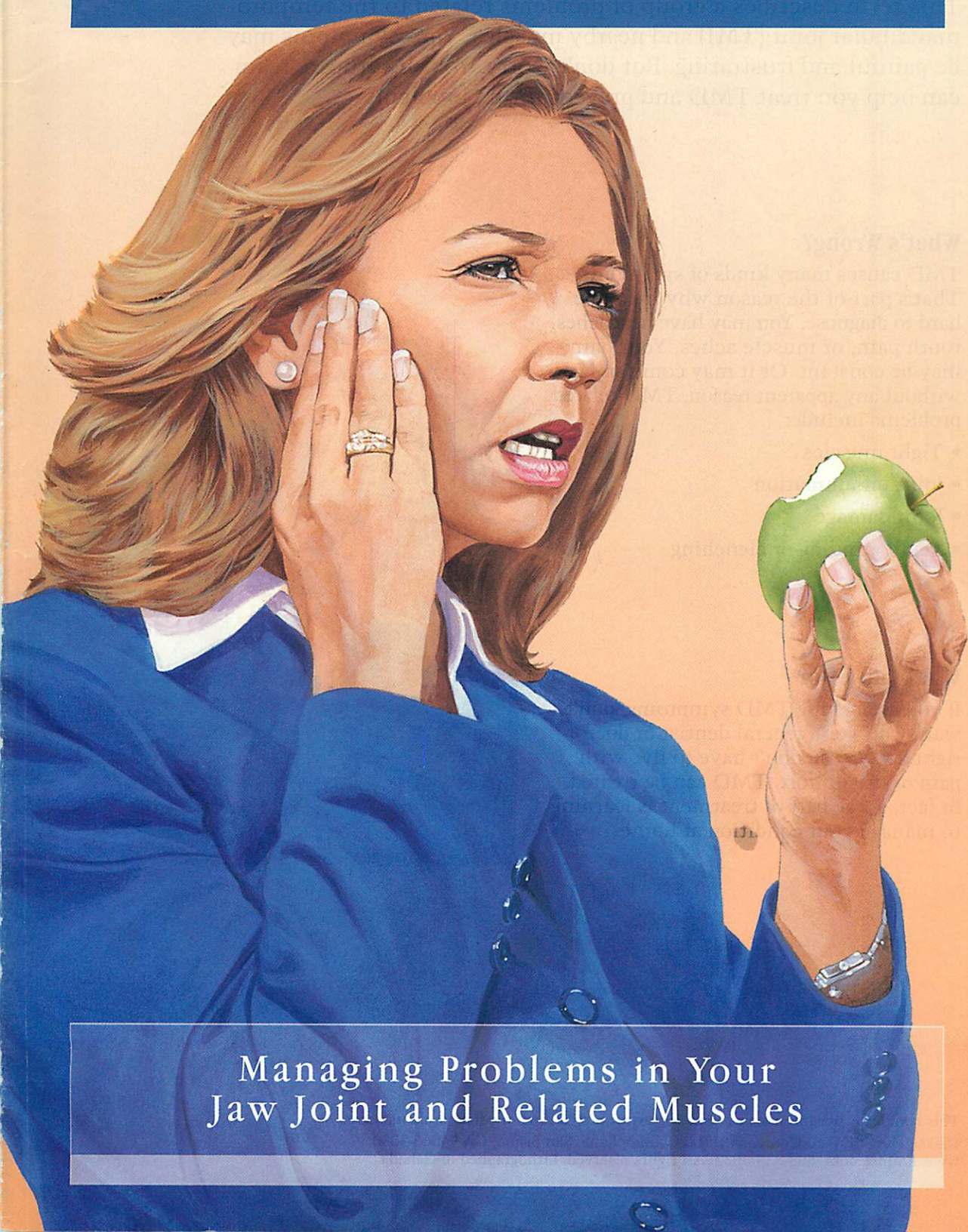


T M D

Temporomandibular Disorders



Managing Problems in Your
Jaw Joint and Related Muscles

FINDING RELIEF

Do you have pain in your face, jaw, or teeth? Do you have trouble chewing? Does your jaw make clicking or popping noises? These symptoms can be caused by **temporomandibular disorders (TMD)**. This term describes a group of problems related to the temporomandibular joint (**TMJ**) and nearby muscles. Your symptoms may be painful and frustrating. But don't worry. Your healthcare team can help you treat TMD and prevent future problems.

