt your head to the right (as before).
2. Slowly drop your head towards your chest.
3. Hold for five seconds.

4. Repeat on the left side.
5. Do 5 repetitions.



#### Move 5: Deep Stretching

1. Sit on a chair and keep your back, neck and head straight.
2. Drop your head towards your right shoulder.
3. Use your right hand on your left ear to pull your head down further. You can brace your left hand on the arm of the chair for support.
4. Try for 10 seconds.
5. Repeat on the left side.
6. Do 3 repetitions.



#### Move 6: Towel Pull

1. Roll up a towel and place it behind your neck, holding the ends in your hands.
2. Slowly tilt your head backward so that you're looking up.
3. As your head rolls against the towel, apply gentle pressure on the towel, using it to support your neck.
4. Return to the starting position without holding the stretch.
5. Do 5 repetitions.





### Tips

- You should feel a strong stretch while doing each of these exercises, but if you feel a pinching sensation on the other side of the neck, or any acute strain, release a little bit to see if that alleviates the discomfort. Stop the stretch if the discomfort does not go away.
- Try to increase the time you hold each stretch gradually so that eventually you are holding each stretch for 30 seconds.



### References & Further Reading

1. Dana, D. (2018). *A Beginner's Guide to Polyvagal Theory, from The Polyvagal Theory in Therapy: Engaging the Rhythm of Regulation*. Retrieved from [https://14dbc715-19a4-4ae3-8e9a-f14071401acd.filesusr.com/ugd/8e115b\\_f304b2d8bd4144bda80e837fec08e2f4.pdf](https://14dbc715-19a4-4ae3-8e9a-f14071401acd.filesusr.com/ugd/8e115b_f304b2d8bd4144bda80e837fec08e2f4.pdf)
2. National Health System (2021). *Flexibility Exercises*, Retrieved from <https://www.nhs.uk/live-well/exercise/flexibility-exercises/>
3. Physiopedia (2021). *Stretching*. Retrieved from <https://www.physio-pedia.com/Stretching>