

Massage and TMJ Disorders Home Study Course

7 CE Hours
Text and Online Study Guide

Presented by the:
Center for Massage Therapy Continuing Education
PO Box 117 • Elk Point, SD 57025
866-784-5940 • www.massagetherapyceu.com

Table of Contents

INSTRUCTIONS	3
TEXT	4
EXAM (for review before taking the online exam).....	31

Center for Massage Therapy Continuing Education

© 2024 Center for Massage Therapy Continuing Education
PO Box 117
Elk Point, SD 57025
www.massagetherapyceu.com
Ph: 866-784-5940
corrimarx@massagetherapyceu.com

© 2024 Melissa M. Dawahare, ND, PLLC
www.drmelissa.com

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It is the responsibility of the practitioner to determine the appropriateness of the principles presented in terms within the scope of practice. This information is in no way meant to diagnose or treat medical conditions.

Instructions for the Massage and TMJ Disorders home study course

Thank you for investing in the *Massage and TMJ Disorders* home study course, a 7 CE hour course designed to further your knowledge on the subject of TMJ disorders and how they relate to the practice of massage therapy.

This guide will contain all of the instructions you will need to complete this course. This is a 7 CE hour course, so that means it should take you approximately 7 hours to read the text and complete the examination and course evaluation.

PLEASE READ THE FOLLOWING DIRECTIONS FOR COMPLETION OF THIS COURSE.

The following are steps to follow in completing this course:

- 1. Read the instructions and review the text and exam.**
- 2. Access the online examination in your account at www.massagetherapyceu.com.**
- 3. Complete your examination and print your certificate. The exam is open book and there is no time limit for completion.**

You must pass the exam with a 70% or better to pass this home study course. You are allowed to access and take the exam up to 3 times if needed. There is no time limit when taking the exam. Feel free to review the text while taking the exam. There are no trick questions on the exam. All of the answers are clearly found in the text. The exam is also included at the end of the text for review before taking the exam.

It is advised to answer the exam questions in the study guide before testing online. That way, when you are testing you do not have go back and forth through the online exam.

Good luck as you complete this course. If you have any questions please feel free to contact us at 866-784-5940, 712-490-8245 or info@massagetherapyceu.com. Most state boards require that you keep your “proof of completion” certificates for at least four years in case of audit. Thank you for taking our *Massage and TMJ Disorders* home study course.

Massage and TMJ Disorders Text

Overview

Temporomandibular joint and muscle disorders, commonly called TMJ, are a group of poorly understood conditions causing pain and dysfunction in the jaw joint and the muscles controlling jaw movement. Alternative names include temporomandibular joint disorders (TMJD), temporomandibular muscle disorders (TMD), and TMJ syndrome. These are umbrella terms covering the acute or chronic inflammation of the temporomandibular joint (TMJ), which results in pain and impairment.

One or both joints may be affected. This can affect the ability to speak, eat, chew, swallow, make facial expressions, and even breathe. For most people, pain in the area of the jaw joint or muscles does not signal a serious problem. Generally, discomfort from these conditions is occasional and temporary, often occurring in cycles. The pain eventually goes away with little or no treatment. Some people, however, develop significant and long-term symptoms.

Researchers are looking for answers to what causes these conditions and what the best treatments for them are. Dentistry and the neurology branch of medicine treat the disorder. Because of this there are a wide variety of treatment approaches.

Until scientific evidence for safe and effective treatments exists, it's important for your massage clients to avoid procedures causing permanent changes in the jaw or bite. This is one of the reasons massage therapy is a perfect treatment for TMJ disorders. Massage does nothing to permanently change the jaw or the bite.

This home study course provides the basic information a professional massage therapist should be familiar with if they want to work with clients who have TMJ disorders. The course covers:

- What is the temporomandibular joint?
- What are TMJ disorders?
- Are there any overlapping medical conditions with TMJ disorders?
- What do the statistics report about TMJ disorders?
- What causes TMJ disorders?
- What are the risk factors for TMJ disorders?
- What are the signs and symptoms of TMJ disorders?
- How are TMJ disorders diagnosed?
- How are TMJ disorders treated?
- What are the costs of TMJ disorders?
- How are TMJ disorders prevented?
- What is the prognosis for those with TMJ disorders?
- How can massage therapy help those with TMJ disorders?
- What types of massage are used with TMJ disorders?
- Are there any contraindications for massage therapy with TMJ disorders?
- When should the massage therapist refer clients with TMJ disorders?
- What can a massage therapist do if they suspect they have a TMJ disorder?
- What research is being conducted on TMJ disorders?
- What are some TMJ disorders resources?

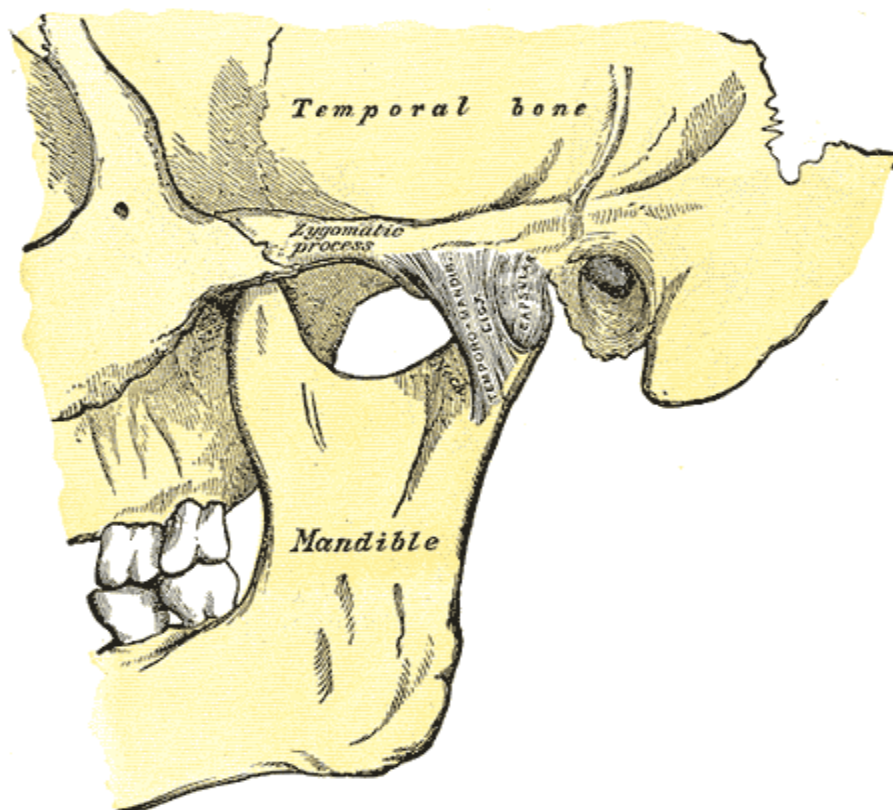
What is the temporomandibular joint?

The temporomandibular joint is the joint of the jaw and is typically referred to as the TMJ. There are two matching TMJs. The name is derived from the two bones which form the joint, the lower jaw or mandible and

the upper temporal bone of the skull. The temporal bone is located in front of the ear on each side of the head. The TMJ is located by placing the fingers in front of the ears and opening the mouth.

When healthy, these joints are flexible. The TMJ is a hinge and a plane joint, so the jaw moves smoothly up and down and side to side. This enables a person to talk, eat, chew, and yawn. Muscles attached to and surrounding the jaw joint control the position and movement of the jaw. See Diagram 1 below.

Diagram 1 – The Temporomandibular Joint



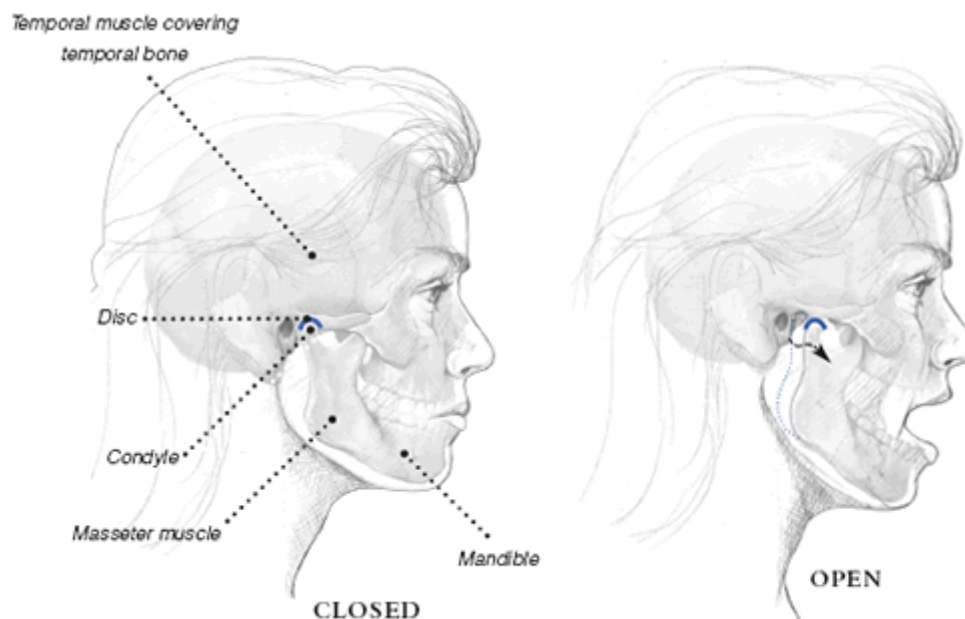
Each TMJ actually has two joints allowing for rotation and sliding. With use, the bone and cartilage may show signs of wear. Clicking, popping, and even deviations in jaw movements are common. Pain is the most common signifier of TMJ disorders.

The temporomandibular joint combines a hinge action with sliding motions. The parts of the bones that interact in the joint are covered with cartilage and are separated by a small shock-absorbing disc, which keeps the movement smooth.

The dysfunction involved in TMJ disorders is between the condyle and mandible and the disc. The sounds produced are described as clicks or pops when heard as a single sound. When heard as multiple sounds, they can be called crepitus.

When the mouth is open, the rounded ends of the lower jaw or condyles glide along the joint socket of the temporal bone. The condyles slide back to their original position when the mouth is closed. To keep this motion smooth, a soft disc lies between the condyle and the temporal bone. This disc absorbs shocks to the jaw joint from chewing and other movements. Diagrams 2 and 3 illustrate this.

Diagrams 2 and 3



The temporal and mandibular bones form the TMJ. As mentioned, attached to the mandibular condyle is an articular disc, which allows the mandible to move smoothly. The mastication muscles (masseter, temporalis, lateral pterygoid, and medial pterygoid) provide stabilization and movement of the TMJ.

