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| **Name:** |
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| **Group:** |
| 8A-4 |
| **Basic Science Question:** |
| What is the anatomy of the Temporomandibular Joint? |
| **Report:** |
| The TMJ is a ginglymoarthroidal joint located between the mandible and the temporal bone. It is at the junction of condyle and the mandibular fossa. Between the condyle and fossa is the articular disc made up of dense fibrous connective tissue with no nerve innervations or vasculature, synovial fluid is present to act as a lubricant when in motion. The joint capsule connects the disc, the condyle and and the articular eminence into one unit. Behind the disc, is retrodiscal tissue which is innervated by nerves and is vascularized. When opening the jaw, the lateral pterygoid muscle is the only active muscle used and the condyles will rotate forward and move anteriorly sliding down the posterior articular eminence. While closing the jaw, the masseter, medial pterygoid and temporalis are used to elevate the mandible back to occlusion sliding back up the eminence. Protrusion of the mandible is accomplished by solely the lateral pterygoid muscle, while with retrusion the horizontal fibers of the temporalis and the deep fibers of the massester are used. There are also 3 major ligaments involved in the TMJ. The temporomandibular ligament runs from the zygomatic process of the temporal bone and attaches to the neck of the condyle. The Sphenomanibular runs from sphenoid bone to the lingula of the mandible. Lastly, the stylomandibular runs from the styloid process of the temporal bone to the angle of the mandible.  |
| **References:** |
| Pihut M, Gorecka M, Ceranowicz P, Wieckiewicz M. The Efficiency of Anterior Repositioning Splints in the Management of Pain Related to Temporomandibular Joint Disc Displacement with Reduction. *Pain Res Manag*. 2018;2018:9089286. Published 2018 Feb 21. doi:10.1155/2018/9089286Wadhwa S, Kapila S. TMJ disorders: future innovations in diagnostics and therapeutics. *J Dent Educ*. 2008;72(8):930-947. |