What's Wrong?

TMD causes many kinds of symptoms. That's part of the reason why it can be hard to diagnose. You may have headaches, tooth pain, or muscle aches. Your pain may be constant. Or it may come and go without any apparent reason. TMD-related problems include:

- Tight muscles
- Joint inflammation
- Joint damage
- Teeth grinding or clenching

What Can I Do?

If you are having TMD symptoms, don't wait. Call your general dentist or doctor right away. You don't have to live with pain or discomfort. TMD can be treated. In fact, a key part of treatment is learning to manage your condition at home.



Which Treatment Is Right for Me?

Treatment helps rest the muscles and joint. It also helps relieve symptoms and restore function. Depending on the type of problem you have, your treatment plan may include:

- Temporary diet changes.
- New habits for managing stress and maintaining the health of your jaw.
- Medication to reduce pain and inflammation.
- Therapy to reduce pressure on the joint and restore function.
- Dental treatment to reduce pressure on the joint.



Your healthcare provider will make a treatment plan suited to your needs.

How Can I Avoid Future Problems?

Treatment can help relieve your current condition. But TMD symptoms may return over time. You can avoid future problems by maintaining the health of your jaw:

- Avoid foods and habits that make your symptoms worse.
- Lower the stress level in your life.
- Follow your treatment plan.
- Pay attention to your body and get help if symptoms recur.

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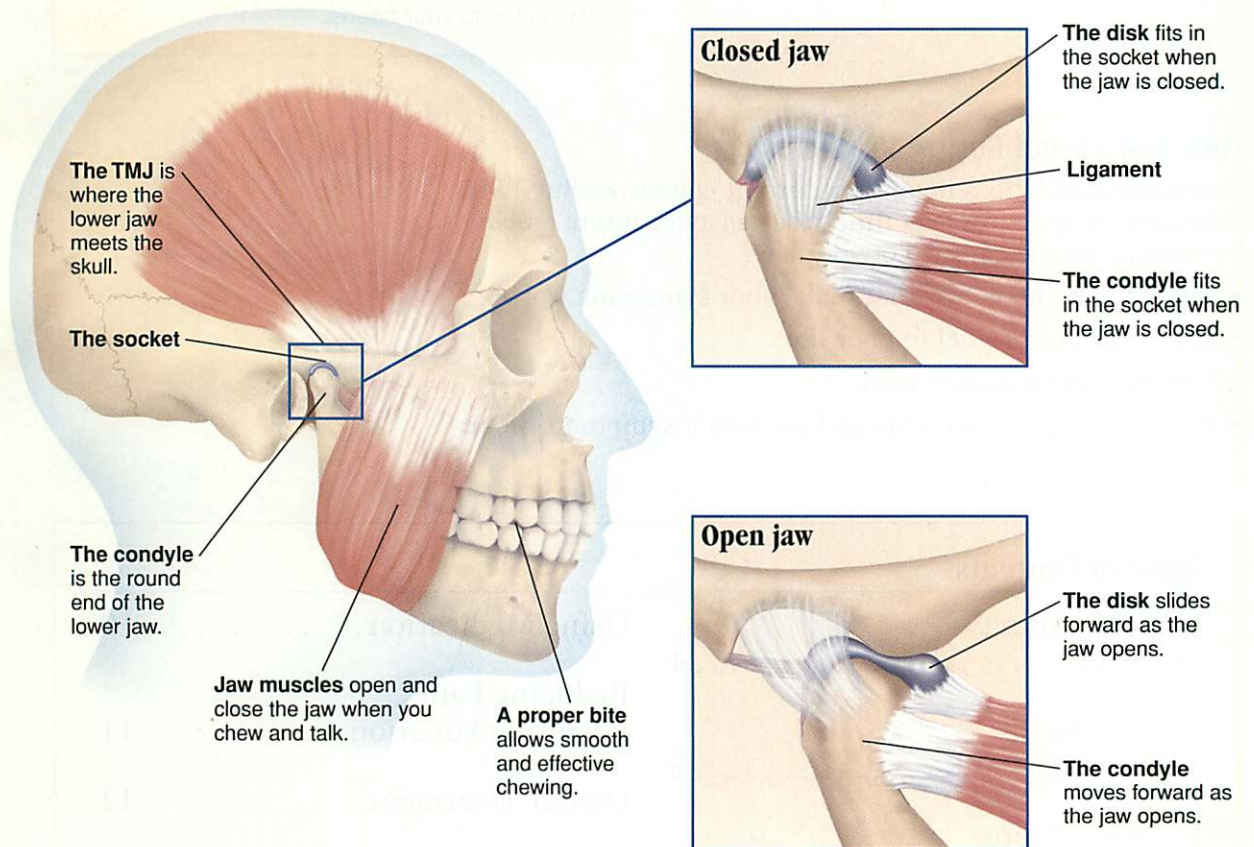
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UNDERSTANDING THE TMJ

