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.

Figure 1. The bones and muscles of your jaw
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 2. Normal width of an open mouth](image)

**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).
• Having routine dental treatment.

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.
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.

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 4). Hold this stretch for 10 seconds.
2. Move your lower jaw to the left (see Figure 5). Hold this stretch for 3 seconds.

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

4. Move your lower jaw in a circle to the left.

5. Move your lower jaw in a circle to the right.

Passive stretching exercise

Repeat these steps 5 times.

1. Place your thumb on your top teeth in the middle of your jaw.

2. Place the index finger of your other hand on your bottom teeth in the middle of your jaw (see Figure 7).

3. 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.
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](image)

**Do these 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. Bend your head backward (see Figure 10).
3. Turn your head to the right (see Figure 11).
4. Turn your head to the left (see Figure 12).

5. Bring your left ear to your left shoulder (see Figure 13).
6. Bring your right ear to your right shoulder (see Figure 14).
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.

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.

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.

If You Develop Tightness When Opening Your Mouth

The earlier you start treatment for trismus, the easier it will be to help your jaw work better. If you notice any tightening in your jaw, call your healthcare provider right away. They can refer you to a specialist, such as:

- Speech and swallowing specialists, physical therapists, or both. They can help you keep your ability to open your mouth and get back any ability you have lost. They use many techniques, such as exercise, stretching, and massage. They may also recommend special devices to help you open your mouth.

- Rehabilitation doctors. They will evaluate how well you can open your mouth. They may give you medication for pain or spasms (sudden intense cramping in your muscle), suggest other treatments, or recommend medical devices to help you.

Your healthcare provider will talk with you about which referral(s) may be most helpful for you.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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