

MORPHOLOGY AND FUNCTIONAL ABILITIES OF THE TEMPOROMANDIBULAR JOINT

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The mandible and the cranium are integrated by a unique joint juncture which is a special structure in the human body for most of its characteristics. From the other joints, it differs in morphology, the potential of the variability of all of the structures related to the joint, special functions, vast freedom of movement, and the close relationship between the joint and vital organs. Articular surfaces are covered by a special type of fibrous tissue which consists of four different zones: the articular zone, the zone of the fibrous cartilage, and the zone of the calcified cartilage. The fibrous capsule of the joint is covered by the synovial membrane. The inside of the joint cavity is filled by the synovial fluid that serves as the metabolic medium and ensures lubrication. The articular disc inserted between the articular surfaces has a complex structure and very important roles ensuring the vast mobility of the joint and the physiological pressure transfer. It divides the joint into two different portions that serve as a uniform functional unit. Morphologically it has a biconcave shape and can be divided into three portions. The intermedial zone is the thinnest, while the posterior, bilaminar, zone has the most complex structure containing the well vascularised retrodiscal tissue between its laminae. Disc constantly changes its shape according to the new configuration inside of the joint which is ensured by a specific alignment of the collagen fibers but also the presence of elastic and oxytalan fibers.

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