The TMJ is a ball-and-socket joint located where the upper and lower jaws meet. You have one joint on each side of your mouth. These joints are part of a large group of muscles, ligaments, and bones that work together as a system.

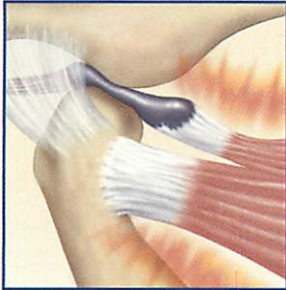
When the System Works

When the system is healthy, you can talk, chew, and even yawn in comfort. **Muscles** contract and relax to open and close the joint. The **disk** absorbs pressure in the joint. It also allows the jaws to open and close smoothly. **Ligaments** connect the jaw bones to the skull. They also support the joint.



WHEN YOU HAVE TMD

The TMJ and its nearby muscles make up a complex, closely connected system. Because of this, a problem in one part of the system can affect the other parts. Common TMD problems include tight muscles, inflamed joints, and damaged joints. In some cases, symptoms may be related to the teeth or bite.



Tight Muscles

The muscles surrounding the TMJ can go into **spasm** (tighten) and cause pain.

- **Referred pain** occurs in a part of the body separate from the source of the problem. For example, pain in the face or teeth could be coming from a problem in the TMJ.
- **Myofascial pain** occurs in soft tissues, such as muscle. Trigger points in these pain areas often cause referred pain. You may feel jaw, neck, or shoulder pain.

Inflamed Joints

Inflammation may include pain, redness, heat, swelling, or loss of function.

- **Synovitis** occurs when certain tissues surrounding the TMJ become inflamed. It causes pain that increases with jaw movement.
- **Inflamed ligaments** can be caused by strain or injury. When this happens, the ligaments are unable to support the joint.
- **Rheumatoid arthritis** is a joint disease. It leads to inflammation in the TMJ.

Damaged Joints

Many people hear clicking when their jaw moves. If you feel pain along with the noise, the joint may be damaged.

- **Impingement** occurs when the disk slips out of place (displacement). This causes the jaw to catch. As the disk slips, you may hear a clicking sound.
- **Locked jaw** occurs when the disk gets stuck in one position. As a result, the jaw locks open or closed.
- **Osteoarthritis** is a joint disease. It causes the TMJ to wear away (degenerate). This leads to pain during movement.

Other Problems

The parts of the jaw and mouth make up a single unit. That's why a problem in one area can cause symptoms elsewhere. Teeth or bite problems associated with TMD include:

- **Bruxism** (grinding your teeth side to side)
- **Clenching** (biting down on your teeth)
- **Malocclusion** (when the teeth or bite is out of alignment)

If you have been diagnosed with any of these, see pages 12 and 13.

LEARNING MORE ABOUT YOUR PROBLEM

You don't have to fight TMD on your own. There are many healthcare providers who can help relieve and treat your symptoms. Your healthcare team may include a general dentist, physician, physical therapist, or other specialist. They will take your history, perform an exam, and guide your treatment.

Preparing Your History

Your health history is the most important factor in diagnosing TMD. To provide the most complete picture of your condition, answer the questions below. Have you had:

- Pain when talking, yawning, or chewing?
- Headaches?
- Neck, shoulder, or back pain?
- Ear pain?
- Clicking or popping noises in the jaw?
- The feeling that your jaw catches?
- Problems opening or closing your mouth?
- The habit of grinding or clenching your teeth?
- A recent change in your bite?
- Whiplash or a recent injury to your head or neck?
- Increased stress in your life?
- A history of arthritis or other medical conditions?
- Any prescription or over-the-counter medications, herbs, or supplements?

