



John Mitakides, DDS, DAACP  
THE TMJ TREATMENT CENTER



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TEMPOROMANDIBULAR JOINT DISORDERS,  
CRANIOFACIAL DISORDERS, CERVICOCRANIAL  
INSTABILITY & EHLERS-DANLOS SYNDROME

# ABOUT DR. MITAKIDES & THE TMJ TREATMENT CENTER

*“Dedicated to the diagnosis and treatment of Craniofacial Pain, Cervicocranial, Temporomandibular Joint Disorders (TMJ) and Ehlers-Danlos Syndrome (EDS)”*

## FOR MORE THAN 40 YEARS,

Dr. John Mitakides has devoted his practice to the diagnosis and treatment of craniofacial pain disorders including TMJ disorders in the EDS patient.

Dr. Mitakides is among the small group of dentists nationwide who have earned the designation of Diplomate of the American Academy of Craniofacial Pain, the highest level of recognition.

Dr. Mitakides serves on the Ehlers-Danlos National Foundation Professional Advisory Network and is a frequent speaker on EDS and Cervicocranial Instability (CCI) in America and England.


TMJ Treatment Center dental assistants working alongside Dr. Mitakides are dually-certified as Expanded Function Dental Assistants through the State of Ohio and certified TMJ Assistants through the American Academy of Craniofacial Pain.

# THE MOST REMARKABLE JOINT IN THE HUMAN BODY

## THE TEMPOROMANDIBULAR JOINT (TMJ)

is one of the most complex and powerful in the human body because it is actually bilateral joints—right and left side of the face— with two joints per side, that must work together in the multi-directional movement, up and down, forward and back, side to side.

In the same area as these complex joints are a network of muscles and nerves extending into the head and neck, adding to the complexity of the TMJ, which can complicate diagnosis and treatment. If any part of this complex area does not function properly, the entire mechanism can be disturbed causing the painful global TMJ disorder, generally just called “TMJ.”



IT IS ESTIMATED THAT TMJ affects over 60 million people.

# WHAT CAUSES TMJ, NECK & CRANIOFACIAL PAIN DISORDERS? WHY DID I GET IT?

Simply put, TMJ and CFP disorders are caused when the temporomandibular joints (TMJ), chewing muscles or articular discs do not work correctly. The jaw joint may misalign, “pop” (dislocate), or lock open or closed, causing muscles to frequently cramp or spasm. The result can be tissue damage, chronic pain and muscle tenderness.

There are many causes for TMJ disorder. They include trauma to the jaw, face or neck; extended mouth opening for general anesthesia or endoscopic procedures; and certainly arthritis and stress can also be factors that may lead to TMJ disorder. In some cases, TMJ disorder is genetic, an inherited pattern.

Grinding or clenching teeth may be a subconscious habit for some people, while others may grind their teeth in their sleep. This unnatural strain on the jaw muscles cause them to spasm and can trigger TMJ disorders and related headaches.

Cervicocranial misalignment (neck, jaw and skull being improperly aligned) are often contributing factors in developing TMJ disorder. When your teeth do not align when you bite, the entire balance of your jaw, head and neck is disrupted.

# WHAT IS EHLERS-DANLOS SYNDROME ?

Ehlers-Danlos Syndrome is a defect in the collagen and connective tissue throughout the body, and is hereditary. Collagen is the substance that creates the muscles, arteries, tendons, and ligaments that hold the entire body together.

While symptoms vary from one individual to another, EDS most often causes individuals to have abnormal flexibility and/or “loose joints” (called articular hypermobility) that are easily dislocated. Many people with EDS are often called “double jointed” prior to diagnosis. This type of loose joint can critically affect the head, neck and jaw. This is why EDS triggers TMJ disorder and head and neck instability (called craniocervical instability or CCI) in almost all patients.

