



TMJ News Bites

Issue 4, 2026

Your Support Advances TMD Research

For more than 35 years, The TMJ Association (TMJA) has worked to ensure that the voices of people living with temporomandibular disorders (TMD) are included in research that shapes the future of care. Today, that mission is more important than ever.

Millions of people living with TMD experience difficulty eating, speaking, kissing, breathing, and other life-altering symptoms. Scientific research is essential to developing safer, more effective treatments and improving quality of life.

Last year, as a result of TMJA advocacy efforts, the National Institutes of Health (NIH) launched and funded the **TMD IMPACT Collaborative**, a five-year national research initiative bringing together researchers, clinicians, and patient partners to advance understanding and treatment of TMD. TMJA is proud to serve as a lead patient partner, ensuring that the patient perspective is included at every stage of this groundbreaking effort. For too long, research has been conducted on patients rather than with patients. TMJA helps change that by working alongside researchers to identify patient priorities, connect them with patient advisors, and ensure lived experience informs research directions and outcomes.

This national initiative is already making progress. At the same time, TMJA is advancing its **patient registry**—an initiative that will allow people living with TMD to share their experiences over time, supporting future research and improving diagnosis, treatment, and care. We are also aligning the registry with NIH data standards so that patient information can contribute more effectively to broader research efforts.

Your generosity makes this work possible. Every gift helps ensure that patients have a voice in the research that shapes the future of TMD care. As a small nonprofit, TMJA relies on donors who believe patients should help guide the research and policies that affect their lives. Your support enables our leadership as a patient partner in this NIH initiative, advances our patient registry, and strengthens education, advocacy, and resources for the TMD community.

Today, we ask you to invest in the future of TMD research. **Your gift—of any amount that is meaningful to you—helps ensure patients remain**

partners, not bystanders, in shaping the future of TMD research and care. You can make your gift online at <https://tmj.org/donate/> or by mail to:

The TMJ Association
P.O. Box 26770
Milwaukee, WI 53226

Thank you for standing with us and helping build a future where everyone affected by TMD has access to safe, effective, evidence-based care.

With gratitude,

Allen W. Cowley, Jr., PhD
President

TMD IMPACT Collaborative Brings Patients and Researchers Together

The TMD IMPACT Collaborative will hold its first annual meeting September 18–19, 2026, at Texas A&M University College of Dentistry in Dallas, Texas. The meeting will bring together researchers, clinicians, NIH staff, and people with lived experience to advance collaboration and help shape the future of TMD research.

The TMJ Association and several of our patient partners will participate in the meeting, helping ensure that patient perspectives are represented as this important research initiative moves forward.

The meeting is open to both in-person and virtual participation. Virtual attendance is free. There is a registration fee for in-person attendance; however, the fee will be waived for patients. If you are a patient planning to attend in person, please do not register through the online form. Instead, contact meghannholt@tamu.edu or monrocroe@tamu.edu to be added to the patient attendance list at no charge.

Virtual participants and other attendees: [click here to learn more and register](#).

11th International TMD Interdisciplinary Research Meeting to Follow IMPACT Meeting

The 11th International TMJ Interdisciplinary Research Meeting (ITIRM) will be held September 19-20, 2026, at Texas A&M College of Dentistry in Dallas, Texas.

This international scientific symposium brings together bioengineers, clinicians, and researchers to discuss the challenges presented by temporomandibular joint disorders and explore new strategies for advancing TMJ research and care.

This year's keynote speaker is Alejandro J. Almarza, PhD, Professor of Oral and Craniofacial Sciences and Bioengineering at the University of Pittsburgh's Center for Craniofacial Regeneration. The full program schedule is coming

soon. The meeting will be open to both in-person and virtual participation. [Click here for registration information.](#)

If you are a patient planning to attend in person, please do not register through the online form. Instead, contact meghannholt@tamu.edu or monrocroe@tamu.edu to be added to the patient attendance list at no charge.

NIH Grand Rounds Highlights the Power of Collaboration in TMJ Research

The National Institutes of Health (NIH) recently featured temporomandibular disorders (TMD) during a Clinical Center Grand Rounds presentation, "Leveraging Collaborations to Advance TMJ Disease Diagnosis and Treatment: The Strength of Intramural-Extramural Multi-Disciplinary Partnerships." The presentation by Hai Yao, PhD, and Janice Lee, DDS, MD, MS, highlighted how researchers, clinicians, engineers, and patient advocates are working together across institutions to accelerate progress in TMD research and improve patient care.