Keeping Track

Your healthcare provider will be looking for patterns to your problem. You can help by keeping a log of your symptoms. Use the sample below. Be sure to take the log with you to doctor visits.

When	What I was doing	What it felt like	What helped
<i>Monday morning</i>	<i>Waking up</i>	<i>Jaw felt very stiff and sore</i>	<i>Moist heat</i>

During Your Exam

Your healthcare provider will do an exam of your head and neck. This may include pressing (**palpating**) the muscles and jaw joint. He or she will check for pain, tension, and tenderness. In many cases, range-of-motion readings and imaging tests are also part of an exam.

Range of Motion

TMD can limit jaw movement. But with treatment, the jaw's range of motion should increase. Your healthcare provider may measure range of motion throughout your treatment as well as during the exam.

- **Vertical readings** measure how wide you can open your mouth. A healthy range is usually between 45 and 55 mm (millimeters).
- **Lateral readings** measure how far you can move your lower jaw left and right. A healthy range is usually about 10 mm in each direction.

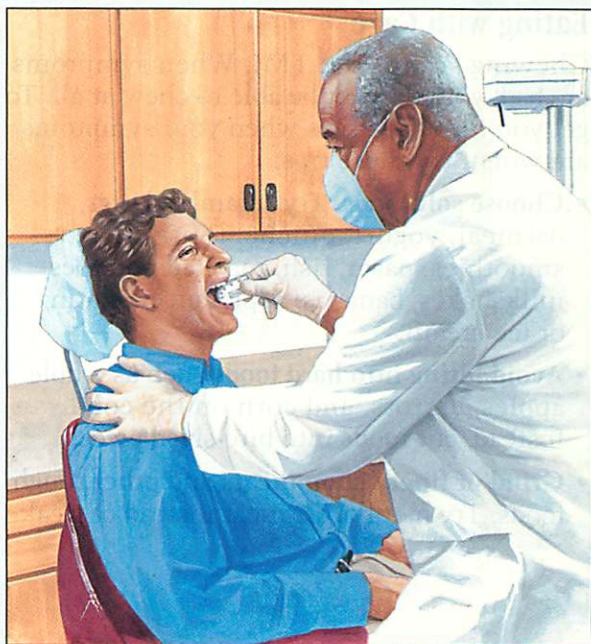
Imaging Tests

Your dentist may order imaging tests. These help show parts of the mouth and head that can't be seen during an exam.

- **Panoramic x-rays** provide a wide view of the jaws, including the teeth and their roots.
- **X-ray tomography** shows the position of the condyle and the joint. The images can also be used to diagnose arthritis.
- **Magnetic resonance imaging (MRI)** creates images of muscles and ligaments of the jaw and head.
- **Other tests** may also be done to check for swelling or joint noise.

Taking the Next Step

Every person with TMD is different. Your dentist or doctor will tailor a treatment plan to your needs. You may also be referred to one or more specialists. If your TMD doesn't respond to treatment right away, don't worry. Sometimes more than one treatment needs to be tried before your doctor finds the best one for you.



To measure range of motion, a small ruler is placed between your upper and lower front teeth.

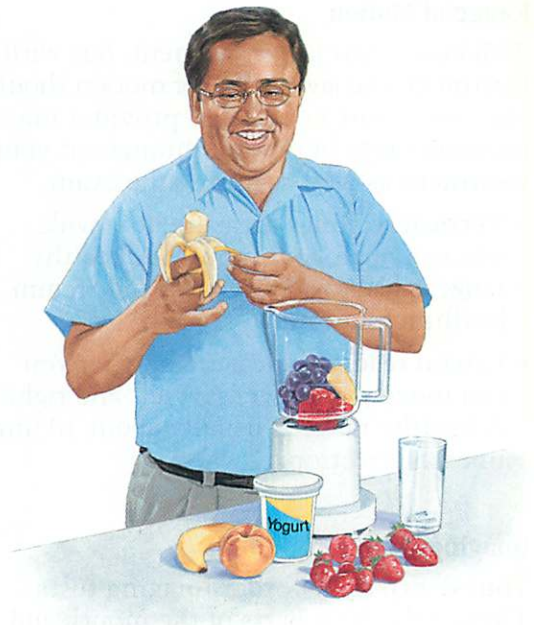
HELPING YOUR BODY HEAL

Have you ever had a sprained ankle? If so, then you know that keeping weight off the ankle helps it to heal. When injured, the TMJ and related muscles need the same treatment. That's why self-care is so important. You can learn how to reduce pressure on the TMJ. You can also learn ways to help it heal.