The temporomandibular joint is different from other body joints. It is one of the most complicated joints in the body because of the hinge and sliding motions. Also, the tissues that make up the temporomandibular joint differ from other load bearing joints, like the knee or hip. Because of its complex movement and unique makeup, the jaw joint and its controlling muscles pose a tremendous challenge to both patients and health care providers when problems arise.

Additionally, the TMJ is susceptible to many medical conditions that affect other joints in the body. Ankylosis, arthritis, dislocations, neoplasia, trauma, injuries, and other developmental anomalies are just a few of these conditions.

In a healthy TMJ, the bone and cartilage do not have any receptors to transmit pain signals. Pain comes from the surrounding soft tissues or trigeminal nerve, which runs through the joint area. When receptors from these other areas are triggered, the pain causes a reflex to limit the mandible's movement. Inflammation of the TMJ and damage to the trigeminal nerve can lead to constant pain even without jaw movement.

What are TMJ disorders?

TMJ disorders are problems of the chewing muscles and joints connecting the lower jaw to the skull. TMJ disorders or disorders of the jaw joint and chewing muscles vary widely. Researchers generally agree TMJ disorders fall into three main categories:

1. Myofascial pain, the most common temporomandibular disorder, involves discomfort or pain in the muscles that control jaw function.
2. Internal derangement of the joint involves a displaced disc, dislocated jaw, or injury to the condyle.
3. Arthritis refers to a group of degenerative/inflammatory joint disorders that can affect the temporomandibular joint.

These disorders occur as a result of problems with the jaw, the jaw joint, and surrounding facial muscles that control chewing and moving the jaw. A person may have one or more of these conditions at the same time.

How jaw joint and muscle disorders progress is not clear. Symptoms worsen and ease over time, but what causes these changes is not known. Most people have relatively mild forms of the disorder. Their symptoms improve significantly, or disappear spontaneously, within weeks or months. For others, the condition causes chronic, persistent, and debilitating pain.

TMJ disorders are highly complex. TMJ disorders cause tenderness and pain in the temporomandibular joint (TMJ), the joint on each side of the head in front of the ears, where the mandible meets the skull. As mentioned, this joint is critical for talking, chewing, and yawning.

Many different types of problems including arthritis, jaw injury, and muscle fatigue from clenching or grinding the teeth can cause TMJ disorders. People with temporomandibular joint disorder may experience severe pain and discomfort. The pain can be acute or chronic. In most cases, the pain and discomfort associated with TMJ disorders can be alleviated with self-managed care or nonsurgical treatments. Severe TMJ disorders may need to be treated with dental or surgical interventions.

Are there any overlapping medical conditions with TMJ disorders?

People with TMJ disorders often experience other symptoms and medical conditions. Sadly, many of these broad multi-system illnesses go undiagnosed. Research is looking into common mechanisms of TMJ disorders and these medical conditions. The exact relationship between these conditions is not known. Here is a potential list of health problems that coexist or overlap with TMJ disorders:

- Allergies
- Cardiac arrhythmias
- Chemical sensitivity
- Chronic fatigue syndrome
- Chronic headaches
- Dizziness
- Dystonia
- Ear pain
- Ehlers-Danlos syndrome
- Endometriosis
- Fibromyalgia
- Generalized pain conditions
- Hypermobility joints
- Interstitial cystitis
- Irritable bowel syndrome (IBS)
- Lyme disease
- Meniere's Disease
- Migraines
- Mitral valve prolapse
- Movement disorders
- Rheumatic disease
- Rheumatoid arthritis
- Scleroderma
- Sleep disorders or disturbances
- Tension headaches

- Tinnitus (ear ringing)
- Vestibular disorders
- Vulvodynia

Current research does not explain why these conditions frequently coexist or overlap. There are many unanswered questions. Some people suffer from two conditions while others may have three or more. In other situations, a person may suffer from one condition for many years before developing a second or third condition. In still other cases, an individual may have symptoms of several conditions simultaneously. Research also shows TMJ patients are hypersensitive to pain. This may explain why they may have other chronic pain conditions.

Overall, as a massage therapist, it is important to remember that clients with TMJ disorders may have overlapping or coexisting medical condition(s). These conditions may affect the massage therapy treatment approach, so take a thorough client history and intake.

What do the statistics report about TMJ disorders?

It is not known for certain how many people have TMJ disorders. Some estimates suggest 10 to 35 million Americans are affected. While both men and women experience TMJ disorders, the majority of those seeking treatment are women in their childbearing years. The condition appears to be more common in women than men. This disorder is seen most commonly in people between the ages of 20 and 50.

What causes TMJ disorders?

The exact cause of TMJ disorders is not clear and not all causes are known. Some dentists believe that symptoms arise from problems with the muscles of the jaw or with parts of the joint itself. Trauma to the jaw or temporomandibular joint plays a role in some TMJ disorders. But for most jaw joint and muscle problems, scientists, researchers, dentists, and doctors don't know the causes.

For many people, symptoms seem to start without obvious reason. Research disputes the popular belief that a bad bite or orthodontic braces can trigger TMJ disorders. Because the condition is more common in women than in men, scientists are exploring a possible link between female hormones and TMJ disorders.

There is no scientific proof that clicking sounds in the jaw joint lead to serious problems. In fact, jaw clicking is common in the general population. Jaw noises alone, without pain or limited jaw movement, do not indicate a TMJ disorder and do not warrant treatment.

Disorders of the teeth can contribute to TMJ disorders. Destruction of the supporting bone and heavy forces placed on the teeth can be problems. The movement of the teeth affects how they contact one another with a closed mouth. When this happens, the overall relationship between the teeth, muscles, and TMJ can be altered. Pulpitis, which is inflammation of the dental pulp, may occur from excessive surface erosion.

Perhaps the most important factor in disorders of the teeth contributing to TMJ disorders is the way the teeth meet together. The force of mastication can displace the condyle when the teeth are misaligned. Some people report TMJ problems after wisdom teeth have been extracted.

The roles of stress and teeth grinding as major causes of TMJ disorders are also unclear. Many people with these disorders do not grind their teeth, and many chronic teeth grinders do not have painful joint symptoms.

Scientists note people with sore, tender chewing or mastication muscles are less likely than others to grind their teeth because it causes pain. Researchers also found stress seen in many persons with jaw joint and muscle

disorders is more likely the result of dealing with chronic jaw pain or dysfunction than the cause of the condition.

Bad posture could be a factor in TMJ disorders. An example would be the person who holds their head forward all day long looking at a computer screen. This strains the muscles of the face and neck. This type of posture problem may contribute to trigger point formation. Many people end up with trigger points, contracted muscles in the jaw, head, or neck, which refer pain to other areas. These trigger points can cause headaches, earaches, and even toothaches.

Here is a list of potential TMJ disorder causes being considered or researched:

- Arthritis
- Asymmetry of the mastication (chewing) muscles
- Auto-immune disease
- Bony ankylosis
- Bruxism
- Chewing habits
- Clenching teeth
- Degeneration of articular joint surfaces
- Degenerative joint diseases
- Developmental abnormality
- Dislocation of disc between ball and socket
- Dislocations in general
- Excessive gum chewing
- Excessive nail biting
- Forward head posture
- Fractures
- Functional habits
- Genetics
- Grinding teeth
- Hormones
- Infections
- Injury or heavy blow to the head and neck
- Injury to the jaw
- Injury to the TMJ
- Jaw thrusting
- Lack of overbite
- Misalignment of teeth due to crowns or other restorative dental work
- Misalignment of the jaw or dentition
- Multiple myofascial trigger points
- Myofascial dysfunction syndrome
- Osteoarthritis
- Over opening the jaw beyond normal range of motion
- Pathologic lesion within the TMJ
- Physical stress on cartilage disc at joint
- Physical stress on muscles of jaw, face, and neck
- Physical stress on nearby ligaments, blood vessels, and nerves
- Physical stress on teeth
- Poor diet
- Poor posture
- Presence of osteoarthritis in the TMJ

- Presence of rheumatoid arthritis in the TMJ
- Recurrent fibrous
- Rheumatoid arthritis
- Size of food bites eaten
- Sleep problems
- Some dental treatments
- Stress
- Structural problems since birth
- Tight facial and jaw muscles
- Tightness of the back and neck
- Trauma
- Unusual speech
- Unusually aggressive or repetitive sliding of jaw laterally or forward
- Whiplash

What are the risk factors for TMJ disorders?

There are not many known risk factors for TMJ disorders. Risk factors identified with TMJ disorders include:

- Ages 20 to 50
- Female
- Jaw deformity
- Overlapping medical conditions like rheumatoid arthritis, fibromyalgia, chronic fatigue syndrome, and sleep disorders

What are the signs and symptoms of TMJ disorders?

Signs and symptoms of TMJ disorders usually involve more than one of the numerous TMJ components:

- Bones
- Connective tissue
- Ligaments
- Muscles
- Nerves
- Teeth
- Tendons

A wide variety of symptoms may be linked to TMJ disorders. Pain is the most common symptom in TMJ disorders. TMJ pain is often described as a dull ache in the jaw joint, ear, and nearby areas which comes and goes. Some people, however, report no pain, but still have problems using their jaws. Other likely symptoms include:

- A change in the way the upper and lower teeth fit together
- A tired feeling in the face
- Biting difficulty
- Biting discomfort
- Chewing difficulty
- Chewing discomfort
- Clicking sounds
- Difficulty opening or closing mouth

- Discomfort in jaw joint
- Dizziness
- Dull aching facial pain
- Ear pain
- Ear pressure
- Earaches
- Facial swelling on the sides
- Grating sensation
- Headaches, acute or chronic
- Hearing problems
- Jaw muscle stiffness
- Jaw noises
- Jaw pain
- Jaw tenderness
- Jaws stuck or locked in the closed mouth position
- Jaws stuck or locked in the open mouth position
- Limited ability to open the mouth widely
- Limited movement of the jaw
- Locking of the jaw joint
- Migraine
- Neck aches
- Pain in chewing muscles
- Pain in the neck
- Pain or tenderness in face
- Pain or tenderness in jaw joint area
- Pain or tenderness in or around the ear while chewing, speaking, or opening the mouth widely
- Pain or tenderness in the shoulders
- Pain or tenderness of the jaw or jaw joint
- Painful clicking, popping, or grating in the jaw joint when opening or closing the mouth
- Radiating pain in the face, jaw, or neck
- Reduced ability to open or close mouth
- Severe pain in jaw
- Tinnitus or ringing in the ears
- Uncomfortable bite
- Uneven bite due to one or more teeth making premature contact
- Upper and lower teeth not fitting together properly
- Vision problems

The professional massage therapist should note jaw noises without pain or decreased mobility typically do not indicate a TMJ disorder. Occasional discomfort in the jaw joint or chewing muscles is common and not always a cause for concern.

Many TMJ sufferers get better without treatment. Often the problem goes away on its own in several weeks to months. However, if a massage client's pain is severe and lasts more than a few weeks, refer them to their healthcare provider.