A central theme of the presentation was that no single discipline can solve the complex challenges of TMD alone. By bringing together experts from dentistry, medicine, pain research, imaging, engineering, and other fields, these collaborative partnerships are advancing our understanding of the biological mechanisms behind TMD, identifying better diagnostic tools, and developing more effective, evidence-based treatments.

The presentation also highlighted the importance of partnerships between NIH intramural researchers—scientists and clinicians who conduct research within the NIH's own institutes and centers—and extramural researchers at universities, academic medical centers, and other research institutions across the country. By combining complementary expertise and resources, these collaborations are accelerating scientific discovery and helping move promising research more quickly toward improved patient care.

This multidisciplinary approach reflects recommendations from the National Academies and aligns with the goals of the NIH's TMD IMPACT Collaborative, which is fostering coordinated, patient-centered research across multiple universities and NIH institutes and centers. By integrating basic science, clinical research, engineering, and patient perspectives, these efforts are helping translate discoveries into better diagnosis, more effective treatments, and ultimately improved outcomes for the millions of people living with TMD.

Watch the NIH Grand Rounds presentation:

<https://videocast.nih.gov/watch/6c1f76ab-3780-11f1-82c0-124f0a52e769>

New Study Identifies the TMJ Lymphatic System

A recent study published in Nature Communications, titled "*Identification of Synovial Lymphatic System in the Temporomandibular Joint and Their Roles in Arthritis and Pain*," reports an important new discovery about the temporomandibular joint (TMJ)—the jaw joint that allows us to chew, speak, swallow, and express emotion. The study was led by Drs. Yang Shu and Jian-

Fu Chen and colleagues at the University of Southern California (USC), with collaborators from the UCLA Schools of Dentistry and Medicine. Importantly, members of this research team are also investigators within the newly established NIH-funded TMD IMPACT Collaborative, a major national initiative created to advance research into TMJ disorders and associated pain conditions.

Temporomandibular disorders (TMDs) affect millions of people and can cause chronic jaw pain, headaches, difficulty eating, jaw locking, and reduced quality of life. Although inflammation and arthritis of the TMJ are common features of many TMDs, scientists have known relatively little about how inflammatory fluids, immune cells, and tissue debris are cleared from the joint once inflammation develops.

The lymphatic system functions as part of the body's drainage and immune network. Lymphatic vessels remove excess fluid and inflammatory molecules from tissues and help regulate immune responses. While lymphatic vessels have been studied extensively in other joints such as the knee, their existence and function in the TMJ had remained largely unknown.

In this study, investigators used genetically engineered mice, advanced three-dimensional imaging, tissue-clearing methods, and human TMJ tissue samples to identify a network of lymphatic vessels within the synovial tissues of the TMJ. The synovium is the thin tissue lining that surrounds the joint and produces lubricating fluid needed for smooth jaw movement.

The researchers then studied what happens to this lymphatic system during TMJ arthritis in mice. They found that inflammation caused major changes in the lymphatic vessels and impaired their ability to drain inflammatory material from the joint. This dysfunction was associated with worsening inflammation, cartilage damage, bone loss, and increased pain-related behaviors.

Importantly, the investigators showed that lymphatic dysfunction was not simply a consequence of arthritis but actually contributed to disease progression. Mice with impaired lymphatic function developed more severe joint inflammation and pain. The study also identified abnormal inflammatory cell populations that emerged when lymphatic drainage failed, suggesting that disrupted lymphatic function can alter the entire joint environment in ways that amplify chronic inflammation.

Perhaps most encouraging, the investigators were able to improve TMJ disease in mice by enhancing lymphatic function. Using a biodegradable hydrogel to deliver VEGF-C, a molecule known to stimulate lymphatic growth and activity, they reduced inflammation, cartilage injury, bone damage, and pain behaviors in the arthritic TMJ.

These findings are significant because they introduce the lymphatic system as a previously unrecognized component of TMJ biology and disease. The work also strengthens the growing view that TMDs are true musculoskeletal and inflammatory disorders rather than conditions related solely to dental alignment or bite mechanics.

At the same time, it is important to recognize that most of these experiments were performed in mice. While the investigators also examined human TMJ tissues anatomically, additional studies will now be needed to determine whether the same lymphatic mechanisms drive TMJ arthritis and pain in other

animal models and, ultimately, in human patients. Translating these findings into clinical therapies will require substantial further investigation.

