



# VISIBILITY OF THE LATERAL PTERYGOID MUSCLE IN TEMPOROMANDIBULAR DISORDERS BY MAGNETIC RESONANCE IMAGING



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**BACKGROUND:** Temporomandibular disorders (TMD) are a heterogeneous group of diseases involving temporomandibular joint (TMJ) and related muscles, characterized by pain, joint movement alterations and articular sounds. Lateral pterygoid muscle (LPM) is a masticatory muscle, one of the main depressors of lower jaw. It has two heads: one inserts on the articular disc and fibrous capsule of TMJ and the other on the mandibular condyle. Visualization of the LPM using magnetic resonance imaging (MRI) enables evaluation of the insertion, presence of partial or complete tear, hypertrophy, atrophy of the muscle and the presence of contracture.

**METHODS:** Fibers of LPM upper head may enter the anterior-medial part of the disc directly and participate in kinematics of TMJ. During contraction, upper head of LPM pushes the disc forward (protraction) and limits the posterior movement of the disc (retraction). Although the importance of LPM for the function of the disc is clear, the exact role of LPM insertion in TMDs is not yet explained. MRI is a powerful tool for the evaluation of TMJ changes, able to depict in detail anatomic relations of LPM to the adjacent structures.



**Figure 1. Insertion of the LPM on the articular disc**

**RESULTS:** Insertion of the LPM upper head has been evaluated in order to explain the presence of the anterior disc dislocation in TMD; however, most studies failed to prove significant correlations between this insertion and disc dislocation.

**CONCLUSION:** Understanding the changes in the LPM images helps clinician to better understand clinical symptoms and allows for more accurate diagnosis of TMD, therefore resulting in more effective treatment.