Editor's Note: *An estimated one-third to one-half of people with fibromyalgia (FM) struggle with temporomandibular joint (TMJ) disorders. The dental institute of the National Institutes of Health (NIH) reports that more than 10 million Americans may be affected by the condition. In addition, a new article on myofascial pain syndrome,* authored by prominent FM expert Robert Bennett, M.D., calculates that as many as 44 million Americans may have myofascial pain problems, also a significant component of TMJ disorders.* These figures are startling and disturbing. However, what is perhaps most unsettling is that so little is known about the temporomandibular joint, myofascial pain, and entities which sound similar but really are quite different, like craniofacial pain. In this fact sheet, TMJ expert Robert Uppgaard, D.D.S., shares some general insights into these conditions.*

Coming To Terms With Dental Health

By Robert O. Uppgaard, D.D.S.

Current literature contains a confusing array of definitions and acronyms to describe conditions which affect the temporomandibular joint and the nerves, muscles, and other soft tissues which impact it. The debate has now reached the National Institutes of Health (NIH), particularly the National Institute of Dental & Craniofacial Research (NIDCR). The new director of NIDCR, Dr. Lawrence Tabak, has outlined goals to be pursued:

1) A clear definition of temporomandibular joint dysfunction to promote a unified understanding of terminology

2) Evidence-based diagnostic criteria

There is little information available about myofascial pain and temporomandibular disorders on the websites of the ADA, NIH, AMA, CDC, AGD, the Pankey Institute, and the Mayo Clinic. It is essential that both health care professionals and patients learn the difference between important medical conditions like TMJD, myofascial pain, and orofacial pain which affect a person's total well-being. To help dispel some of the confusion, a few brief descriptions follow.

What Are The Temporomandibular Joints?**

The *temporomandibular joints* are complex hinges that connect the lower jaw, or *mandible*, to the skull. They are made up of bones, ligaments, muscles, cartilage, and fascia. You have one on each side of your jaw (see Figure 1). The joints move the jaw during chewing, speaking, swallowing, and so on. Place your fingertips against your face in front of your ears and move your jaw up and down; you can feel the temporomandibular joints. You use these hinges hundreds of times every day, even when you sleep.

The rounded ends at the top of each side of the mandible are called *condyles*. The condyles glide forward as the jaw opens. They slide back to their original position when you close your mouth. To keep this motion smooth, a soft *disc* lies between the condyle and the upper jaw, or *temporal* bone; this disc absorbs shocks to the temporomandibular joint from chewing and other movements. Because joints are flexible, the jaw can move up and down and side to side, enabling you to talk, chew, and yawn.

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* "Myofascial Pain Syndromes And Their Evaluation." *Best Practice & Research Clinical Rheumatology, 2007; 21(3):428.*

** TMJ information reprinted from, *Taking Control of TMJ: Your Total Wellness Program for Recovering from Temporomandibular Pain, Whiplash, Fibromyalgia, and Related Disorders*, by Robert O. Uppgaard, D.D.S., Oakland (CA): New Harbinger Publications, 1999:13-17.

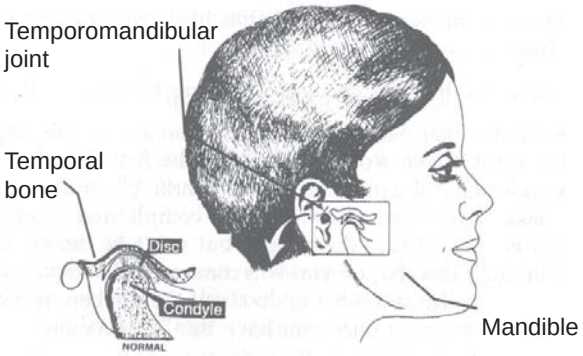


Figure 1: Temporomandibular Joint

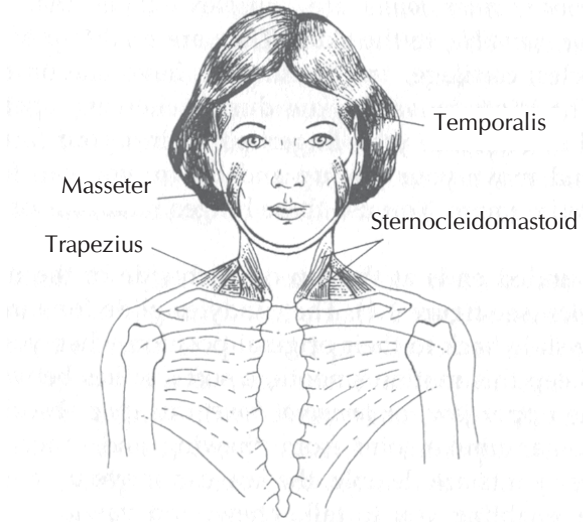


Figure 2: Muscles Related to Stress and TMJ Disorder

Figure 2 shows the many muscles involved with the temporomandibular joint. When the jaw is not functioning properly, muscles begin to hold a tense, unnatural position. Muscle spasms occur, and before long the tension travels by chain reaction throughout the body. While an injured limb can be rested, it is impossible to leave the jaw joint inactive. That is why so many millions of people have problems—from very simple to extremely complex—in the temporomandibular joints.