EDS affects an estimated one out of every 2,500 to 5,000 people, both male and female, of all races and ethnicities. While there is no cure for EDS, proper treatment can dramatically reduce pain and improve function. Dr. Mitakides is a leading care provider for people with EDS who also have TMJ disorder and CCI. He works closely with geneticists, orthopedists, and other members of a patient’s EDS treatment team to assure coordinated care for each EDS patient.

**EDS AFFECTS** one in 2,500 to 5,000 people, both male and female, and yet it is often misdiagnosed and/or unrecognized.



# HYPERMOBILITY

The cause, extent, and condition of hypermobility varies from person to person, making it difficult to measure. As a baseline, the Beighton Score was developed to aid physicians in diagnosing hypermobility.

## THE BEIGHTON SCORE

CHECK ALL THAT APPLY  
CAN YOU...

Put your hands flat on the floor with your knees straight? \_\_\_\_\_

Bend your left elbow backwards? \_\_\_\_\_

Bend your right elbow backwards? \_\_\_\_\_

Flex your left knee backwards? \_\_\_\_\_

Flex your right knee backwards? \_\_\_\_\_

Bend your left thumb back to the front of your forearm? \_\_\_\_\_

Bend your right thumb back to the front of your forearm? \_\_\_\_\_

Bend your left little finger at 90 degrees, towards the back of your hand? \_\_\_\_\_

Bend your right little finger at 90 degrees, towards the back of your hand? \_\_\_\_\_

TOTAL SCORING.  
(9 is maximum score) \_\_\_\_\_

If you answered “Yes” to four or more, you may have joint hypermobility; however, scoring four or more does not indicate EDS.

## OTHER SYMPTOMS INCLUDE:

- + Joint pain for three months or longer
- + Back pain for three months or longer
- + Spondylosis (spinal arthritis)
- + Spondylolisthesis—when one vertebra slips forward over another vertebra
- + Partial or complete dislocation in more than one joint, or the same joint multiple times
- + Injuries to soft tissues—tenosynovitis or bursitis
- + Spontaneous bruising

The Beighton Score is simply a starting reference. Only a thorough, multi-step examination, and genetic profiling by a medical professional can provide an accurate diagnosis.

## TREATING TMJ AND EDS

A malfunctioning temporomandibular joint can become dislocated, creating a popping, clicking, or grinding sensation. This can lead to jaw pain, pain and ringing in the ears, disrupted sleep, and severe head, neck, back and arm pain. Dr. Mitakides will focus treatment on stabilizing the head, neck, jaw, and upper cervical vertebrae. This reduces the jaw's range of motion, lowering the possibility for dislocation, and preventing future damage. Treatments recommended by Dr. Mitakides to manage and eliminate pain could include deep heat, cold laser and friction muscle massage to custom splints, medications, Botox®, counseling, and physical therapy. Since every TMJ patient is different, treatments vary. Dr. Mitakides works carefully with patients to determine what works best for them.



# OUR APPROACH

TMJ treatment is the heart of Dr. Mitakides' practice, and always has been. He has earned the highest level of TMJ credentialing in North America. In addition, two TMJ-Certified, Expanded Function Dental Assistants at the TMJ Treatment Center are present to assist the patients. With their combined training and experience, our team is focused on helping patients achieve the best possible outcome for TMJ disorder. As new diagnostic and treatment options are developed, the team at the TMJ Treatment Center stays at the forefront of the TMJ field, in order to offer patients the widest range of care options possible.

Treatment begins by eliminating the muscle spasms and pain, often with external heat and cold laser therapy, muscle massages, oral orthotics and dietary changes. Occasionally, prescriptions are advised. Dr. Mitakides is trained in the use of Botox® injections as TMJ treatment, which can provide significant and immediate relief in some patients.

The use of Botox® in TMJ treatment has shown positive results in recent years. Muscle spasms and associated pain have responded very well to the use of Botox®. Dr. Mitakides is the Botox® consulting expert for the Ohio State Dental Board.