How are TMJ disorders diagnosed?

A physician, physician's assistant, or nurse practitioner may diagnose TMJ disorders based on clinical symptoms, routine laboratory tests, and X-rays. Their clinical assessment, which involves history taking and physical examination, supports the diagnosis of TMJ disorders.

There are no widely accepted, standard tests available to correctly diagnose TMJ disorders. Because the exact causes and symptoms are not clear, identifying these disorders can be difficult and confusing. Currently, health care providers note the patient's description of symptoms, take a detailed medical and dental history, and examine problem areas, including the head, face, jaw, and neck. Imaging studies may also be recommended.

The health care provider will examine the TMJ for pain or tenderness. They will listen for clicking, popping, or grating sounds during jaw movement. They look for limited range of motion and locking of the jaw while opening or closing the mouth. The bite is examined and so is facial muscle function. Sometimes the physical examination may be normal. A thorough examination may involve:

- A dental exam looking for poor bite alignment
- Limited range of motion in TMJ
- Palpating the joint and connecting muscles for tenderness
- Pressing around the head or temporal bone for sensitive/painful areas
- Sliding the teeth from side to side
- TMJ pain or tenderness
- Watching, feeling, and listening to the jaw open and shut
- X-rays to show abnormalities

Other known causes of pain should be ruled out. Facial pain can be a symptom of many other conditions, such as sinus infections, ear infections, various types of headaches, and facial neuralgias (nerve related facial pain). Ruling out these problems helps identify TMJ disorders. Other specific conditions to rule out may include trigeminal neuralgia, a toothache, infections, sinus problems, gum disease, decayed or abscessed teeth, and arthritis. A diagnose of TMJ disorder is correctly made when all other possibilities have been considered and eliminated.

If the physician or dentist suspects a teeth problem, panoramic X-rays can be taken. These allow the dentist or health care provider to view the entire jaw, TMJ, and teeth. Computer tomography (CT) scans can provide detailed images of the bones involved in the joint. Magnetic resonance imaging (MRI) can reveal problems with the joint's disc.

In the diagnosis of TMJ pain and symptoms, medical specialists are sometimes used. Some specialized health care providers who treat TMJ disorders may include:

- Chiropractors
- Dentists
- Ear, nose, throat (ENT) specialists
- Endocrinologists
- Neurologists
- Oral/Maxillofacial surgeons
- Pain specialists
- Primary care physicians
- Rheumatologists
- Sleep specialists

Overall, a professional massage therapist can best serve their TMJ clients by encouraging them to seek a specialist for unresolved pain and proper diagnosis. The massage therapist should advise clients to avoid costly diagnostic tests and get second opinions from other providers when in doubt or necessary.

How are TMJ disorders treated?

Because more studies are needed on the safety and effectiveness of most treatments for jaw joint and muscle disorders, experts strongly recommend using the most conservative, reversible treatments possible. Conservative treatments do not invade the tissues of the face, jaw, or joint, or involve surgery. Reversible treatments do not cause permanent changes in the structure or position of the jaw or teeth. Even when TMJ disorders have become persistent, most patients still do not need aggressive types of treatment.

Treatments range from simple self-care practices and conservative treatments to injections and surgery. Most experts agree treatments should be conservative and non-surgical. Surgery is the last resort. Many of the treatments covered below work well when combined.

Reversible/Conservative Treatments

Because the most common jaw joint and muscle problems are temporary, do not get worse, and resolve on their own, simple treatment is all that is usually needed to relieve discomfort. These things include self-care practices, medications, Botox, stabilization splints, massage therapy, and alternative medicine.

Self-Care Practices

There are steps you can take which may be helpful in easing TMJ symptoms, such as:

- Applying ice packs to side of face/temple for 10 minutes to relieve pain
- Applying warm, moist heat packs to side of face/temple for 10 minutes to relieve pain
- Avoid hard, sticky, crunchy, or chewy foods like hard rolls, pretzels, raw carrots, caramels, and taffy
- Avoid jaw clenching
- Avoid long dental appointments requiring an open mouth
- Avoid overuse of jaw muscles
- Avoiding extreme jaw movements (such as wide yawning, loud singing, and gum or ice chewing)
- Become aware of tension related habits like clenching the jaw, grinding the teeth, or chewing pens/pencils to reduce their frequency
- Cut food into small pieces to reduce the amount of chewing required
- Don't hold the telephone between the shoulder and ear
- Don't rest the chin on the hand
- Don't stretch the mouth to accommodate foods such as corn on the cob, apples, or whole fruits
- Eating soft foods like cottage cheese, scrambled eggs, yogurt, mashed potatoes, soup, fish, cooked fruits and vegetables, beans, and some grains allows jaw to rest temporarily
- Exercise several times each week
- Have massage therapy sessions regularly
- Keep the teeth slightly apart to relieve pressure on the jaw
- Keep tongue between the teeth to control clenching or grinding during the day
- Learning techniques for relaxing and reducing stress like guided imagery, deep breathing, yoga, and meditation
- Over the counter analgesics
- Practice good posture to reduce neck and facial pain
- Practicing gentle jaw stretching and relaxing exercises to increase jaw movement prescribed by a health care provider, physical therapist, or professional massage therapist
- Read as much as possible about TMJ treatment options and get multiple health care provider's opinions
- Relax facial muscles and lips
- Self-massage to face, head, neck, and shoulders as instructed by a massage therapist
- Sleeping on the side using a pillow for support between the shoulder and neck

- Use hand to support chin during yawning to prevent joint damage or joint locking in the open position
- Use stress reduction therapies regularly like biofeedback

In TMJ disorders, often the muscles are unbalanced. Using biofeedback is helpful in balancing these muscles. A simple mirror can be used as a biofeedback device. Have your massage client draw a vertical line on a mirror. Instruct them to relax the jaw while exhaling and view the jaw relaxing in the midline of the mirror. Have them practice breathing and relaxing daily using the mirror. Symptoms improve when the jaw opens at the midline.

Cognitive behavioral therapy may also be suggested as a self-care practice. For those whose TMJ symptoms are worse with stress or anxiety, a health care provider may refer them to a psychotherapist for cognitive behavioral therapy. This strategy helps the person become aware of behaviors and learn relaxation techniques and interventions to manage stress.

Medications

The pain of TMJ disorders is often more neurologic in nature which does not respond well to drugs. Despite this, there are several useful categories of medications for people with TMJ disorders. Painkillers, both over the counter and prescription, can be used to relieve TMJ pain. Tricyclic antidepressants, such as amitriptyline or nortriptyline, are used at bedtime to ease TMJ pain in some people. This strategy is useful for those who suffer with depression in addition to TMJ disorders.

Muscle relaxants are occasionally used for days or weeks at a time to relieve pain caused by TMJ disorders. These are helpful for those who grind or clench their teeth because they can relax the jaw muscles. Rarely, corticosteroid drugs are injected into the joint space to provide relief. This strategy is only for significant pain and significant joint inflammation. Anti-anxiety medications are sometimes used to relieve stress contributing to TMJ symptoms. These drugs are not a long-term solution.

In conclusion, for many people with TMJ disorders, short-term use of over the counter pain medicines like acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, may provide temporary relief from jaw discomfort. When necessary, a dentist or doctor can prescribe stronger pain or anti-inflammatory medications, muscle relaxants, or anti-depressants to help ease symptoms.

Stabilization Splints

A doctor or dentist may recommend an oral appliance, also called a stabilization splint, occlusal splint, night guard, mouth guard, or bite guard. They have been used since the 1930's to treat teeth grinding, clenching, and TMJ disorders despite the fact that research evidence is inconclusive. Occlusal splints do prevent the loss of tooth enamel from grinding, but the use of a splint can worsen TMJ disorder symptoms for some.

These plastic guards fit over the upper or lower teeth to lessen the effects of clenching or grinding the teeth. Stabilization splints are the most widely used but unproven treatments for TMJ disorders. A splint must be properly fitted and used for limited periods of time. The use of the splint must be discontinued if it is painful or pain increases.

The difference between a splint and night guard is that a night guard is worn only at night. Splints are worn 24 hours a day, 7 days a week. They correct the bite by positioning the teeth in their most correct and least traumatic position.

If your massage client grinds their teeth in their sleep, they may benefit from wearing a soft or firm bite guard device over their teeth. The guard or splint helps prevent the upper and lower teeth from coming together, touching, and/or grinding. Bite guards can make sleep apnea symptoms worse.

Studies of their effectiveness in providing pain relief, however, have been inconclusive. While many have found them helpful, the benefits vary widely. The guard can lose effectiveness over time or when it is not being worn. Some people feel their pain worsen while wearing one.

If a stabilization splint is recommended, it should be used only for a short time and should not cause permanent changes in the bite. Permanent use of a guard is not recommended and should be stopped if it causes a change in the bite. If a splint causes or increases pain, encourage the massage client to stop using it and see their health care provider.

Botox

Botox™ (botulinum toxin type A) is a drug made from the same bacterium that causes food poisoning. Used in small doses, Botox injections can actually help alleviate some health problems. The Food and Drug Administration (FDA) has approved Botox for the treatment of certain eye muscle disorders, cervical dystonia (neck muscle spasms), and severe underarm sweating, as well as for limited cosmetic use.

Botox has not been approved by the FDA for use in TMJ disorders. Research is under way to learn how Botox specifically affects jaw muscles and their nerves. The findings will help determine if this drug may be useful in treating TMJ disorders. The theory is that injecting Botox into the jaw muscles used for chewing may relax and relieve pain associated with TMJ disorders.

Massage Therapy

The applications of massage for TMJ disorders and different types of massage useful in TMJ disorders are discussed in detail in upcoming sections of this home study course.

Alternative Medicine

Since stress does occasionally contribute to TMJ disorders, stress-relieving techniques from the alternative medicine field may help alleviate TMJ symptoms, reduce jaw clenching, and decrease teeth grinding.

Deep breathing is the easiest to practice. Teach your massage clients to sit comfortable, breathe in through their nose, and expand their abdomen as they breathe in. Have them pause for a second. Exhale through the mouth, gently pushing or sucking the abdomen towards the spine.

Guided imagery is another easy alternative medicine method to teach your massage clients. Known as visualization, this method of relaxing involves lying quietly and picturing a peaceful setting, perhaps in nature. Instruct your clients to experience the setting with all of their senses. For example, have them imagine lying on the beach, picturing the blue sky, smelling the salty ocean, hearing the waves crest on the beach, and feeling the warm breezes on the skin. The messages the brain receives help the massage client relax deeper.

Progressive muscle relaxation is another tool to provide your massage clients with. Have them relax a series of muscles, one at a time. First, instruct them to increase the tension in a group of muscles like the leg or arm. Have them tighten the muscles and then relax them. Move to the next group of muscles. Do this over the entire body, from head to foot.

