PATIENT & CAREGIVER EDUCATION

Preventing Trismus

This information will help you prevent trismus during and after your surgery or radiation therapy.

The Structure of 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 upper jaw is called the maxilla and your lower jaw is called the mandible. Your mandible connects to your skull at the temporomandibular joint (TMJ).

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

![Figure 2. Normal width of an open mouth](image)

## Trismus

Trismus is a condition in which someone has difficulty opening their mouth. Trismus can occur anytime during, right after, or even years after your treatment. It can develop:

- If you have a tumor that involves the bones, muscles, and nerves that open the mouth.
- After surgery to the head and neck.
- After radiation therapy to the head and neck.

You may develop fibrosis (scarring) as the tissues begin to heal from surgery. Fibrosis can also build up years after radiation therapy.

When you can’t open your mouth well, it is hard for your doctor to examine this area. You may also have problems:

- Cleaning your mouth and teeth. This may lead to bad
breath, cavities, and infections.

- Chewing and swallowing. This can make it difficult for you to eat and drink.
- Talking
- Kissing
- Having a breathing tube placed, if you ever need general anesthesia (medication to make you sleep during a surgery or procedure).

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

**How to Prevent Trismus**

There are 4 ways to help prevent trismus. Even if you don’t have any symptoms, you should do the following to prevent problems:

- Massage your jaw muscles.
- Exercise your jaw muscles.
- Maintain good posture.
- Maintain good oral hygiene.

There are a number of exercises described below. During the exercises, breathe normally and do not hold your breath. If any of these exercises cause pain, numbness, or tingling, stop them.
right away and call your doctor or nurse. If you have had surgery, check with your doctor or nurse before you begin these exercises.

**Massage Your Jaw Muscles (Masseter Muscle)**

Place your index 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 points that feel tender or tight. Massage these areas with your fingers in a circular direction for 30 seconds. Do this 2 to 3 times a day.

To keep your jaw muscles relaxed all the time, avoid clenching your jaw when you are stressed or out of habit.

**Exercise Your Jaw Muscles**

Use a mirror for these exercises to help you do them correctly. These movements should give you a good stretch, but not cause pain. Do these exercises 2 to 3 times a day.

**Active range of motion and stretching exercises**

Sit or stand. Hold your head still while doing these exercises.

1. Open your mouth as wide as you can, until you can feel a good stretch but no pain (see Figure 4). Hold this stretch for _____ seconds.
2. Move your jaw to the left (see Figure 5). Hold this stretch for 3 seconds.

3. Move your jaw to the right (see Figure 6). Hold this stretch for 3 seconds.
4. Move your lower jaw in a circle. Make 5 circles in each direction.

**Passive stretching exercise**

1. Place 1 thumb on your top teeth in the middle of your jaw.
2. Place the pointer (index) finger of your other hand on your bottom teeth, in the middle of your jaw.
3. Open your mouth with your fingers, but do not bite down or resist (see Figure 7). Let your fingers do all of the work. Hold this stretch for ____ seconds.
Maintain Good Posture

Good posture means sitting and standing with your ears, shoulders, hips, knees, and ankles aligned. To maintain good posture, you need to keep your neck and shoulders strong and flexible (see Figure 8). The exercises listed below will help you do this. **Do these exercises twice a day.**
Neck stretch

Sit or stand with your arms at your side. Hold each stretch for 30 seconds.

1. Bend your head forward (see Figure 9).
2. Bend your head backwards (see Figure 10).

Figure 10. Head bent backwards

3. Rotate your head to the right (see Figure 11).

Figure 11. Head rotated to the right

4. Rotate 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
1. Sit or stand with your arms at your side.

2. While looking forward, tuck your chin.

3. Pull your head back to line up your ears with your shoulders (see Figure 15). Hold this position for 3 seconds.

4. Do this exercise 10 times slowly.

**Shoulder blade pinch**

1. Sit or stand with your arms at your side. 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.

4. Do this exercise 10 times slowly.
Maintain Good Oral Hygiene

- Brush your teeth and tongue when you wake up, after each meal, and at bedtime.

- If you have removable dentures or a dental prosthesis, take it out and clean it each time you clean your mouth. Do not sleep with these devices in your mouth.

- Floss your teeth once daily at bedtime.

If You Develop Tightness When Opening Your Mouth

The earlier you start treatment for trismus, the easier it will be to restore your jaw function. If you notice any tightening in your jaw, call your doctor or nurse right away. They can refer you to:
• Speech and swallowing specialists and physical therapists. They can help you maintain and restore your ability to open your mouth. 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) or suggest other treatments to help 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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