Eating with Care

Chewing strains the TMJ. When symptoms are bad, you may not be able to chew at all. To get you through times when your symptoms are worst, try these tips:

- **Choose soft foods.** Try scrambled eggs, oatmeal, yogurt, quiche, tofu, soup, smoothies, pasta, fish, mashed potatoes, milkshakes, bananas, applesauce, gelatin, or ice cream.
- **Avoid biting into hard foods** such as whole apples, carrots, and corn on the cob. Instead, cut foods into bite-sized pieces.
- **Grind or finely chop** meats and other tough foods. Try hamburger meat instead of steak.



Using Ice and Heat

Your healthcare provider may suggest using ice and heat. Ice helps reduce swelling and pain. Heat helps relax muscles, increasing blood flow.

- **Use a gel pack or ice wrapped in a towel** for severe pain. Apply for 10 to 20 minutes or until the site becomes numb. Repeat as needed.
- **Use moist heat** for mild to moderate muscle pain. Apply a moist, hot towel to the muscles for 10 to 20 minutes. Repeat as needed.

Avoiding Triggers

Certain activities (called triggers) strain the TMJ, making symptoms worse. The tips below can help you avoid common triggers and limit strain.

- **Avoid hard or chewy foods** such as nuts, pretzels, popcorn, chips, gum, caramel, gummy candies, carrots, whole apples, hard breads, and even ice.
- **Reschedule routine dental visits**, such as cleanings, if your jaw aches. If you have severe pain, call your healthcare provider.
- **Support your jaw** when yawning. When you feel a yawn coming on, put a fist under your jaw. Apply gentle pressure. This helps prevent wide, painful yawns.
- **Avoid any activity that hurts.** This may include nail biting, yelling, and singing.



Maintaining Good Posture

Work at improving your posture during the day and when you sleep. Good posture can help your body heal. Try these tips:

- **Use a headset** when on the telephone. Don't cradle the phone with your shoulder.
- **Keep ergonomics in mind.** This includes making sure your workstation fits your body. Support your lower back. Take frequent breaks to stretch and rest. If you use a computer, keep the monitor at eye level.
- **Keep your head in a neutral position**, with your ears in line with your shoulders. Don't slouch or crane your head forward.
- **Use an orthopaedic pillow** to support your head and neck during sleep.

A Note About Intimacy

TMD can disrupt your life in unexpected ways. It can even disrupt intimacy with your partner. Many people with TMD feel pain when kissing. If this happens to you, don't be afraid to tell your partner. Then try a different form of intimacy until your symptoms improve.

USING MEDICATION

Your doctor may suggest medication to treat TMD. For your safety, tell your doctor if you are taking any prescription or over-the-counter medications. Also mention any herbs or supplements you are using. Then, ask about your new medication. What are its risks or side effects? How should it be taken?

Types of Medications

Some medications used to treat TMD are by prescription only. Others are available over-the-counter. The medication type and dosage will depend on the problem you have. Common medications used to treat TMD are described below.

Anti-inflammatories and Analgesics

These medications are used to treat **pain, inflammation, osteoarthritis, and rheumatoid arthritis**. Anti-inflammatories reduce swelling, heat, redness, and pain. They also help restore function. Analgesics reduce pain. Nonsteroidal anti-inflammatories (NSAIDs) relieve inflammation as well as pain.

Muscle Relaxants

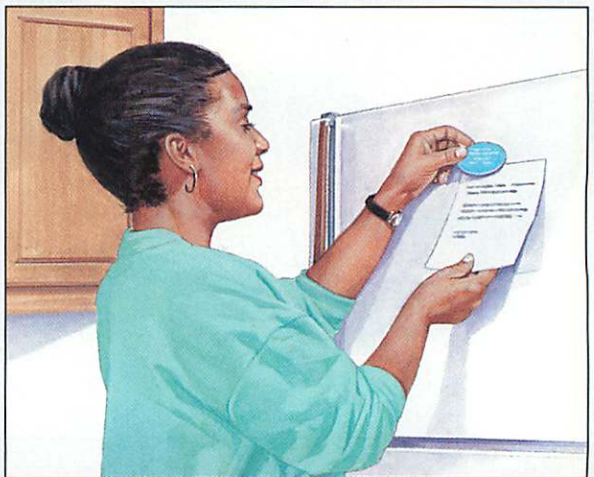
These medications are often used to treat **myofascial pain**. Muscle relaxants help ease muscle tension. This reduces pressure on the TMJ from tight jaw muscles.