Meditation as a daily practice is an alternative medicine technique with scientific evidence validating its usefulness. It is a way to calm mind, body, and spirit. Instruct your massage client to sit quietly and focus on nothing or on a mantra, which is a simple sound, repeated over and over. You can teach them any other method you are familiar with. This causes the person to enter deep relaxation and a restful state to reduce stress in the body. The breathing slows, muscle tension eases, and brain wave activity changes to a restful pattern.

Yoga is an excellent practice for those with TMJ disorders. It incorporates breathing, movement, and posture. A series of poses and postures is completed while paying attention to the breath. Inhalation is made during certain movements and exhalation is made during others.

Several other alternative medicine treatments include transcutaneous electrical nerve stimulation (TENS), ultrasound, trigger point injections, and radio wave therapy. TENS uses low-level electricity to provide pain relief and is done in the office or at home by the patient. Ultrasound can be applied to the TMJ to alleviate symptoms and is usually an in office procedure. Trigger point injections are when pain medication is injected into tender facial muscles or trigger points for pain relief. Radio wave therapy provides low-level electrical stimulation to the joint. Research is being done to look at the effectiveness of these types of treatments.

These more conservative, reversible treatments described are useful for temporary relief of pain. They are not cures for TMJ disorders. Overall the massage therapist must remember if their client's symptoms continue over time, come back often, or worsen, they should notify their doctor or other health care provider.

Failure of these more conservative treatments does not automatically mean your massage client will need more aggressive treatment. Some TMJ pain goes away on without treatment. Encourage your massage clients to be very cautious about nonreversible treatment methods such as orthodontics or surgery.

Irreversible Treatments

Irreversible treatments not proven to be effective include surgery, implants, and corrective dental treatments. These things may even make the problem worse.

Surgery

Other types of treatments, such as surgical procedures, invade the tissues. Surgical treatments are controversial, often irreversible, and should be avoided where possible. There have been no long-term clinical trials to study the safety and effectiveness of surgical treatments for TMJ disorders. In some studies, the results are worse than before surgery. Nor are there standards to identify people who would most likely benefit from surgery. Failure to respond to conservative treatments, for example, does not automatically mean surgery is necessary.

Reconstructive surgery of the jaw or joint replacement is rarely required. Since surgery is irreversible, encourage your massage clients to get a second and even third opinion from other health care providers. Surgery should only be considered after all other treatment options have been tried and pain is persistent, severe, and intense.

As a last resort option, a doctor or dentist may suggest surgery to repair or replace the joint. The National Institute of Dental and Craniofacial Research considers TMJ surgery to be controversial and recommends it be avoided when possible.

There are three types of surgery for TMJ disorders. They include arthrocentesis, arthroscopy, and open joint surgery. The type of surgery indicated depends on the TMJ problem.

Arthrocentesis may be recommended for your massage client. This minor procedure is done in a doctor's office under general anesthesia. It is used in cases of acute restricted jaw opening. It involves the insertion of a needle into the TMJ. Fluid, usually saline and an anti-inflammatory solution, is irrigated through the joint to remove debris and inflammatory byproducts. Sometimes a blunt instrument is put into the joint to remove tissue adhesions or dislodge a disc stuck in front of the condyle. In some cases this can reduce the inflammation process.

Arthroscopy is done under general anesthesia by a surgeon. A small incision is made and a thin camera is inserted and hooked up to a video screen. The TMJ and surrounding areas are examined and inflamed

tissue may be removed or a disc may be realigned. This surgery is less invasive than open joint surgery with less scarring and shorter recovery time. Arthroscopy may not be possible in some cases and open joint surgery is considered.

Open joint surgery is done under general anesthesia. The entire area around the TMJ is opened for greater access and viewing. This approach is used if bony structures of the jaw are deteriorating, tumors are present in or around the TMJ, and if severe scarring or chips of bone are in the joint. Open joint surgeries have the longest recovery time and a greater risk of scarring and nerve injury.

Overall if surgery is recommended for your massage client, encourage them to have their doctor explain in words they understand, the reason for the treatment, the risks involved, and other types of treatment that are available.

Implants

Surgical replacement of jaw joints with artificial implants may cause severe pain and permanent jaw damage. Some of these devices may fail to function properly or may break apart in the jaw over time.

If a massage client had already had temporomandibular joint surgery, encourage them to be very cautious about considering additional operations. Persons undergoing multiple surgeries on the jaw joint generally have a poor outlook for normal, pain free joint function. Before undergoing any surgery on the jaw joint, it is extremely important to get other independent opinions and to fully understand the risks.

Corrective Dental Treatments

Corrective dental treatments include orthodontics to change the bite, replacing missing teeth, crown and bridge work to balance the bite, grinding down teeth to bring the bite into balance, called occlusal adjustment, and repositioning splints, also called orthotics, which permanently alter the bite.

A dentist may improve the bite by balancing the biting surfaces of the teeth, replacing missing teeth, or replacing fillings or crowns, but these types of treatment often worsen TMJ pain. They should be avoided if possible.

Restoration of the occlusal surfaces of the teeth should also be avoided as a TMJ treatment if possible. Sometimes teeth surfaces are damaged due to dental malpractice, periodontal disease, and/or periodontal trauma. Proper occlusion may need to be restored in these cases.

Those with bridges or crowns may have malocclusion. Crowns, which are too high, lead to excess pressure on the crown or opposite tooth. The person compensates by chewing with the opposite side of the mouth, which may lead to TMJ problems. This is generally considered dental malpractice.

Many treatments recommended by TMJ “specialists” are based on beliefs not grounded in scientific research unfortunately. As a consequence, unsuspecting clients are made worse by these irreversible treatments.

As a massage therapist it is important to remember that in some cases the symptoms of TMJ disorders may go away without treatment. If your massage client’s symptoms persist, encourage them to visit with their doctor. They may recommend medications, a bite guard to prevent nightly teeth grinding, or any other number of options. Remember, in very rare cases such as trauma or injury to the jaw, surgery may be required to repair or replace the joint.

What are the costs of TMJ disorders?

There are no standardized costs for the treatment of TMJ disorders. Many medical and dental insurance plans do not pay for treatment of the jaw joint and muscle disorders. Some insurance companies pay for only some

procedures. Insurance coverage varies from state to state, company to company, and policy to policy. Often a policy will have an exclusion clause for the TMJ or have a dollar amount limitation.

Insurance companies typically avoid covering the cost of TMJ related claims because there is too much controversy about the causes of and effective treatments for the problem. Additionally, there is little scientific research validating TMJ therapies.

Another problem is that there are arguments regarding whether TMJ treatments should be considered dental, medical, or even cosmetic. Because of this, some TMJ treatment is considered medical and some is considered dental. This gives the massage client the added complication of dealing with both the medical and dental insurance companies.

As discussed, some treatments appear to cause new TMJ problems or make the existing ones worse. Since most insurance companies don't have established criteria based benefits for TMJ problems, your massage clients may be denied coverage they are entitled to.

Without identifiable causes of TMJ disorders and effective treatments based on scientific research, insurance companies will not recognize treatments with questionable results. Encourage your massage clients to contact their insurance companies to see what coverage they have and what treatments are covered.

How are TMJ disorders prevented?

Currently, no treatment exists to prevent the development of TMJ disorders. As a professional massage therapist, you can warn any massage client who is told they should undergo treatments to prevent a TMJ disorder that no evidence exists that such conditions can be prevented.

Despite this lack of scientific evidence, some general recommendations for healthy TMJ care can be made. The hope is good home care of the TMJ may prevent problems from developing in the first place. These things can include but are not limited to:

- Avoiding hard foods and chewing gum
- Learn relaxation techniques to minimize stress and muscle tension
- Maintain good posture and body ergonomics especially if on a computer all day
- Pause often to change position, rest the hands and arms, and relieve stressed muscles
- Use safety measures to reduce the risk of fractures and dislocations

What is the prognosis for those with TMJ disorders?

For many people with TMJ symptoms, they do not last long and go away with time and little or no treatment. Most cases are treated successfully. Some cases of TMJ pain go away without intervention. Occasionally, TMJ pain can return. Possible complications from TMJ disorders can include chronic facial pain and chronic headaches.

If the cause of the TMJ disorder is nighttime teeth clenching, treatment is difficult since it is due to a sleeping behavior that is hard to control. In these cases, mouth splints are a common treatment approach. Some splints stop the grinding by providing an even surface. They may not be effective at reducing pain or stopping teeth clenching. Usually splints are effective in the short term and become less effective in the long term.

How can massage therapy help those with TMJ disorders?

Massage therapy can help those with TMJ disorders greatly. Massage relaxes the soft tissues, increases oxygen and blood to the massaged areas, warms the massaged areas, and decreases pain. Best of all, massage therapy

does nothing to permanently alter the TMJ. By manipulating the muscles and soft tissues of the body, a therapist brings much relief to those who suffer with TMJ problems.

As a professional massage therapist, you know massage therapy is a proven modality that is safe and has few serious risks when simple cautions are followed. Some side effects of massage can include temporary discomfort or pain, swelling, or bruising. These effects usually occur with deeper tissue massages and are not likely to be side effects of massage TMJ treatments.

Massage therapy for TMJ disorders should be focused towards the releasing of tension in the fascia, elimination of trigger points, and reduction of tension in the muscles of mastication. When using massage for a client with a TMJ disorder, the massage therapist releases any tension in the fascia around the jaw area. The therapist eliminates trigger points, which are hyperirritable knots felt in the muscle that refer pain elsewhere in the body. The massage therapist focuses the treatment on the reduction of tension in the muscles of mastication or chewing muscles. All of these things in combination provide pain relief for those with TMJ disorders.

What types of massage are used with TMJ disorders?

When treating jaw pain and TMJ disorders, it is beneficial for the massage therapist to have training in several techniques. These include but are not limited to:

- Acupressure
- Craniosacral Therapy
- Neuromuscular Therapy
- Post-Isometric Relaxation
- Swedish Massage

Acupressure

Acupressure uses the application of pressure at specified points along the meridians or energy channels. The meridians surrounding the jaw and face are the Gallbladder, Large Intestine, Stomach, and Triple Warmer. Acupressure point stimulation increases circulation and provides pain relief.

Diagram 4 illustrates the Gallbladder meridian and points around the ear and TMJ area. Diagram 5 illustrates the Large Intestine meridian and points around the mouth and nose that may be helpful in TMJ disorders. Diagram 6 illustrates the Stomach meridian and points around the jaw and facial areas. Diagram 7 illustrates the Triple Warmer channel and points around the face, jaw, ear, and neck that may be helpful with TMJ symptoms. Incorporate any of these acupressure points in your massage treatments of TMJ disorders.

