Recommendations for Limited Jaw Opening (Trismus) and Temporomandibular Disorders (TMD),

**Preventing Trismus**

This information will help you prevent trismus (lockjaw) during and after your surgery or radiation therapy. Trismus is when you can’t open your mouth as wide as usual.

**About Your Jaw**

Your jaw is made up of a pair of bones that form the framework of your mouth and teeth (see Figure 1). Your maxilla is your upper jaw bone.

- Your mandible is your lower jaw bone.
- Your temporomandibular joint (TMJ) is where your mandible connects to your skull.
- Your masseter muscle is the muscle that connects your mandible to your skull.

Many muscles and nerves around your jaw work together to open and close your mouth. Most people can open their mouth 35 to 55 millimeters (1.4 to 2.2 inches), which is about the width of 3 fingers (see Figure 2).

Figure 1. The bones and muscles of your jaw

Figure 2. Normal width of an open mouth
About Trismus

Trismus can happen anytime during, right after, or even years after your treatment. It can happen:
- If you have a tumor that involves the bones, muscles, and nerves that open your mouth.
- After surgery to your head and neck.
- After radiation therapy to your head and neck.

Trismus can happen if you develop fibrosis (scarring) as the tissues start to heal after surgery. Fibrosis can also build up years after radiation therapy. When you can’t open your mouth well, it’s hard for your healthcare provider to examine the area. You may also have problems with:
- Oral hygiene (cleaning your mouth and teeth). This can lead to bad breath, cavities, and infections.
- Chewing and swallowing. This can make it hard for you to eat and drink.
- Talking.
- Kissing.
- Having a breathing tube placed, such as if you ever need general anesthesia (medication to make you sleep during a surgery or procedure).

Once trismus develops, it’s very hard to treat. That’s why it’s important to prevent trismus and treat it as early as possible.

How to Prevent Trismus

There are 4 main ways to help prevent trismus:
- Massage your jaw muscles.
- Exercise your jaw muscles.
- Keep good posture.
- Keep good oral hygiene.

Even if you don’t have any symptoms, you should do these things to help prevent problems. Follow the instructions in the sections below. If you have had surgery, ask your healthcare provider if it’s safe before you start.

It may be helpful to use a timer or clock to make sure you hold the stretches long enough. Remember to breathe normally and don’t hold your breath. If you feel pain, numbness, or tingling, stop right away and call your healthcare provider’s office.
Massage your jaw muscles

Place your index (pointer) and middle finger on your cheek bone. Run your fingers down over your masseter muscle, which ends at your bottom jaw (see Figure 3). As you move your fingers, find areas that feel tender or tight. Massage these areas with your fingers in a circular motion for 30 seconds. Do this 2 to 3 times every day.

Try not to clench your jaw when you’re stressed or out of habit. This will help keep your jaw muscles relaxed.

Figure 3. Massaging your jaw muscles

Exercise your jaw muscles

✓ Do these exercises 3 times every day. You can do them while sitting or standing. Use a mirror to help you do them correctly.
✓ These movements should give you a good stretch, but they shouldn’t cause pain. If an exercise is causing pain or discomfort, try doing the stretch more lightly. If you still have pain or discomfort, contact your healthcare provider.

Passive stretching exercise

Repeat these steps 5 times.

- Place your thumb on your top teeth in the middle of your jaw.
- Place the index finger of your other hand on your bottom teeth in the middle of your jaw (see Figure 7).
- Open your mouth as wide as you can. Use your fingers to give extra resistance to keep it from closing. You should feel a light stretch, but not pain. Hold this stretch for ______ seconds.

Figure 4. Place your thumb and index finger on your teeth
**Active range of motion and stretching exercises**

Hold your head still while doing these exercises. Repeat these steps 5 times.

1. Open your mouth as wide as you can, until you feel a good stretch but no pain (see Figure 5). Hold this stretch for 10 seconds.

   Figure 5. Open mouth as wide as you can

2. Move your lower jaw to the left (see Figure 6). Hold this stretch for 3 seconds.

   Figure 6. Jaw moved to the left

3. Move your lower jaw to the right (see Figure 7). Hold this stretch for 3 seconds.

   Figure 7. Jaw moved to the right

**Keep good posture**

Good posture means sitting and standing with your ears, shoulders, hips, knees, and ankles aligned (see Figure 8). You need to keep your neck and shoulders strong and flexible to have good posture. The following exercises will help you do this.

Figure 8. Good posture
Do the following exercises 2 times every day. You can do them while sitting or standing with your arms at your sides.

**Neck stretch**
Repeat these steps 5 times. Hold each stretch for 30 seconds.

1. Bend your head forward (see Figure 9).
2. Turn your head to the right (see Figure 11).
3. Bend your head to the right (see Figure 13).
4. Bend your head backward (see Figure 10).
5. Turn your head to the left (see Figure 12).
6. Bend your head to the left (see Figure 14).

![Figure 9. Head bent forward](image1)

![Figure 10. Head bent back](image2)

![Figure 11. Head turned to the right](image3)

![Figure 12. Head turned to the left](image4)

![Figure 13. Head bent to the right](image5)

![Figure 14. Head bent to the left](image6)
Chin tuck

Repeat these steps 5 times.
1. While looking forward, tuck your chin.
2. Pull your head back to line up your ears with your shoulders (see Figure 15). Hold this position for 3 seconds.

Figure 15. Chin tucked and head pulled back

Shoulder blade pinch

Repeat these steps 5 times.
1. Tuck your chin as described in the chin tuck exercise above.
2. Pinch your shoulder blades together as tightly as possible (see Figure 16).
3. Hold this position for 3 seconds.

Figure 16. Shoulder blades pinched together

Keep good oral hygiene

- Brush your teeth and tongue when you wake up, after each meal, and before you go to bed.
- If you have removable dentures or a dental prosthesis, take it out and clean it each time you clean your mouth. Don’t sleep with it in your mouth.
- Floss your teeth once daily before you go to bed.