Antidepressants

These medications can be used to reduce **pain or bruxism**. At higher dosages, these medications are used to treat depression. Given at low dosages, antidepressants help relieve TMD symptoms. They can reduce muscle pain. They also raise the level of serotonin, a body chemical that improves sleep. This in turn can decrease bruxism during the night.



Ask your pharmacist how to take your medications safely.



To remember when to take your medications, try writing yourself reminders.

REDUCING PAIN, RESTORING FUNCTION

People with TMD often receive certain types of therapy. Massage, ultrasound, or gentle exercise may be used to help relieve pain and restore function. The therapy you receive will depend on how much pain you feel. The cause and severity of your problem will also affect the choice of therapy.

Treating Painful Muscles

A trigger point is a painful spot in a tight muscle. It is often painful to the touch and may refer pain to other places. Your healthcare provider can focus on trigger points using:

- **Massage**, both inside and outside the mouth. This relaxes muscles and improves circulation.
- **Palpation**, which is applying pressure to points of the jaw and face with the fingers.
- **Cold spray** and stretch of the muscles to relax them.
- **An anesthetic** for pain relief. This may be given as an injection by your dentist.



Massage provides relief from pain and muscle stiffness.

Treating the Joint

Therapy may also focus directly on the TMJ. There are different ways to treat the joint:

- **A self-care program** helps you treat and manage symptoms on your own. Your program may include exercises. It may also include using ice and heat to relieve pain.
- **Gentle manipulation** reduces pain and restores range of motion. The healthcare provider uses his or her hands to relax muscles and ligaments around the joint.
- **Exercises** strengthen muscles in the jaw and face.
- **Ultrasound** uses sound waves to reduce pain and swelling. It also improves blood flow.



Ultrasound increases blood flow, nourishing damaged tissues.

Treating Inflammation

When the joint is inflamed, movement becomes difficult—even impossible at times. Your healthcare provider can help. Treatment may include:

- **Rest and gentle exercise** to increase range of motion. One common exercise is to apply pressure to the jaw and resist the movement.
- **A gel pack or ice wrapped in a towel** applied for 10 to 20 minutes. This eases swelling and reduces pain.
- **Massage and gentle manipulation** as described above.



Exercises increase strength.

DENTAL TREATMENT

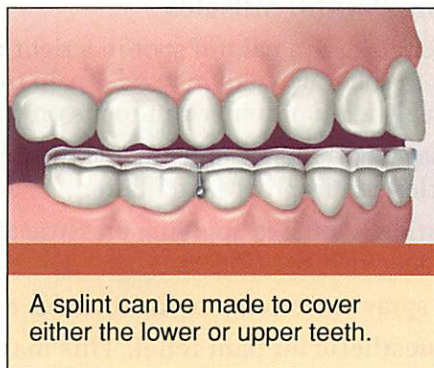
The TMJ is part of a system that includes the teeth (see page 4). Because the joint and the teeth work together, a problem with your teeth or bite can be linked to TMD. If you grind your teeth or if you have a bad bite, your dentist may be able to help. If your bite needs adjustment, you may be referred to an orthodontist.

If You Grind or Clench Your Teeth

Bruxism (teeth grinding) or clenching strains the TMJ. If you have these habits during the day, doing self-checks can help you stop (see page 14). But it's hard to control these habits when you're asleep. That's when splinting can often help.

Splints

A splint is an appliance that fits in the mouth. It may also be called an **orthotic** or **night guard**. There are different kinds of splints for different kinds of needs. A splint can keep the upper and lower teeth apart. This helps protect tooth surfaces from grinding. A splint can also be made to reduce strain on the area.



A splint can be made to cover either the lower or upper teeth.



