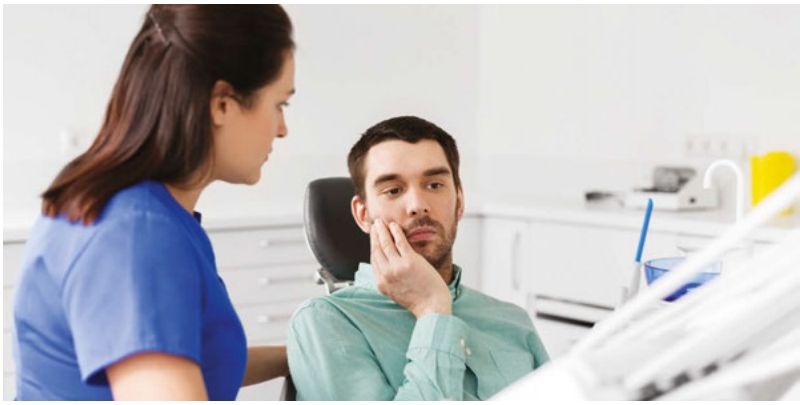
An OMD assessment with TMD muscle pain: a case study

Judith Dember-Paige, BSOHP, COM®, discusses how transformation sometimes takes years, but it's worth the effort

Stan was referred to my office by a TMD specialist. His chief complaints were he could not chew or open his mouth without pain. It seemed the less he chewed, the more pain he experienced. As a result, an Orofacial Myofunctional Therapy (OMT) program was created to help support his muscles of the TMJ and craniofacial respiratory complex. He used his splint as instructed by his specialist. However, his anterior open bite widened, and his teeth became more misaligned over time.

TMD and orofacial muscle pain is a problem that can start small and grow in magnitude and dysfunction. Sometimes the pain may be associated with Orofacial Myofunctional Disorders (OMDs). Therapy may be needed to address the muscle pain that accompanies the dysfunction

Stan was a 28-year-old male in a lot of pain. He had just come from his TMJ specialist where he received an oral orthotic splint to relieve his discomfort. He told me it all started after a long dental appointment where he received a root canal and a new crown on the upper right. After this procedure, his jaws felt tight so he gave it a good stretch by opening very wide. He heard a rip and a crunch. Opening his mouth was never the same after that. He presented with a set of symptoms: TMD muscle pain, he could no longer chew his food without pain (food had to be the soft consistency of tofu), daytime clenching and night time grinding of his teeth. In addition, he had daily headaches and ear ringing. He could not open his mouth very wide without experiencing sharp pain. He took acetaminophen for his discomfort and zolpidem nightly to help him fall asleep easier.



Upon closer examination, there were contributing factors that led to his discomfort. Stan had been a stomach/face sleeper for years. He also bit his nails since childhood, had a smoking habit from his youth, and he was prone to ear infections. He had moderate tongue and buccal ties, obligate mouth breathing, aggravated by a deviated septum, narrow nares, low tongue resting posture, an anterior open bite, a lower jaw that deviated upon opening, and bouts of acid reflux.

An orofacial therapy program was created to allow his tongue to give better support and function to his oral structures, especially the TMJ joint. When the tongue rests in the palate, it removes the unwanted pressure off of the TMJ. As part of the course of his therapy, focus was made to reeducate his breathing to make his nose the primary way he breathes. Optimal breathing rate for an adult is slower than for a child. Good nasal breath-

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Figures 1A-D: 1A. Initial assessment on December 15, 2016. 1B. 1 month of OMT January 27, 2017. 1C. 5 months later April 17, 2017. 1D. 10 months later October 30, 2017

ing during the day supports good nasal breathing during the night for optimal sleep.

When the tongue rests in the palate, it impacts facial development especially for children who are still growing. An adult, for example, like our friend Stan, the progress made is gradual but more likely to last a lifetime. Generally, therapy starts out once a week for about 2-3 months. Then therapy progresses to every other week for 2-3 months, and then changes to once a month for about 5 months for the rest of the year. The exercises are done a minimum of 2 times everyday. These exercises are designed to strengthen and tone the orofacial muscles, building brand new neuromuscular function. When the muscles of the face are well developed, it may favorably impact appearance and the overall integrity of the facial structures. The muscles of the face also include the tongue, lips, cheeks and neck. Although the therapy program is typically only a year, Stan really liked how good he felt and decided to continue with some of the exercises to this day. From the photos you can see how much the program has impacted his health and well-being.

During his therapy, there was a discussion about the possible benefits he may receive from having his jaws expanded, making more room for his tongue, then to be followed by a tongue and buccal frenums release. His intermolar width is 34 mm, and his intercanine width is 25 mm. I feel any expansion has a potential benefit.

After completing his course of myofunctional therapy, he was able to open his jaws with full range of motion and achieve his goal of being able to enjoy some of his favorite foods again. He was most excited about being able to bite into a juicy cheeseburger.

Stan has a very narrow external nasal valve and receives some benefit from using dilator nasal strips. There are a few more products on the market that may help make nasal breathing easier for him.

To document any initial assessment, the midpoint of therapy, and when therapy has ended, it is important to take detailed photos, videos, plus full measurements of the face and teeth. This makes it possible to compare results while showing that your therapy works based on the evidence you gathered before, during, and after treatment.

In conclusion, Stan was very proud of how hard he worked during his myofunctional therapy and urged me to share his exceptional results. OP

Figure 2: Initial assessment on December 15, 2016 (top left). Later September 20, 2017, his anterior openbite widened (top right)

Figure 3: Milled orthotic splint

Figure 4: 7 years later on April 10, 2024. Anterior open bite closed a bit

Figure 5

Figure 6: No room for his tongue