Botox® blocks chemical changes on nerve endings, modifying the impulse between nerves and muscles. This results in decreasing the amount of contraction the muscle is able to generate, therefore reducing spasms and pain. Pain reduction is often immediate, and injections last for weeks or months, depending on the patient.

For patients with a bite misalignments, called malocclusion, Dr. Mitakides often recommends a bite plane or splint, and can provide additional treatment alternatives.

Relaxation therapy is a common part of the treatment for TMJ disorder, because stress leads to jaw-clenching and teeth-grinding. Dr. Mitakides' approach may include neck and shoulder physical therapy to relax these muscles.

People with TMJ can also suffer from sleep apnea or heavy snoring, which can aggravate TMJ disorder. The TMJ Treatment Center team may include specific snoring and sleep apnea treatment as needed.

While very rare, in severe cases of TMJ disorder, surgery may be recommended as the final method of treatment. The joints may have become injured or arthritic, or the bones and soft tissues don't align as a result of an injury or accident.

The bottom line is that TMJ is treatable and many, many people see successful results. The first step in effectively treating TMJ disorder is talking with the knowledgeable team at the TMJ Treatment Center, and getting a complete TMJ workup and diagnosis.



# DO YOU THINK YOU HAVE TMJ?

## TMJ CHECKLIST

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Jaw locks or gets stuck \_\_\_\_\_

Jaw makes popping, grinding or clicking sound \_\_\_\_\_

Headaches are frequent in the morning and can occur throughout the day \_\_\_\_\_

Jaw, neck and upper back are tender \_\_\_\_\_

Pain or difficulty chewing, yawning or opening jaw \_\_\_\_\_

Dizziness, muffled hearing, ear pain or ringing in the ears \_\_\_\_\_

Teeth grinding, broken or sore teeth \_\_\_\_\_

## TOTAL

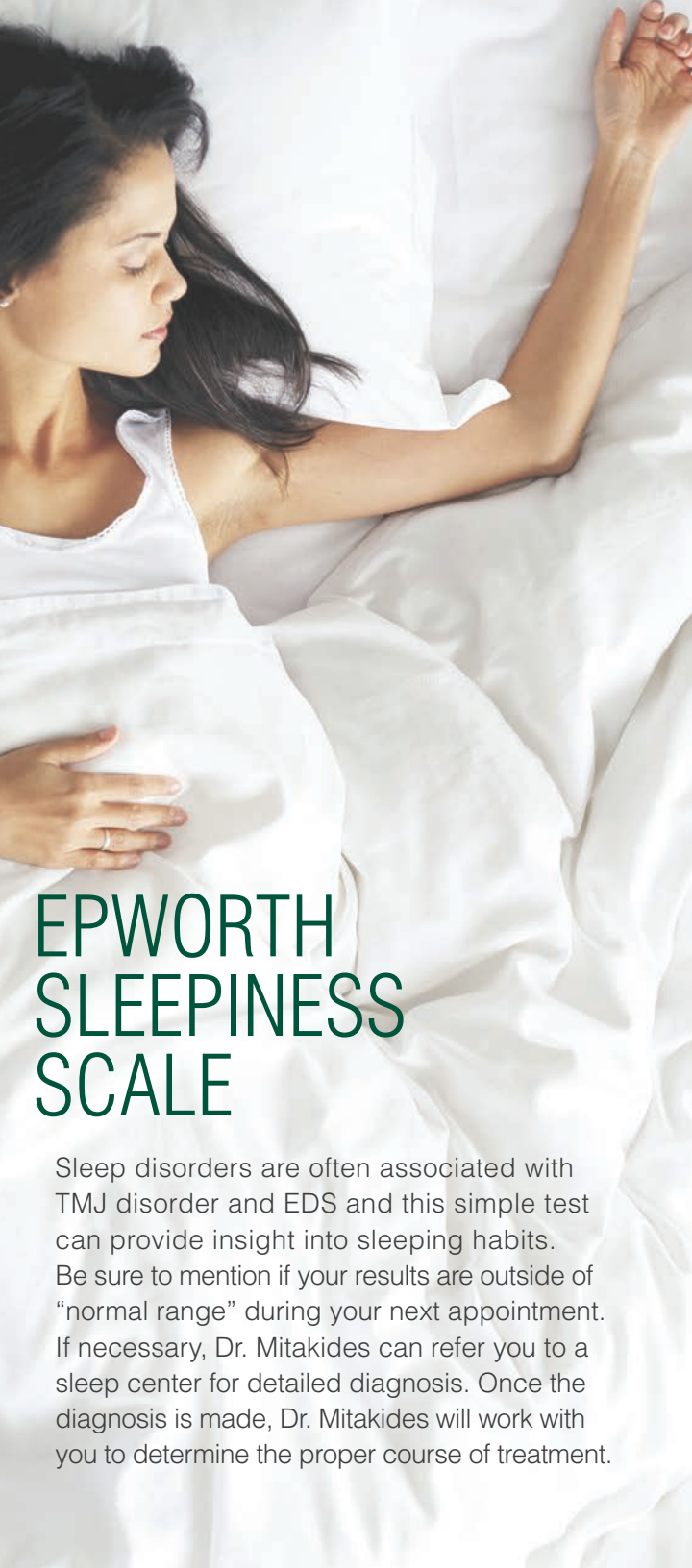
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### SCORING:

