

# Prevent and Reduce Stiffness Caused by Radiation Treatment

**For patients with head and neck cancer**

Read this pamphlet to learn more about:

- Why are stretching exercises important
- Why should I do these exercises
- How often should I do these exercises
- When should I stop doing these exercises
- Safety information about these exercises
- Cancer exercise and wellness programs



## Why are stretching exercises important?

Radiation treatment can make your muscles and soft tissues (for example, ligaments and skin) stiff and tight.

This condition is called **radiation induced fibrosis**.

If your muscles and soft tissues are tight it can be:

- painful
- change your posture
- affect your joints

When your muscles are not moving properly they can cause pain or limit movement in other parts of your body. Stretching exercises may help prevent or reduce stiffness.

## Why should I do these exercises?

Your neck and shoulders can become stiff and tight:

- during your radiation treatment
- immediately after your radiation has ended
- a long time after your radiation has ended

The exercises in this pamphlet may help:

- prevent you from feeling stiffness
- improve any stiffness you may feel in your neck and shoulders from your radiation treatment

## How often should I do the exercises?

- Do the exercises every day during radiation treatment
- Do the exercises every other day after your radiation treatment is done

You may find it too hard to do the number of repetitions stated for each exercise. If so, start with a smaller number of repetitions and build up to the numbers shown.

If you get tired doing all of the exercises at once, take breaks between exercises. Start slow and build up.

## When should I stop doing these exercises?

You should do the exercises during your radiation treatment and for at least 6 weeks after your radiation treatment is done.

If you feel stiff after your radiation treatment is done, you can do the exercises at any time.



### **Safety information about the exercises**

- You may feel a pull in your muscles.
- If you find the exercises uncomfortable, you may want to take your pain medication 20 to 30 minutes before exercising.
- You should not feel any pain. If you feel pain, try not to stretch so far.
- If your skin is very sore or has open or healing areas, you may still do most of these movements, but be gentle and let pain be your guide.
- If you have had surgery, some exercises may not be possible. You may have been told by your surgeon not to do certain movements for 4 to 6 weeks, especially if you had jaw reconstruction or grafts taken from elsewhere in your body.
- These exercises are provided as a general guide. If you have questions about the exercises, talk to your health care team.

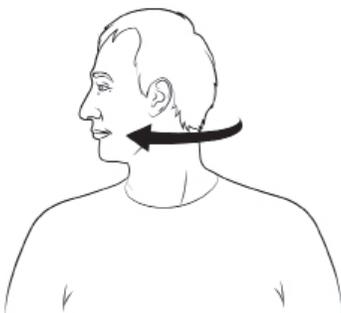
## How to do the exercises



1. Sit or stand to do this exercise.
2. Tilt your head down toward your chest until you feel a stretch behind your neck.
3. Pause at the bottom and hold this position while you take 3 deep breaths.
4. Do this 3 times.



1. Sit or stand to do this exercise.
2. Lift your head up and look toward the ceiling as much as you can.
3. Pause at the bottom and hold this position while you take 3 deep breaths.
4. Do this 3 times.



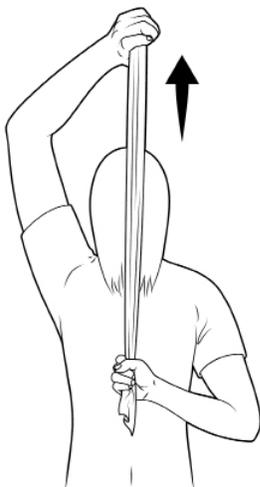
1. Sit or stand to do this exercise.
2. Turn your head to look over your shoulder until you feel a stretch in your neck.
3. Pause in the furthest position and take 3 deep breaths.
4. Repeat on the other side.
5. Do this 3 times.



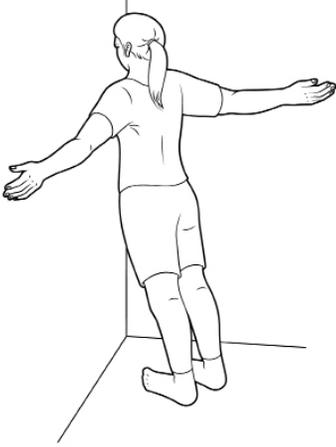
1. Sit or stand to do this exercise.
2. Tilt your ear toward your shoulder until you feel a stretch in the opposite side of your neck.
3. You may put your hand on your head and use your hand to gently pull your head toward your shoulder.
4. Hold for up to 30 seconds.
5. Repeat on the other side.
6. Do this 3 times on each side.



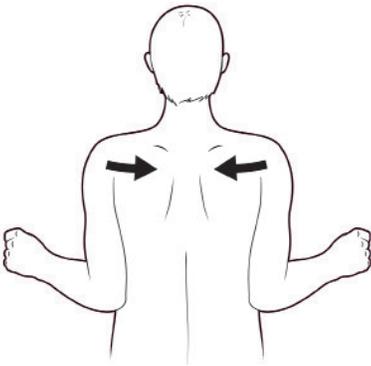
1. Sit to do this exercise.
2. Put your hands behind your back and hold your hands together.
3. Tilt your head toward your shoulder and lift your chin up toward the ceiling. You should feel a stretch on the other side of your neck.
4. Hold for up to 30 seconds.
5. Repeat on the other side.
6. Do this 3 times on each side.