Wearing and Caring for Your Splint

To make a splint, your dentist or orthodontist may take impressions of your teeth. Then a splint will be made to fit your mouth. A splint:

- May be worn during the day or only at night. Be sure to ask when and how often you should wear your splint.
- Should be cleaned before you put it in and after you take it out. Ask your dentist or orthodontist how to clean the splint.
- Should be kept in a protective case, away from the reach of children and pets. This helps keep the splint from getting dirty or broken.

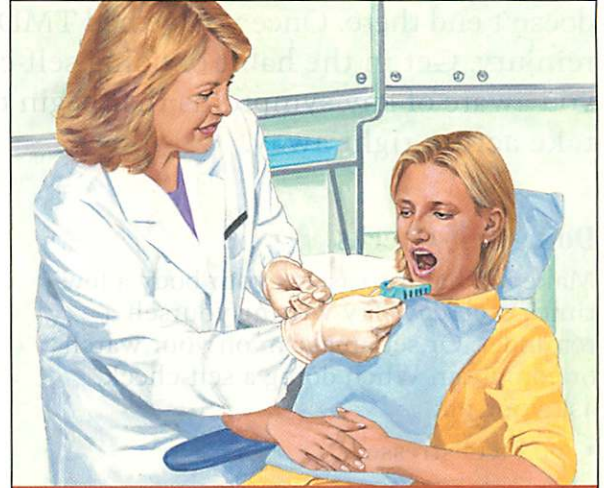
If Your Bite Is Incorrect

Malocclusion means the jaws or teeth don't fit together properly. This can result in pain and problems with jaw function. If your jaws or teeth are out of alignment, orthodontic treatment may help. If your bad bite is due to missing or damaged teeth, you may receive restorative treatment.

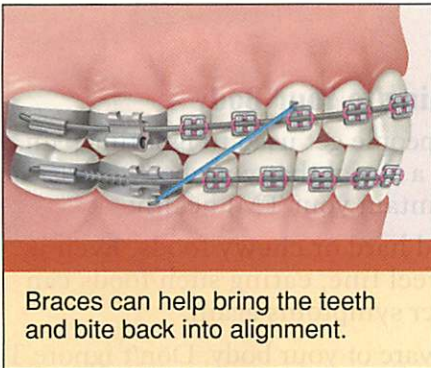
Restorative Treatment

A bad bite can be caused by missing or damaged teeth. A dentist can restore teeth in many ways:

- **A crown** is a porcelain or metal cap. It is cemented in place to repair a broken or damaged tooth.
- **A bridge** is a false tooth fused between two crowns.
- **A dental implant** is an artificial tooth root. It is attached to the jaw as a base for an artificial tooth.



Before restorative work is done, a mold of your teeth will be made.



Braces can help bring the teeth and bite back into alignment.

Orthodontic Treatment

Sometimes the upper and lower jaws are out of alignment. Or teeth are out of line, turned, crowded, or spaced too far apart. Your orthodontist can align teeth with braces and other devices. This helps provide a more comfortable bite.

If Surgery Is Needed

Surgery is rarely needed for TMD problems. However, if other treatments haven't worked, you may be referred to an oral and maxillofacial surgeon. Talk to your doctor about whether surgery might be right for you.

MAINTAINING THE HEALTH OF YOUR JAW

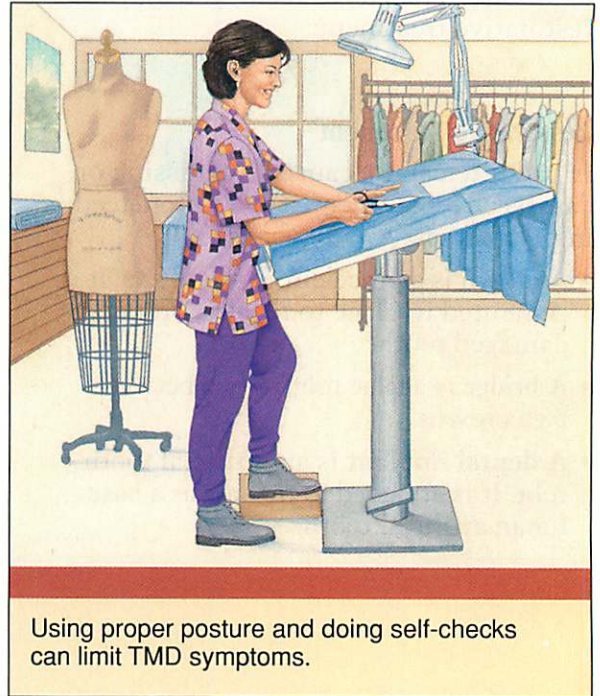
Treatment will get you back to normal function. But your care doesn't end there. Once you've had TMD, it's important to avoid reinjury. Get in the habit of doing self-checks. This can make you aware of any symptoms that begin to recur, so you can take action right away.

