

# Atlanto-odontoid joint

The surface area, thickness and composition of articular cartilage of the atlanto-odontoid joints were investigated in twenty human cadaveric cervical spine specimens. The specimens were also examined grossly and by light microscopy to determine the location of the synovium. The anterior arch of the atlas and ventral and dorsal articular surfaces of the dens were covered with hyaline cartilage. The mean values of the articular surface areas on the ventral surface of the dens and anterior arch of the atlas were 55.10 and 58.24 mm<sup>2</sup>, respectively. The mean thickness of the articular cartilage of the anterior arch of the atlas, ventral and dorsal surfaces of the dens was 0.80, 0.81 and 0.82 mm, respectively. Synovial membranes were associated with the joint capsules and surrounding tissues of both anterior and posterior atlanto-odontoid joint spaces, where the synovial membranes were attached to the margins of the articular surfaces of the dens and anterior arch of the atlas anteriorly and the region of the cruciate ligament immediately peripheral to the cartilage region apposed to the dens and dens cartilage itself, posteriorly <sup>1)</sup>.

<sup>1)</sup>

Ebraheim NA, Yang H, Lu J, Biyani A, Yeasting RA. Cartilage and synovium of the human atlanto-odontoid joint. An anatomic and histological study. *Acta Anat (Basel)*. 1997;159(1):48-56. PubMed PMID: 9522897.

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