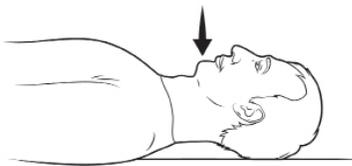
1. Stand or sit to do this exercise.
2. Hold a towel or belt above your head. It should hang down behind your back.
3. Reach behind your back and hold onto the bottom of the towel or belt with your other hand as shown.
4. Pull the towel or belt up to lift your lower arm up as high as it can go.
5. Pause for 3 to 5 breaths.
6. Do this 3 times and then repeat on the other side.



1. Stand in a corner of a room, face the corner as shown.
2. Lift both your arms and place them on the wall so that your arms are level with your shoulders.
3. Lean your upper body toward the corner until you feel a stretch in your chest.
4. Hold for up to 30 seconds.
5. Do this 3 times.



1. Stand with your elbows close to your body.
2. Bent your elbows so they make the shape of the letter L.
3. Squeeze your shoulder blades together.
4. Hold for 5 seconds.
5. Do this 10 times, 2 or 3 times a day.
6. Be mindful not to lift your shoulders up towards your ears.



1. Lie on your back.
2. Tuck your chin in toward your throat so you make a double chin. Keep your neck flat on the floor or bed.
3. Hold for 5 to 10 seconds.
4. Do this 3 times, 1 or 2 times a day.

If you find it hard to do this lying down, you can do it sitting on a chair or up against a wall.



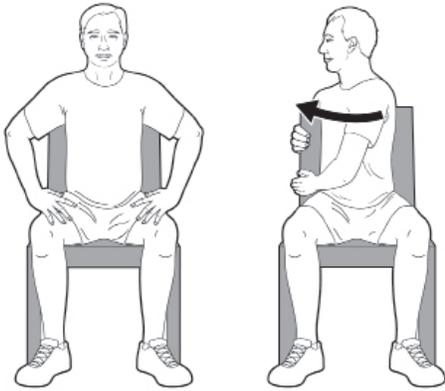
1. Lie on your back.
2. Hold your hands together over your body and then raise them over your head so that you feel a stretch.
3. Keep your hands together but keep your arms straight and let them fall toward the floor.
4. Hold for up to 30 seconds.
5. Do this 3 times, 1 or 2 times a day.

To increase the stretch, hold a small weight like a soup can in your hands.



1. Lie on your back, if possible.
2. Put your hands behind your head as shown.
3. Let your elbows fall out to the sides so that you feel a stretch in the front of your chest.
4. Hold for up to 30 seconds.
5. Do this 3 times.

If you find it hard to do this standing, you can do this lying down on the floor.



1. Sit on a chair to do this exercise.
2. Sit with your back straight.
3. Turn to look over one shoulder. Put one arm over the back of the chair and hold the side of the chair as shown.
4. Put your other arm across your body and hold the side of the chair as shown.
5. Use your arms to gently pull your body for an extra stretch.
6. Hold for 5 breaths.
7. Repeat on the other side.
8. Do this 3 to 5 times on each side.



## **Cancer exercise and wellness programs**

If you would like to know about other exercise and wellness programs at the Princess Margaret, speak to a member of your health care team.

You must be referred to the Cancer Rehabilitation and Survivorship program by a doctor. Your referring doctor can be any doctor caring for you. Your referral is a paper form that can be found online at [https://www.uhn.ca/PrincessMargaret/Health\\_Professionals/Patient\\_Referral/Documents/CRS\\_Program\\_Referral.pdf#search=Cancer%20Rehab%20and%20survivorship%20program](https://www.uhn.ca/PrincessMargaret/Health_Professionals/Patient_Referral/Documents/CRS_Program_Referral.pdf#search=Cancer%20Rehab%20and%20survivorship%20program).

To search for exercise and wellness programs outside of Princess Margaret, you can visit Head and Neck Cancer Rehabilitation Resources (information below). This site was prepared by Princess Margaret clinicians through a grant from the Canadian Cancer Society Research Institute.



## For more information

### **The Cancer Rehabilitation and Survivorship Centre**

Princess Margaret Cancer Centre, 2nd floor beside the Breast Centre

Hours: Monday to Friday, 9:00 am – 5:00 pm

Phone: 416 946 4501 extension 2363

Fax: 416 946 4549

Email: [Survivorship@uhn.ca](mailto:Survivorship@uhn.ca)

### Head and Neck Cancer Rehabilitation Resources

Email: [info@hncrehab.ca](mailto:info@hncrehab.ca)

Website: [www.hncrehab.ca](http://www.hncrehab.ca)

The development of patient education resources is supported by the Princess Margaret Cancer Foundation.



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