Doing Self-Checks

Make it a habit to assess your body a few times each day. Try writing yourself a reminder. Or set an alarm on your watch or computer. When doing a self-check, ask yourself:

- Do I feel stressed?
- Are my muscles tense?
- Am I grinding or clenching my teeth?
- Is my posture healthy for my body?
- Is there anything I can do to make myself more comfortable?

If you answer "yes" to any of the questions above, you need to take action. Adjusting your posture or taking a short break can help prevent or relieve TMD symptoms.



If pain returns, don't put off calling your doctor. Get help right away.

Listening to Your Body

Many people get used to ignoring pain. But pain is a signal that your body needs care. To maintain your TMJ health:

- Avoid hard or chewy foods. Even if you feel fine, eating such foods can trigger symptoms again.
- Be aware of your body. Don't ignore TMD symptoms. The nagging pain in your neck or jaw may indicate that you need care.
- Be sure to keep follow-up appointments with your healthcare team.

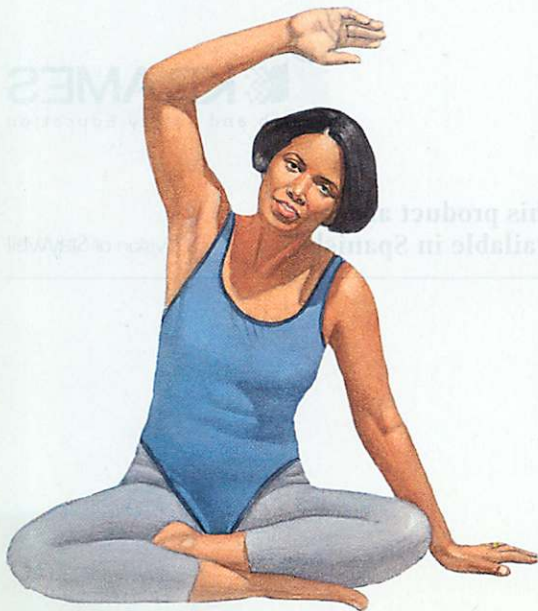
TIPS FOR LIFE

Some lifestyle changes are only needed while you're healing. But other changes can become healthy lifelong habits. Start by managing your stress and staying active. These changes are good for your TMJ. They are also healthy for your body.

Managing Stress

Stress is a key factor in TMD. Stress can cause you to clench your muscles or grind your teeth. It can also affect your sleep, reducing your body's ability to heal. Here are a few tips to manage stress:

- Learn ways to relax. Try listening to music or gently stretching. Take a few slow, deep breaths. Or, close your eyes and imagine a place or object that is calming.
- Get plenty of rest and sleep.
- Set goals you know you can attain.
- Make time for people and things you enjoy.
- Ask for help if you need it. Friends and family can run errands and cook meals for you. They can also join you for walks or other types of exercise.



Staying Active

Activity helps the body in many ways. It helps you stay looser and more relaxed. It also helps keep muscles and tissues conditioned. That way you can heal faster and make reinjury less likely. Here are some tips to get you started:

- Talk to your healthcare provider before starting an exercise program.
- Always warm up and stretch before activity. This helps prevent injury.
- Try walking or swimming. These activities are easy on your joints. They also benefit your heart and lungs.
- Try yoga or tai chi. These are relaxing activities known for reducing stress.

FEELING BETTER

Self-care is an ongoing process. Now that you have made changes to treat TMD, you'll start feeling better. Some changes become lifelong habits. Others can be used as needed. If symptoms start again, you'll know what to do. Once you understand your problem, you'll have the power to manage it.

Resources

- **American Dental Association**
www.ada.org
- **National Institute of Dental and Craniofacial Research**
www.nidcr.nih.gov
- **American Association of Oral and Maxillofacial Surgeons**
www.aaoms.org
- **American Academy of Otolaryngology—Head and Neck Surgery**
www.entnet.org
- **American Association of Orthodontists**
www.braces.org



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