

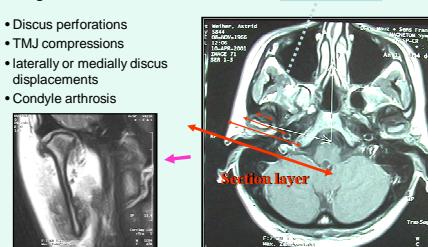
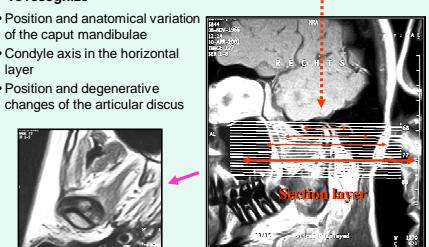
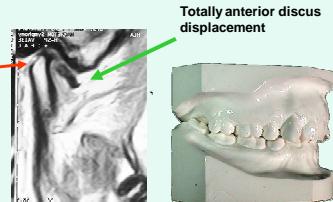
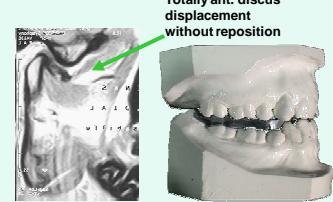
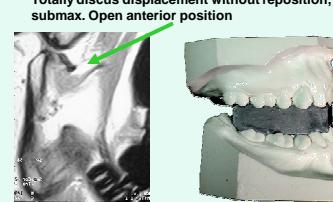
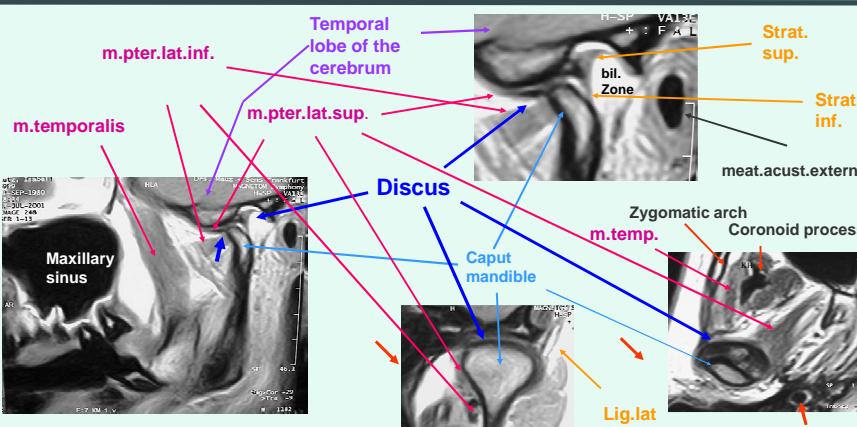
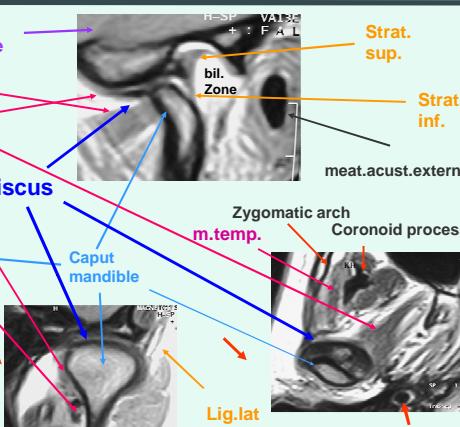
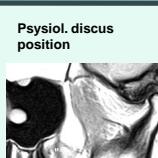
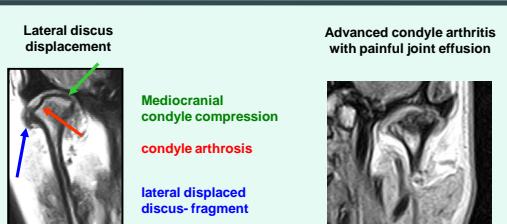
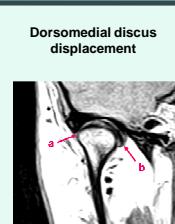
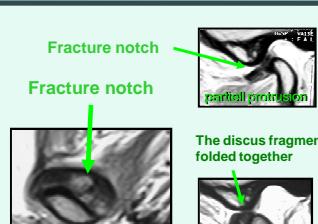
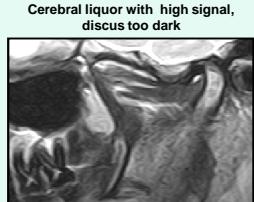
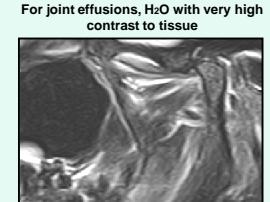
# Systematic of the temporomandibular MRI Diagnosis

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**Introduction:** Systematic in MRI- Diagnostics can describe the pathology of the temporo-mandibular joint (TMJ) and will help to discover the anatomic structures and diseases in three dimensional view. MR-Images give important information to evaluate chronic pathologic disorders of orthofunctions.

Sections layer:	Parasagittal	Paracoronal	Transversal	
Representation as	Sections sequence	Diagnosis of	Section sequence	
<ul style="list-style-type: none"> <li>Main image layer</li> <li>Image perpendicularly by the condyle axis from lat. to med.</li> <li>Image in three different lower jaw positions</li> <li>Image layer with Video MRI's</li> </ul> 	 <ul style="list-style-type: none"> <li>Discus perforations</li> <li>TMJ compressions</li> <li>laterally or medially discus displacements</li> <li>Condyle arthrosis</li> </ul>	 <ul style="list-style-type: none"> <li>Position and anatomical variation of the caput mandibulae</li> <li>Condyle axis in the horizontal layer</li> <li>Position and degenerative changes of the articular discus</li> </ul>		
Main layer:	Occlusal bite	therap. protrus. 2-4mm, anter. caudal	submaximal anter. caudal	
Dorsocranial TMJ arthrosis with dorsocranial TMJ compression and retral TMJ position (displacement)	 <p>Totally anterior discus displacement</p>	 <p>Totally ant. discus displacement without reposition</p>	 <p>Totally discus displacement without reposition, submax. Open anterior position</p>	
Anatomical structures:	MRI-Map	Findings :	Parasagittal	
		 <p>Physiol. discus position</p>	 <p>Partial anterior discus displacement</p>	
Findings:	Paracoronal	Transversal and parasagittal		
Apatholog. TMJ	Lateral discus displacement	Advanced condyle arthritis with painful joint effusion	Dorsomedial discus displacement	   
Good for first orientation, discus with too little contrast	Cerebral liquor with high signal, discus too dark	Best contrast for the diagnosis of the discus articularis	For joint effusions, H <sub>2</sub> O with very high contrast to tissue	
The MRI emphases are used to represent the different groups of tissues with various levels of contrast. The MR-images are differentiated between T1-, T2-, and proton-related images. The best contrast for the diagnostics of the TMJ and discus can be achieved with the proton emphasis. With iv-injection of Gadolinium, the contrast to the well circulated tissues is enhanced. Fat suppressed images are excellent to point out traumatic effusions of the joint.				
			Fat suppressed T 2	
				

## Summary:

A systematic MRI (magnet resonance imaging) diagnosis allows a three dimensional evaluation of the anatomic structures and describe the pathology of the temporo-mandibular joint (TMJ). MRIs reveal important information about chronic pathological findings. With the increasing number of adult patients, MRI's are important forensically, as well as for comprehensive treatment planning.