You may have TMJ disorder if you experience one or more of these symptoms. It is important to have an exam by a highly-trained professional to determine if your symptoms are TMJ disorder.

## GETTING STARTED

TMJ disorder affects more than 10 million American men and women of all ages, according to the National Institute of Dental and Craniofacial Research. When faced with a possible TMJ diagnosis, it is normal to have questions about the disorder and treatment options. Dr. Mitakides and the TMJ Treatment Center team begin with a thorough examination of the jaw, head and neck area, along with specific x-rays, ICAT or MRI imaging to accurately diagnose the disorder and provide the best course of treatment for each patient.



# EPWORTH SLEEPINESS SCALE

Sleep disorders are often associated with TMJ disorder and EDS and this simple test can provide insight into sleeping habits. Be sure to mention if your results are outside of “normal range” during your next appointment. If necessary, Dr. Mitakides can refer you to a sleep center for detailed diagnosis. Once the diagnosis is made, Dr. Mitakides will work with you to determine the proper course of treatment.

## SCORING:

Use the following scale to choose the appropriate number for each situation:

- 0 No chance of dozing
- 1 Slight chance of dozing
- 2 Moderate chance of dozing
- 3 High chance of dozing

## SITUATION:

How likely are you to fall asleep in the following situations compared to just feeling tired?

### CHANCE OF DOZING

Sitting and reading	_____
Watching TV	_____
Sitting inactive in a public place (theatre or meeting)	_____
As car passenger for an hour	_____
Lying down to rest mid-day	_____
Sitting and talking to someone	_____
Sitting quietly after a lunch (without alcohol)	_____
In a stopped car for several minutes in traffic	_____
.....	
<b>TOTAL</b>	_____

## SCORE:

- 0-10 Normal
- 10-12 Borderline
- 12-24 Abnormal





Dr. Mitakides is a Diplomate of the American Academy of Craniofacial Pain (CCP), and a member of the Professional Advisory Network of the Ehlers-Danlos National Foundation, the leading organization serving EDS patients and physicians. Dr. Mitakides is also a Diplomate of the American Board of Dental Sleep Medicine, the Ohio State Dental Board Botox consultant and consultant to the Chiari and Syringomyelia Foundation. He is licensed in the states of Ohio, Texas and Maryland. He is on Staff at Cincinnati Children's Hospital and Kettering Memorial Hospital.



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