Diagram 4 – The Gallbladder Meridian

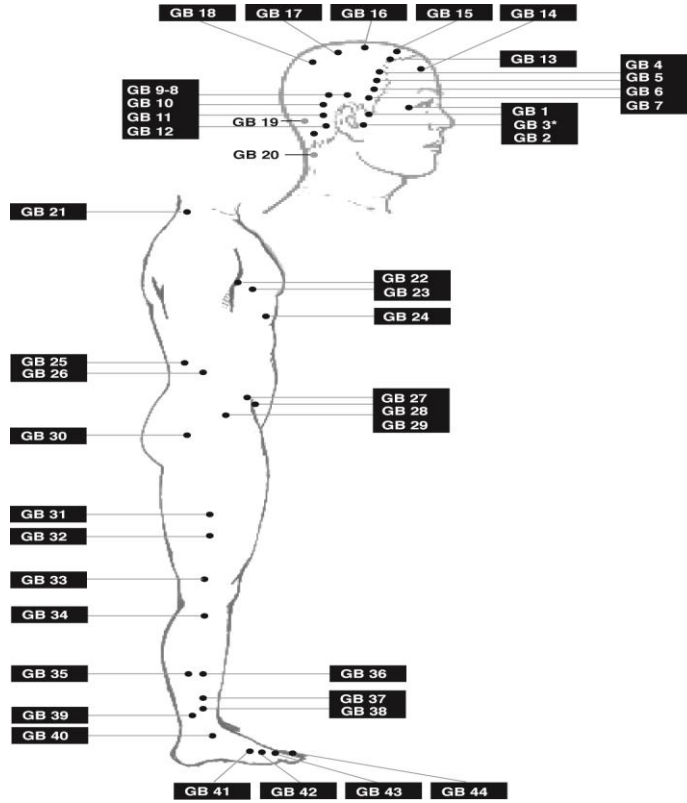


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Diagram 5 – The Large Intestine Meridian

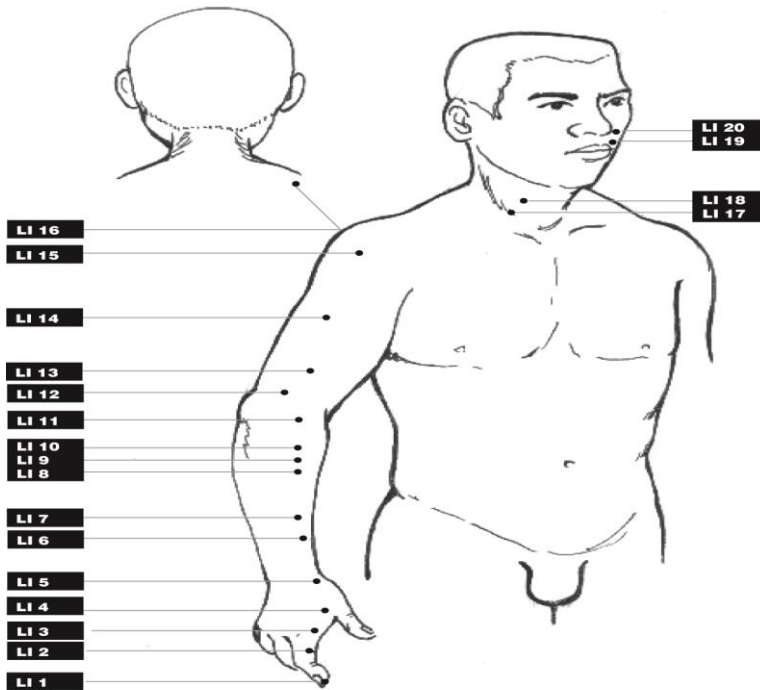


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Diagram 6 – The Stomach Meridian

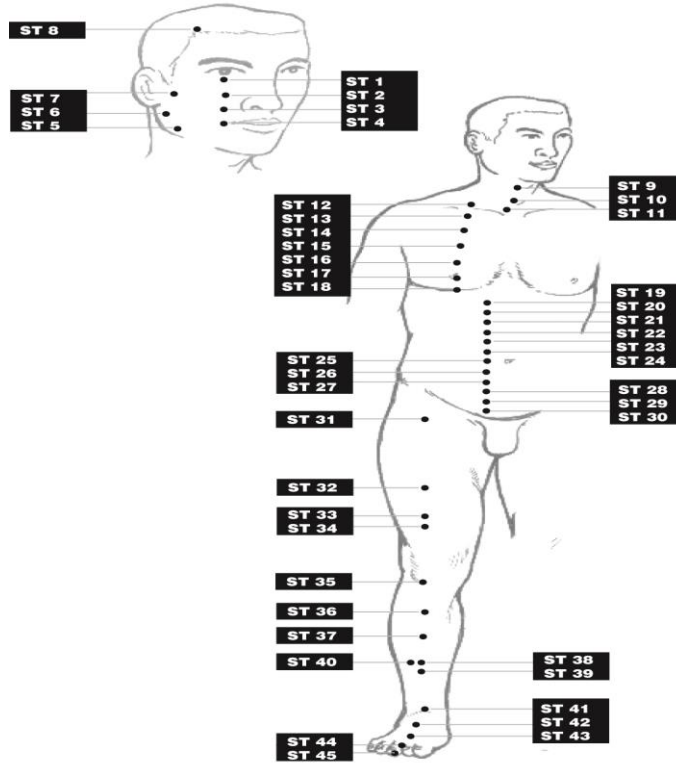


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Diagram 7 – The Triple Warmer Meridian

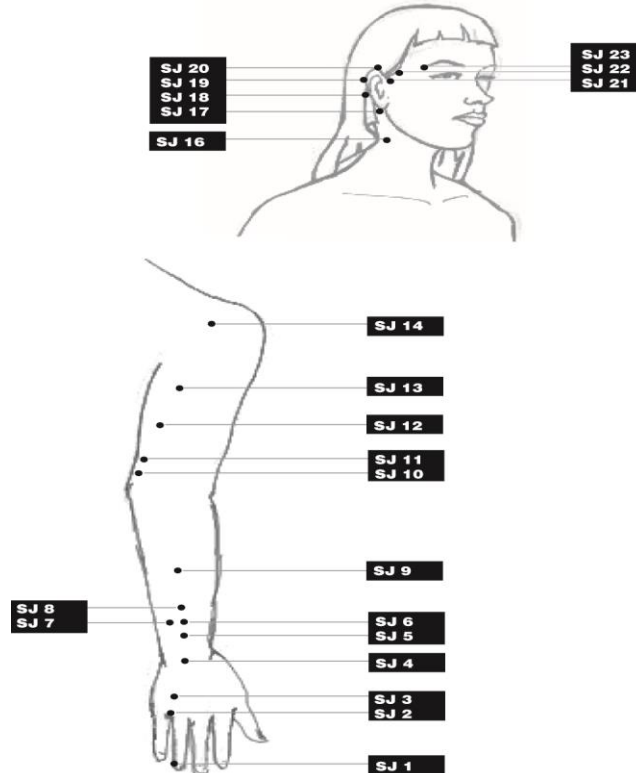


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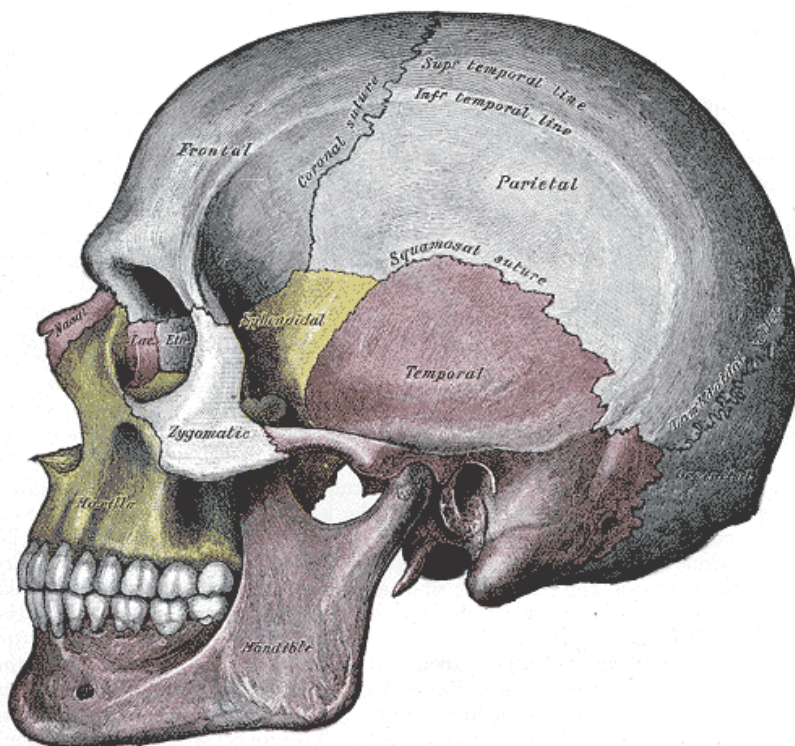
Craniosacral Therapy

Craniosacral therapy works gently with the spine, skull, cranial sutures, diaphragm, sacrum, fascia, and specific bones. The specific bones to work with in TMJ problems include the mastoid, temporal, sphenoid, and zygomatic bones. Craniosacral therapy lessens restrictions in nerve passages, restores misaligned bones to proper positions, optimizes the flow of cranial sacral fluid through the spinal cord, and may provide TMJ pain relief.

In craniosacral therapy, the massage therapist evaluates and treats the whole body through the craniosacral system. Palpation techniques are performed with the fingers on the skull using very light pressure. The massage therapist feels for the rhythm of the craniosacral system. The massage therapist then uses light friction techniques on the cranium to ease tension and free restrictions in the tissues.

Diagram 8 illustrates the locations of the bones to work with in TMJ focused massage treatments. The mastoid bone and mastoid process are in red at the bottom portion of the temporal bone. The temporal bone is in red. The sphenoid bone is in yellow and the zygomatic bone is in white.

Diagram 8 – The Mastoid, Temporal, Sphenoid, and Zygomatic Bones



Neuromuscular Therapy

Neuromuscular therapy involves applying thumb and finger pressure to myofascial trigger points in the jaw muscles. The muscles to work with in TMJ disorders specifically include the temporalis, masseter, lateral pterygoid, and medial pterygoid muscles. This helps relieve tension, relieve spasms, and relax muscles of the TMJ area.

In neuromuscular therapy, the massage therapist first performs an evaluation by palpation to determine if there are any reflex points, trigger points, or myofascial restrictions in the tissues. In the palpatory evaluation, the massage therapist feels the tissues for skin changes, temperature changes, tenderness, edema, and/or localized

tension. Once the affected tissue(s) have been determined, the therapist uses specialized techniques such as stretching, thumb walking, skin distraction, skin rolling, ischemic compression with the thumb, trigger point release, muscle energy techniques, and/or active release to treat the area. Thumb or finger compression and trigger point release of the following outlined structures should provide relief for your client with TMJ disorders. Always consult with the client for the correct amount of pressure to use.