Nevertheless, this study represents an important advance in TMJ research. By identifying a functional lymphatic system within the jaw joint and linking lymphatic dysfunction to inflammation and pain, the work opens a promising new direction for understanding and potentially treating TMJ disorders in the future.

More at: <https://pubmed.ncbi.nlm.nih.gov/42034638/>

Innovative Imaging Offers New Insights into TMJ Pain

Researchers at the University of Pittsburgh have developed an innovative imaging technique that allows scientists to see nerves inside joints in remarkable three-dimensional detail. While the technology was first tested using knee joints, the ultimate goal is to better understand the temporomandibular joint and why some people experience chronic pain while others do not.

Traditionally, researchers have studied joint nerves by slicing tissue into thin sections, which destroys the tissue's three-dimensional structure. The new approach combines advanced tissue-clearing methods with light-sheet fluorescence microscopy, making the tissue transparent so scientists can visualize the entire network of nerves without cutting it apart.

This technology could help answer one of the biggest questions in TMJ research: Why do some people with significant joint damage have little or no pain, while others experience severe, persistent pain even when imaging shows only minor changes? By creating detailed maps of the nerves within joints, researchers hope to identify differences in nerve structure and organization that may contribute to pain.

The research team is part of the NIH-funded ReJoin Consortium, which is working to map nerve architecture across different joints and disease states. Although this work is still in the research stage, it represents an important step toward understanding the biological mechanisms behind TMJ pain and may eventually lead to more targeted treatments for people living with temporomandibular disorders.

[Click here to read the full story.](#)

Patient Spotlight - Meet Bernard

The following reflects experiences that occurred within several detention facilities in southern Virginia. While incarcerated individuals do not have the same autonomy over medical and dental decision-making as those in the broader community, this narrative represents one person's lived experience and underscores the urgent need for greater general awareness and education about temporomandibular disorders (TMD).



Raising awareness about TMD is a responsibility I take seriously. Although arthritis is common among the men in my family, I was unprepared for my own diagnosis at nineteen.

My symptoms began as mild jaw tightness. It took six months before I was brought to the dental department for evaluation. The dentist asked a few questions, took measurements, and told me I could leave. The stiffness and intermittent facial pain continued for another four months before I was seen by a physician.

By then, I was desperate for answers. I asked why it had taken so long to address my symptoms. Without responding, the doctor left the room and returned with my file, stating that the dentist had reported, “There is nothing wrong—he opened his mouth all the way.” My symptoms were dismissed. Instead of improving, my condition worsened over time. In addition to jaw arthritis, I began experiencing severe throbbing in my calf muscles within six years—pain that kept me awake most nights. During one consultation, a physician diagnosed me with restless legs syndrome (RLS) and prescribed iron supplements. Within a few months, treatment was discontinued.

Over time, institutional physicians, dentists, and nurses recommended various TMJ surgeries while repeatedly cycling me on and off NSAIDs (nonsteroidal anti-inflammatory drugs) and other arthritis medications that had already proven ineffective.

At every facility, I encountered dental providers who were unfamiliar with TMD, declined to conduct a thorough oral examination, and resisted basic accommodations such as a supportive head wrap, a child-sized toothbrush, or access to ice and heating packs. Requests were often ignored. Appointments were delayed, canceled, rescheduled without notice, or marked as “no-show.” I have been waiting since 2023 to see a specialist. Currently, a 30-day prescription for Zanaflex is the only treatment available to me.

Since reaching out to The TMJ Association (TMJA) in September 2019, I have been encouraged to take an active role in my own care. With their guidance, I have learned practical self-management strategies, including closely monitoring my symptoms, educating myself about TMD, journaling to track patterns and progress, and sharing my story to help others better understand this condition. Being mindful to avoid activities or situations that may aggravate my symptoms has also been an important part of managing day-to-day life. I am profoundly grateful to TMJA’s beloved founder, Terrie Cowley, whose compassion and unwavering dedication brought hope to so many individuals living with TMD. I am equally thankful for the devoted staff and volunteers who continue to provide consistent support, encouragement, and reliable information to patients in need.

If you or someone you love is living with TMD, please consider supporting the TMJ patient community by reaching out to local and state leaders, elected officials, government agencies, and other decision-makers to advocate for meaningful progress in TMD research, education, and patient care.