In addition to the bone, muscles, ligaments, and cartilage that make up the temporomandibular joint, many nerves and tiny blood vessels travel through the area. Any disruption of this flow can cause severe pain and discomfort.

What Is Temporomandibular Joint Disorder?

According to the NIDCR, there is actually more than one type of TMJ disorder. They fall into three main categories:

- *Myofascial* pain (the most common form)—discomfort or pain in the muscles that control the jaw as well as the neck and shoulder muscles [and muscles "head-to-toe"]
- *Internal derangement of the joint*—a dislocated jaw or displaced disc or injury to the condyle
- *Degenerative joint disease*—for example, osteoarthritis or rheumatoid arthritis in the jaw joint

You can have more than one of these conditions at the same time. I find that most of my patients with TMJ disorder have both myofascial pain and internal derangement. In addition, it should be noted that when a person has a coexisting systemic condition—such as fibromyalgia—with overlapping symptoms, the diagnosis and treatment become much more difficult.

Fascia & Myofascial Pain

Fascia is the connective tissue found everywhere in your body that holds all of your organs in place. When fascia malfunctions due to injury, illness, surgery or poor posture, it becomes tight and binds down, resulting in abnormal pressure on nerves, muscles, bones or organs of the body. Restriction in one region can put a "drag" on the fascia in any other direction.

In his 1995 article, "Myofascial Release: The 'Missing Link' in Your Treatment" (*Physical Therapy Today*), John Barnes describes the following other important factors concerning fascia:

- Fascia supports and stabilizes, thus enhancing the postural balance of the body.
- It is vitally involved in all acts of motion and acts as a shock absorber.
- It aids in circulation of the blood and lymphatic fluids.

Photos courtesy of Dr. Bob Uppgaard & Katy Uppgaard Flaherty

"Dr. Bob" Uppgaard with wife Barbara at the 110-acre Uppgaard Wildlife Management Area which the couple donated to the Minnesota Department of Natural Resources in 1987

- It is a major area of inflammatory processes; that is, it is involved when there is any tissue irritation, injury, or infection, characterized by pain, redness, localized fever, or swellling.

- The central nervous system is surrounded by fascial tissue which attaches to the inside of the cranium. Dysfunction in these tissues can have a profound and widespread neurological effect.

There are different types of connective tissue or fascia. The one we are concerned with is called myofascia. "Myo" means muscle, so this type of fascia is involved with muscles of the body.

Myofascial pain is pain resulting from changes in the fascial system of the body and involves muscles. In TMJ disorders, professionals tend to look primarily at the muscles of the upper body and head. While this is the main site of pain, the rest of the body should not be overlooked. Myofascial pain occurs throughout the body and affects how healing takes place. Myofascial pain can also be associated with trigger points, hyper-irritable spots that form in skeletal muscle or nearby fascia.

Managing TMJ Disorders & Myofascial Pain

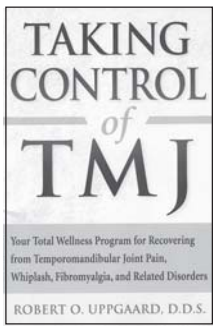
Dentists need to take the lead in helping health care professionals and the public to make the distinction between the terms "*facial*" and "*fascial*" and between *orofacial pain* (pain in teeth and the face)—which is taught in dental schools—and *myofascial pain* which is not taught in our dental or medical institutions. Once awareness improves regarding TMJ disorders and myofascial pain, conservative treatments may be administered to patients with these disorders, and self-help techniques that are essential to success can be taught with great success.

> LeRoy M.S. Miner, D.D.S., in 1934 said: "*Not until diagnosis becomes the foundation on which the whole structure of dentistry is built can it lay claim to be a learned profession or an important branch of the great art and science of healing.*"

About the Author: Dr. Bob Uppgaard has worked in the field of health care research for 54 years, helping people become partners in their treatment plan and manage the head-to-toe problems associated with chronic pain from TMJ, fibromyalgia, and related disorders.

With the help of Barbara, his wife of 60 years who insisted that he write a self-help book for patients when he turned 70, Dr. Uppgaard produced and published, *Taking Control of TMJ: Your Total Wellness Program for Recovering from Temporomandibular Joint Pain, Whiplash, Fibromyalgia, and Related Disorders* (Harbinger Publications, 1999). International myofascial pain experts Janet Travell, M.D., and David Simons, M.D., assisted with the editing of chapters on whiplash, fibromyalgia, and stress in this book.

Dr. Uppgaard has a website at: www. uslink.net/~uppgaard. He is retired from general practice but continues his research on the connection between whiplash, fibromyalgia, and TMJ disorders. He lives at Pequot Lakes, MN.



Taking Control of TMJ is available at Amazon.com, BarnesandNoble.com, and many other bookstores