Diagram 9 illustrates the location of the temporalis and masseter muscles as well as other facial and neck muscles. Diagram 10 illustrates the location of the lateral pterygoid muscle. Diagram 11 illustrates the location of the medial pterygoid.

Diagram 9 – The Temporalis, Masseter, and Other Facial/Neck Muscles

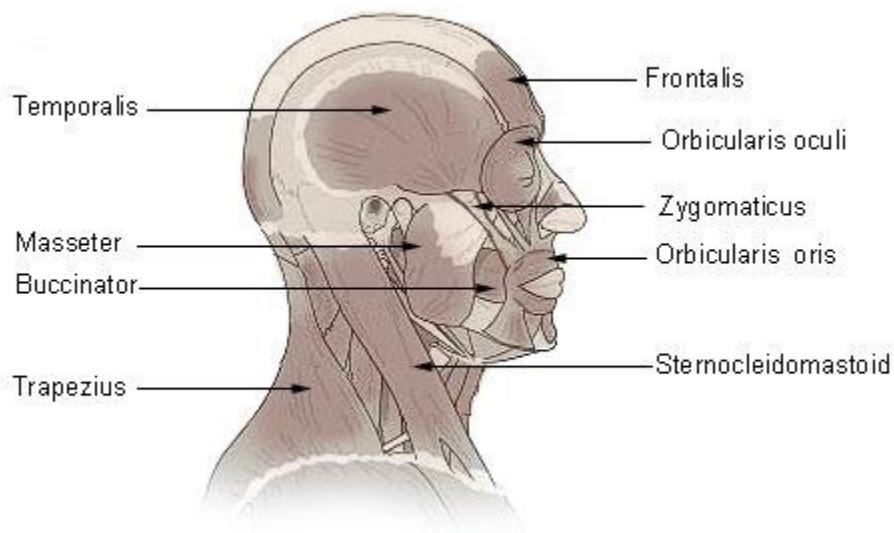


Diagram 10 – The Lateral Pterygoid Muscle

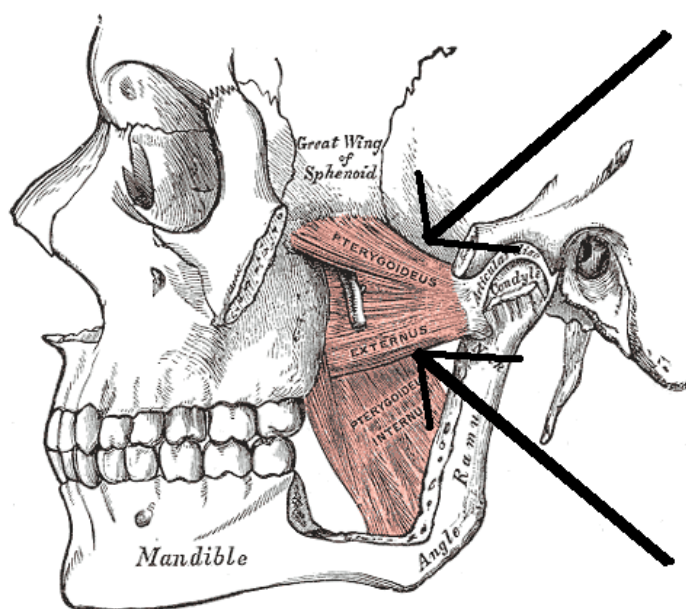
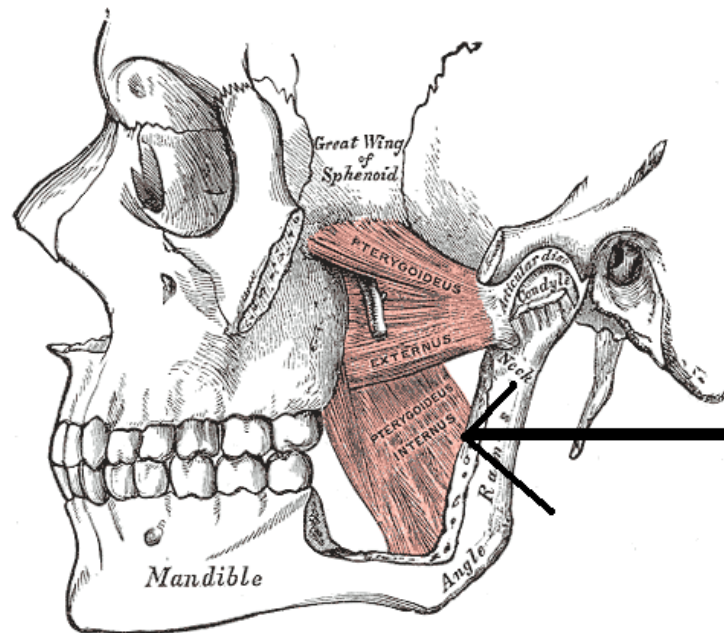


Diagram 11 – The Medial Pterygoid Muscle



Post-Isometric Relaxation

Post-isometric relaxation restores decreased range of motion found in TMJ disorders. It does this via a systematic process of isometric contractions to stretch tense muscles, resistance for deeper stretch, and relaxation for relief of targeted muscles.

Post-isometric relaxation is performed by bringing a muscle to its maximum length without stretching. The massage client is then asked to minimally resist against the massage therapist for about 5 to 10 seconds while slowly inhaling. The client is then asked to relax and exhale slowly for about 10 seconds. This procedure should be repeated about 3 to 5 times until a relaxation response is achieved. Post-isometric relaxation technique is utilized in the TMJ massage routine #2.

Swedish Massage

Swedish massage is the most commonly used and best-known massage modality. It facilitates relaxation via the full body massage using techniques such as effleurage, petrissage, friction, kneading, and vibration. Since stress contributes to TMJ disorders, this relaxation can reduce tension being held in the jaw. Perform a full body Swedish massage with focus on the muscles of the neck, jaw, and face for clients suffering from TMJ pain. Incorporate techniques from the TMJ massage routine #1 when using Swedish massage.

For the professional massage therapist, utilizing a combination of these five techniques and others can bring much needed pain relief to your TMJ clients in a safe and holistic treatment. If you are interested in learning more in depth about acupressure, craniosacral therapy, or neuromuscular therapy, please see our *Acupressure Basics*, *Seated Acupressure*, *Understanding Craniosacral Therapy*, and *Neuromuscular Therapy* home study courses.

TMJ disorder is common and as a professional massage therapist, you probably have many clients with facial pain and tightness in jaw muscles. Relieving TMJ pain is easy and you can follow the one or both of the simple routines described in the next few paragraphs.

TMJ Massage Routine #1

Massage of the jaw, head, neck, and shoulder muscles can be helpful on a regular basis using light friction, effleurage, petrissage, compression, and stripping. This will ease muscle tension and improve range of motion for your TMJ clients. When working with the TMJ client, focus on the TMJ area. Gently massage these muscles using small circles. Communicate with the client to determine the right level of pressure to use.

As you work the TMJ area, move to the area behind the ears. Massage all around the hairless area of the scalp. Continue to use the same circular friction technique. Next, give a scalp massage. Use your finger pads to massage the temporal area, the area surrounding the ear and extending to the temples of the forehead, and muscle. Use minimal massage oil.

Massage the back of the neck too. Work the scalene muscles and suboccipital muscles. Use circular friction in this area. Additionally, use light stripping and stretch the neck from side to side as well as forward.

A final technique you can use when working with your TMJ clients is to work the inside of the client's mouth. Put on gloves, ask your client to open their mouth, locate the lateral pterygoid, and apply gentle pressure. This may be painful for the client in an acute phase of TMJ disorder, so communicate with them to determine the correct pressure level.

Overall, communicate with your client during this TMJ routine. Ask about the level of pressure being applied. Too much pressure could make the condition more painful and be a set back for the TMJ client. Massage techniques can be performed up to three times per week with a 30-minute treatment time. Always perform an assessment before each session to determine treatment progress.

TMJ Massage Routine #2

This routine is adapted from an article in *Massage Today, Medical Massage for Jaw and Joint Disorders*, December 2004, Vol. 04, Issue 12. The original article has photos that demonstrate the routine described below. The article and photos can be accessed at <http://www.massagetoday.com/mpacms/mt/article.php?id=12058>.

Position the client prone on the massage table. With the fingertips, massage the neck area bilaterally in a circular motion for about 5 minutes. Next, place the fingertips around the occipital bone and increase pressure gradually. Massage the insertion of the cervical muscles into the occipital bone of the skull for about 4 minutes using compression and friction. Next, place the fists on the top of the trapezius. Massage the top of the trapezius with gradual pressure for about 1 minute. Next work the jaw. Ask the client to relax their jaw as much as possible. With the fingertips, massage the muscles of mastication bilaterally for up to 7 minutes.

Position the client supine on the massage table. This time you will work the chewing muscles one side at a time or each side separately for about 3 to 4 minutes. Ask the client to open their mouth as wide as possible. Place the thumb on the chin, helping to hold open the mouth. With the other hand's fingertips, massage the mastication muscles. Next, have the client open their mouth slightly and place both thumbs on the chin. Ask the client to close the mouth while you provide resistance. Under this isometric tension, hold the mastication muscles for 30 seconds. With exhalation, passively stretch the chewing muscles. Repeat this as needed, up to 6-8 times. Finish the routine with trigger point therapy at each localized area of pain identified.

Are there any contraindications for massage therapy with TMJ disorders?

People with acute flare-ups of rheumatoid arthritis should not receive massage therapy. Since RA is often a coexisting medical condition in TMJ disorders, check with the client about this before the session begins. Massage therapy is also contraindicated in those with skin lesions like eczema, so again, ask your clients about this prior to the massage session.

Other general contraindications for massage therapy with TMJ clients include those who might have cancer. It is not an absolute contraindication; it is just that the patient and/or massage therapist should check with the oncologist before considering massage treatments because direct massage can further damage tissue already subjected to chemotherapy or radiation treatments.

Other times a TMJ patient might want to avoid massage would be in cases of osteoporosis, high fever, low white blood cells, low blood platelets, mental impairment, or recovering from certain types of surgery.

Another general caution with massage and TMJ disorders would be on women receiving full body massages during pregnancy. Pregnant women should consult a therapist specifically trained to perform massages on pregnant women.

Additionally, as the massage therapist, ask about any medications the client is taking. Massage may influence the absorption or activity of both oral and topical medications. A good history and intake form takes care of this issue.

Generally, massage is considered relatively safe for most people. Pain or other rare negative side effects are usually only caused by an extremely vigorous massage. Overall, massage therapy is a safe and effective for clients with TMJ disorders.