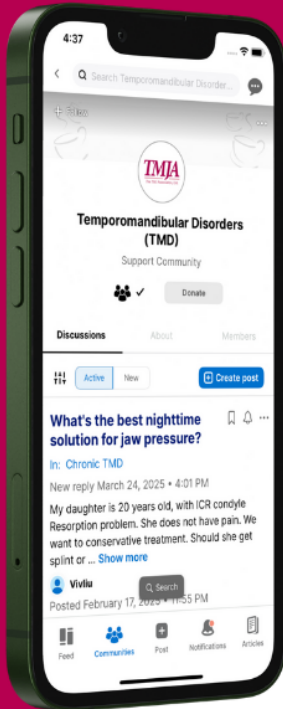


JOIN US ON INSPIRE

TMJ Café
Support Community

tmj.inspire.com



The TMJ Association, Ltd.

Continuing Education Opportunities

Harvard Interdisciplinary Pain & Headache Rounds

The Bruce Donoff Memorial Symposium will be held virtually on Saturday, November 7, 2026 (9:00 a.m. - 1:00 p.m. ET) and include invited remembrances, a keynote presentation by Lisa Simon, MD, DMD, a session on temporomandibular disorders and interprofessional care, panel discussion, and closing remarks by Richard W. Valachovic, DMD, MPH.

[View Full Flyer, Agenda & Registration](#)

Online Research Survey - Juvenile Idiopathic Arthritis and TMJ Arthritis

The Childhood Arthritis and Rheumatology Research Alliance (CARRA) is a non-profit organization throughout North America whose goal is to improve research in pediatric patients with rheumatic diseases. One of CARRA's subgroups, the TMJ (temporomandibular joint) Arthritis Workgroup, is conducting a one-time survey.

This study is looking at inflammatory disease of the TMJ, which is known as TMJ arthritis.

The terminology of "TMJ" and "TMD" is often used interchangeably but usually refers to non-inflammatory causes of diseases of the jaw. TMJ arthritis, however, can be seen in patients with a history of childhood-onset inflammatory joint disease called Juvenile Idiopathic Arthritis (JIA).

If you are an adult who has a diagnosis of JIA and has seen a pediatric rheumatologist (past or current), we invite you to participate in this survey to better understand the care of TMJ arthritis.

Please see the flyer below for more information.

Join Our Research Study!

DO YOU HAVE A HISTORY OF JAW ARTHRITIS AS A CHILD?

If you are an adult (18 years and older) with a

- history of Juvenile Idiopathic Arthritis (JIA)
AND
- history of Temporomandibular Joint (TMJ) Arthritis

who sees an adult rheumatologist, we invite you to participate in a one-time electronic survey to talk about your experiences with TMJ arthritis since transitioning into adult rheumatology care. This survey should take a few minutes to complete.

SCAN HERE



Study Contact:

Patricia Hoffman, DO

hoffmanp@hss.edu

Pediatric Rheumatology Fellow

Hospital for Special Surgery

IRB-exempt research study

HSS

Changing the Face of TMJ

We cannot change the face of TMJ without YOU!

When you donate, you are making the following happen:

- Advancing TMJ Scientific Research
- Advocating for TMJ Patients
- Supporting and Guiding Patients
- Educating Health Care Professionals
- Providing Trusted Information

The TMJ Association is the *ONLY* patient advocacy organization fighting for the best science to advance understanding of TMD and related conditions — and to help ensure treatments improve, rather than harm, patients' lives.

As an independent, patient-led nonprofit, The TMJ Association receives no funding from commercial entities, professional societies, or industry. This independence allows us to provide unbiased advocacy, education, and support for rigorous, patient-centered research.

We cannot change the face of TMJ without YOU. [Your tax-deductible contribution is more than a donation](#) — it gives patients with TMD a voice through education, support, advocacy, and research.

Thank you for helping us continue this important work.

About The TMJ Association ... *Changing the Face of TMJ*

The TMJ Association, Ltd., is a nonprofit patient advocacy organization dedicated to improving healthcare and the lives of everyone affected by Temporomandibular Disorders (TMDs, also known as "TMJ"). For more than 35 years, we have provided reliable information, resources, and support while advocating for research that leads to better understanding and better care. Learn more at www.tmj.org.



The TMJ Association, Ltd., P.O. Box 26770, Milwaukee, WI 53226

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The TMJ Association, Ltd., is a nonprofit 501(c)(3) tax-exempt organization.

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