When should the massage therapist refer clients with TMJ disorders?

It may be necessary to refer a client with TMJ disorders. For example, a massage therapist with lack of proper massage training to treat the client's symptoms would be an appropriate referral. The people to refer to include professional massage therapists with proper TMJ treatment training, primary care providers, neurologists, or other doctors who specialize in TMJ disorders.

It is always appropriate to refer a TMJ client anytime the massage therapist feels they are not making progress with the person. Additionally, if symptoms become worse and pain increases, refer the client to their physician or other health care provider immediately.

Refer your massage client if they have trouble eating or opening their mouth. The massage therapist must encourage their TMJ clients to see a doctor or dentist any time there is persistent pain or tenderness in the TMJ. If they can't open or close their jaw completely, this is another time you must refer. A wide variety of conditions cause TMJ symptoms from arthritis to whiplash injuries. The doctor or dentist or other TMJ expert trained in treating facial pain will diagnose and discuss the cause and treatments with the client.

Remember, for most people, discomfort from TMJ disorders will eventually go away without treatment. Simple self-care practices are often effective in easing symptoms. If referral and treatment is needed, it should be based on a reasonable diagnosis, be conservative and reversible, and be customized to the client's special needs. Again, encourage your clients to avoid treatments causing permanent changes in the bite or jaw. If irreversible treatments are recommended, be sure to get a reliable, independent second opinion or even a third opinion.

Because there is no certified specialty for TMJ disorders in either dentistry or medicine, finding the right care provider can be difficult. Teach your TMJ clients to look for a health care provider who understands musculoskeletal disorders (affecting muscle, bone, and joints) and who is trained in treating pain conditions.

Pain clinics in hospitals and universities are often a good source of advice, particularly when pain continues over time and interferes with daily life. Complex cases marked by prolonged, persistent and severe pain, jaw dysfunction, coexisting conditions, and diminished quality of life require a team of experts from various fields, such as neurology, rheumatology, pain management and others, to diagnose and treat this condition.

Once a massage therapist has decided to refer their TMJ client to a primary care provider, neurologist, or other doctor specializing in TMJ medicine, help them prepare for the appointment. Visits are brief and there is a lot of ground to cover. This also helps them know what to expect. Here are some suggestions to offer clients to prepare for their appointment with their doctor:

- Make a list of all medications, vitamins, and supplements taken including those used to treat the TMJ pain and the dosages
- Make a list of questions, listing from most important to least important in case time runs out
- Take a family member or friend to the visit as there will be a lot of information to soak up and they may hear or remember something forgotten or missed
- Write down any sleep problems
- Write down key personal information including major life changes or stresses
- Write down questions for the doctor as time is limited and this helps make the most of the time
- Write down the types of symptoms experienced
- Write down what the jaw does on movement, i.e. clicking or popping
- Write down what triggers the pain
- Write down when the symptoms started

Sample questions to ask the physician may include:

- Ask any questions when you don't understand something covered
- What triggered my TMJ?
- What are other possible causes for my symptoms?
- What tests are needed?
- Is this likely to be temporary or chronic?
- What is the best course of action?
- What are the alternatives to the approach you suggest?
- What lifestyle changes do you suggest?
- How do I best manage this with my other health conditions?
- What websites, brochures, or other material do you recommend?

Prepare your massage client by letting them know what the doctor will ask them. Here are some potential questions the physician may cover:

- When did your symptoms first start?
- Are the symptoms occasional or constant?
- How severe are the symptoms?
- Does anything improve the symptoms?
- Does anything worsen the symptoms?

Let your massage client know what to expect from the doctor:

- A physical examination of the TMJ
- Asking of questions about level of stress and anxiety and what the person does to deal with it
- Checking for conditions that cause misalignment of the jaw like high fillings, tooth displacement, etc.
- Examination of teeth for wear patterns indicating chronic grinding
- Examination of the bite to check for misalignment of the jaw
- Listening to and feeling the jaw when the mouth is opened and closed
- Observation of jaw range of motion
- Palpation or pressure on areas around the jaw to identify sites of discomfort and/or pain

With these suggestions, your massage clients with TMJ disorders will be well prepared for their referral. Once they begin treatment with a doctor or other health care provider, work in partnership with that provider. Let them know the massage treatments you use for the client. Ask for any special recommendations they have.

What can a massage therapist do if they suspect they have a TMJ disorder?

If you are a massage therapist and you suspect you have a TMJ disorder, you can apply all of the advice in the above referral section of this course to your situation. Additionally, you can apply the principles listed in this section of the course. It is important that you learn all you can about this condition. TMJ disorders can take weeks and even months to improve.

Don't lose hope and give the conservative and reversible treatment approaches time to work. Use your expertise in massage therapy to help yourself and get regular massage treatments. Remember, the National Institute of Dental and Craniofacial Research and The TMJ Association only recommend conservative, reversible, and noninvasive treatment approaches.

Remember that many TMJ disorder treatments are based on beliefs not grounded in research. Research shows many treatments don't help and may harm. Well meaning health care providers may have their own approaches and theories that may or may not be right for you. See more than one doctor before making major decisions about treatment.

Here are some tips for massage therapists who suspect they have a TMJ disorder to use at their visits with doctors, dentists, oral surgeons, or other health care providers:

- Get copies of current and relevant medical records
- Have a family member or friend attend the appointment with you as your advocate
- If possible, talk with others with TMJ disorders
- Keep treatments conservative, reversible, and noninvasive
- Learn all you can about TMJ disorders
- Make a list of current medications
- Make a list of types of treatments you have used and your response to them

At the visit:

- Speak with the health care provider in an office setting before the exam begins if possible as exam tables or dental chairs can be uncomfortable
- Learn about the specialist expertise, approaches, and type of practice
- State your situation simply and briefly
- Explain other health problems you have in addition to the TMJ
- Ask the provider to explain any tests they want to perform
- Speak up for yourself knowing you can refuse any request, test, or treatment you don't understand
- Have the provider communicate with your primary doctor or health care provider

Before consenting to any type of TMJ treatment, consider asking:

- What is the purpose of this treatment?
- Why is this treatment necessary in my case?
- Is the treatment reversible or irreversible?
- Will the treatment reduce my TMJ pain?
- Any side effects or complications I should know about?
- What other treatment options are available?
- What are the benefits and risks of this treatment?

- What does follow up treatment look like?
- How much will this treatment cost?
- Will insurance cover these treatment costs?
- Review any payment contracts you must sign
- Review any consent for treatment contracts you must sign

During treatment, the massage therapist with TMJ might want to:

- Ask those you live with to note behavior changes or pain levels as they can see things you may miss
- Bring X-rays, MRIs, and other test results to your appointments and keep copies for your medical records if possible
- If medication is prescribed, check on side effects and your ability to work while using those medications
- Keep a diary of pain and other symptoms and at what times of day you feel worse
- Note what makes the TMJ pain better and worse
- Write down your experiences

As a professional massage therapist you may be used to speaking with physicians and other health care providers on your client's behalf. When dealing with a health care provider for your own personal health issues like TMJ problems, it helps to remember to apply the same tips to yourself that you would use on your client's behalf.

For instance, speak honestly and openly when working with your doctor. Be clear about your TMJ pain and any urgency for pain relief. Ask questions when you don't understand. Ask about all TMJ treatment options and get explanations about each. Remember your right to say no to any test, treatment, or request. It is your health care provider's job to help you and make sure they focus on your needs. If you feel uncomfortable with the doctor, find a doctor you do feel comfortable with. Get other opinions before making final decisions.

What research is being conducted on TMJ disorders?

The National Institute of Dental and Craniofacial Research (NIDCR), one of the National Institutes of Health (NIH), leads the Federal research effort on temporomandibular joint and muscle disorders. In a landmark study, NIDCR is tracking healthy people over time to identify risk factors that contribute to the development of these conditions. The findings may lead to a better understanding of the onset and natural course of TMJ disorders and potentially to new diagnostic and treatment approaches.

Because pain is the major symptom of these conditions, NIH scientists are conducting a wide range of studies to better understand the pain process, including:

- Examining the effects of stressors, such as noise, cold and physical stress, on pain symptoms in patients with TMJ disorders to learn how lifestyle adjustments can decrease pain
- Exploring differences between men and women in how they respond to pain and to pain medications
- Identifying medications, or combinations of medications and conservative treatments, that will provide effective chronic pain relief
- Investigating possible links between osteoarthritis and a history of oral facial pain
- Pinpointing factors that lead to chronic or persistent jaw joint and muscle pain
- Understanding the nature of facial pain in TMJ disorders and what it may hold in common with other pain conditions, such as headache and widespread muscle pain

Research is also under way to grow human tissue in the laboratory to replace damaged cartilage in the jaw joint. Other studies are aimed at developing safer, more life like materials to be used for repairing or replacing diseased temporomandibular joints, discs, and chewing muscles.

To learn more about TMJ implants and their medical effects on patients, NIDCR has launched a TMJ implant registry. The registry tracks the health of patients who receive implants, as well as those who already have the devices, or who have had them removed. Scientists also examine implants that have been removed to learn why problems developed in these patients. By increasing understanding of how temporomandibular joint implants perform and why they often fail, the study will help scientists design safer and more effective implants.

The challenges posed by TMJ disorders span the research spectrum, from causes to diagnosis through treatment and prevention. Researchers throughout the health sciences are working together not only to gain a better understanding of the temporomandibular joint and muscle disease process, but also to improve quality of life for people affected by these disorders.

What are some TMJ disorders resources?

For more information on chronic pain and TMJ disorders, visit the any of the following organization's websites:

- The American Chronic Pain Association <http://www.theacpa.org/default.aspx>
- The American Pain Foundation <http://www.painfoundation.org/>
- The American Pain Society <http://americanpainsociety.org>
- The TMJ Association <http://www.tmj.org/>
- The TMJ Association's Resources Webpage <http://www.tmj.org/site/content/additional-tmj-resources>
- The NIH TMJ Implant Registry
https://www.nidcr.nih.gov/grantsandfunding/See_Funding_Opportunities_Sorted_By/ConceptClearance/ArchivedCC/TMJPatReg.htm

This is a link to a free PDF from the NIH about TMJ. You can print this for your massage clients with TMJ:

- https://www.nidcr.nih.gov/oralhealth/Topics/TMJ/Documents/TMJ_Disorders.pdf

References

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Massage and TMJ Disorders Exam

1. TMJ disorders mainly result in:
 - A. Pain and impairment of the jaw
 - B. A healthy jaw without range of motion limitations
 - C. Dizziness and imbalance in the inner ear
 - D. None of the above

2. In TMJ disorders:
 - A. One or both joints may be affected
 - B. Speech, chewing, and facial expression may be affected
 - C. Pain is occasional and temporary
 - D. All of the above

3. TMJ clients should avoid treatments that:
 - A. Are unilateral
 - B. Permanently change the jaw or the bite
 - C. Are conservative and reversible
 - D. Involve massage therapy

4. The TMJ is what kind of joint?
 - A. Cracking joint
 - B. Pivot joint
 - C. Hinge and plane joint
 - D. Ball and Socket joint

5. What lies between the condyle and temporal bone of the TMJ?
 - A. A disc
 - B. A ligament
 - C. A tendon
 - D. A muscle

6. The mastication muscles include all of the following except which muscle?
 - A. Distal pterygoid
 - B. Medial pterygoid
 - C. Lateral pterygoid
 - D. Masseter

7. The TMJ may be susceptible to all of the following except which condition?
 - A. Ankylosis
 - B. Diarrhea
 - C. Arthritis
 - D. Dislocations

8. Most people have a relatively _____ form of TMJ disorders.
 - A. Severe
 - B. Mild
 - C. Intense
 - D. Drastic

9. The TMJ is critical for which of the following?
- A. Talking
 - B. Chewing
 - C. Yawning
 - D. All of the above
10. Which of the following is not an overlapping medical condition with TMJ disorders?
- A. Allergies
 - B. Fibromyalgia
 - C. Rheumatoid arthritis
 - D. Chronic constipation
11. Which of the following is a common overlapping medical condition in those with TMJ disorders?
- A. Chronic constipation
 - B. Chronic diarrhea
 - C. Sleep disorders or disturbances
 - D. Stomach disorders or disturbances
12. TMJ disorders are most commonly seen in:
- A. Men
 - B. Elderly
 - C. Women
 - D. Infants
13. Jaw noises alone:
- A. Must be treated conservatively
 - B. Must be treated aggressively
 - C. Do indicate a TMJ disorder
 - D. Do not indicate a TMJ disorder
14. Trigger points in TMJ disorders can cause:
- A. Gluten sensitivity
 - B. Backaches, knee aches, leg aches
 - C. Headaches, earaches, toothaches
 - D. All of the above
15. A potential cause of TMJ disorders may be:
- A. Warts
 - B. Arthritis
 - C. Herpes viruses
 - D. Hepatitis
16. Which of the following is not considered a possible cause of TMJ disorders?
- A. Gluten sensitivity
 - B. Fractures
 - C. Teeth grinding
 - D. Jaw injury

17. Poor posture, poor sleep, and _____ may contribute to the cause of TMJ problems.
- A. Stress
 - B. Cancer
 - C. Impaired memory
 - D. Impaired mobility
18. Identified risk factors for TMJ disorders include all of the following except:
- A. Female
 - B. Male
 - C. Age 20 to 50
 - D. Overlapping medical conditions
19. Signs and symptoms of TMJ disorders may involve which TMJ component?
- A. Skin
 - B. Lips
 - C. Muscles
 - D. Nose
20. Likely TMJ symptoms include:
- A. Tired feeling in the face
 - B. Biting discomfort
 - C. Chewing difficulty
 - D. All of the above
21. Which of the following is not a potential sign or symptom of TMJ problems?
- A. Pain in the face
 - B. Pain in the jaw joint
 - C. Pain in the ear or shoulders
 - D. All are potential signs or symptoms
22. If a massage client's TMJ pain is severe and lasts more than a few weeks:
- A. Apply moist heat and wait for the pain to decrease
 - B. Apply ice and wait for the pain to decrease
 - C. Ignore the symptoms
 - D. Refer them to their health care provider
23. A physical exam of a patient's TMJ may include all of the following except:
- A. A dental exam
 - B. Tests for TMJ range of motion
 - C. Height and weight measurements
 - D. Palpation of the joint
24. Specialized health care providers who may diagnose and treat TMJ problems include all of the following except:
- A. Neurologists
 - B. Oral/maxillofacial surgeons
 - C. Cardiovascular surgeons
 - D. Rheumatologists

25. TMJ experts recommend using what kinds of treatment for TMJ problems?
- A. Aggressive and irreversible
 - B. Conservative and reversible
 - C. Permanent and reversible
 - D. None of the above
26. Eating soft foods, like yogurt or cottage cheese:
- A. Allows the TMJ inflammation to worsen
 - B. Allows the jaw to temporarily rest
 - C. Allows the jaw to work harder
 - D. Allows the TMJ to work harder
27. Self-care practices for TMJ problems include all of the following except:
- A. Marathon running
 - B. Avoiding jaw clenching
 - C. Over the counter analgesics
 - D. Practicing good posture
28. Self-care practices for easing TMJ pain include:
- A. Self-massage to the face, head, neck, jaw, and shoulders
 - B. Ignoring financial problems
 - C. Eating meals at irregular times
 - D. Increasing stress
29. Biofeedback may be helpful in TMJ problems by:
- A. Balancing any muscle imbalances
 - B. Triggering headaches
 - C. Establishing effective sleep patterns
 - D. None of the above
30. Which of the following drugs are not used in TMJ disorders?
- A. Antidepressant medications
 - B. Cardiovascular medications
 - C. Muscle relaxants
 - D. NSAIDs
31. Other names for a stabilization splint include all of the following except:
- A. Occlusal splint
 - B. Mouth guard
 - C. Facial guard
 - D. Night guard
32. Stabilization splints fit:
- A. Behind the upper and lower teeth
 - B. On the sides of the upper and lower teeth
 - C. Under the upper and lower teeth
 - D. Over the upper and lower teeth

33. Stabilization splints should be used for:
- A. A short time only
 - B. A long time only
 - C. TMJ pain once in awhile
 - D. A month at a time
34. Botox is:
- A. Approved by the FDA for TMJ disorders
 - B. Not approved by the FDA for TMJ disorders
 - C. Never useful clinically
 - D. None of the above
35. Which of the following alternative medicine therapies may help TMJ?
- A. Deep breathing
 - B. Guided imagery
 - C. Progressive muscle relaxation
 - D. All of the above
36. How may meditation help TMJ patients?
- A. By slowing breathing
 - B. By easing muscle tension
 - C. By change brain wave activity
 - D. All of the above
37. Failure of conservative and reversible treatments:
- A. Automatically means the client needs surgery
 - B. Automatically means the client needs more aggressive treatments
 - C. Does not automatically mean the client needs aggressive treatments
 - D. Automatically means that the client is healthy
38. The abbreviation TENS stands for:
- A. Targeted electrical neurological stimulation
 - B. Therapy energy nerve stimulation
 - C. Temporomandibular energy nerve stimulator
 - D. Transcutaneous electrical nerve stimulation
39. Surgery for the treatment of TMJ disorders is considered:
- A. Safe and effective
 - B. Controversial and unproven
 - C. Controversial yet advocated
 - D. Safe and inexpensive
40. Types of surgery for TMJ disorders include:
- A. Arthrocentesis
 - B. Arthroscopy
 - C. Open joint surgery
 - D. All of the above

41. Corrective dental treatments include all of the following except:
- A. Stabilization splints
 - B. Orthodontics to change the bite
 - C. Replacing missing teeth
 - D. Crown and bridge work to balance the bite
42. Occlusal surfaces of the teeth may be damaged by:
- A. Dental malpractice
 - B. Periodontal disease
 - C. Periodontal trauma
 - D. All of the above
43. Some symptoms of TMJ disorders:
- A. Should be ignored by the health care provider
 - B. Should be ignored by the patient
 - C. Should be ignored by the massage therapist
 - D. May go away without treatment
44. Insurance companies may avoid paying TMJ related claims due to:
- A. Controversy about causes of and effective treatments for the problem
 - B. Controversy about risk factors and ineffective treatments for the problem
 - C. Controversy about prognosis and prevention treatments
 - D. None of the above
45. A recommendation for healthy TMJ care is:
- A. Avoiding dancing and ballet
 - B. Avoiding hard foods and chewing gum
 - C. Avoiding work and exercise
 - D. Avoiding soft foods and drinking soup
46. The prognosis for people with TMJ disorders is:
- A. Poor
 - B. Bleak
 - C. Usually positive
 - D. Usually negative
47. Massage therapy for TMJ disorders focuses on:
- A. Releasing tension in the fascia
 - B. Eliminating trigger points
 - C. Reducing tension in the mastication muscles
 - D. All of the above
48. When massaging the back of the neck, work the:
- A. Abdominal muscles
 - B. Biceps and triceps muscles
 - C. Masseter and temporal muscles
 - D. Scalene and suboccipital muscles

49. When massaging the TMJ area on a client, make sure to:
- A. Check on their response to family members
 - B. Check on their response to the level of pressure being applied
 - C. Ignore their response to the treatment
 - D. Ignore their response to the level of pressure being applied
50. All of the following massage modalities may be useful in TMJ disorders except:
- A. Acupressure
 - B. Craniosacral therapy
 - C. Acupuncture
 - D. Neuromuscular therapy
51. Which of the following acupressure meridians may be helpful in TMJ problems?
- A. Gallbladder
 - B. Large Intestine
 - C. Stomach
 - D. All of the above
52. In craniosacral therapy, the massage therapist should focus on all of the following bones except:
- A. Frontal
 - B. Mastoid
 - C. Temporal
 - D. Sphenoid
53. In neuromuscular therapy, which of the following muscles should the massage therapist focus on?
- A. Lateral pterygoid
 - B. Masseter
 - C. Temporalis
 - D. All of the above
54. Post-isometric relaxation:
- A. Restores tension in the muscle
 - B. Restores decreased range of motion
 - C. Restores trigger points in the muscle
 - D. None of the above
55. A contraindication for massage therapy with TMJ disorders may include:
- A. Those with an acute flare up of muscle tension
 - B. Those with an acute flare up of stress
 - C. Those with an acute flare up of rheumatoid arthritis
 - D. Those with an acute flare up of anxiety
56. In which of the following situations would it be appropriate for the massage therapist to refer their TMJ client?
- A. Lack of proper TMJ massage training
 - B. Not making progress with the client
 - C. Client has trouble opening their mouth
 - D. All of the above

57. Physicians may ask TMJ patients which of the following in an office visit?
- A. When did symptoms start?
 - B. How severe are symptoms?
 - C. What makes symptoms better?
 - D. All of the above
58. Before consenting to any type of TMJ treatment consider asking all of the following except:
- A. Will exercise be required?
 - B. Why is this treatment necessary?
 - C. Will the treatment reduce TMJ pain?
 - D. What other treatment options are available?
59. The NIDCR is conducting research on:
- A. Pinpointing factors which lead to strokes
 - B. Pinpointing factors which lead to jaw joint and muscle pain
 - C. Pinpointing factors which lead to cardiovascular disease
 - D. None of the above
60. The NIDCR has launched what kind of registry?
- A. TMJ guard registry
 - B. TMJ splint registry
 - C. TMJ implant registry
 - D. TMJ arthrocentesis registry

This completes the *Massage and TMJ Disorders* exam.