CLINICAL FIELD GUIDE

TMJ DISC DISPLACEMENT

With reduction / Without reduction

From clinical history to decisions



DDwR

Clinical criteria · diagnostics

DDwoR

Clinical criteria · diagnostics

CLINICAL ALGORITHMS / 2 TEACHING CASES / WORKSHEETS

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00 / How to use this guide

For qualified dental professionals. This is an educational companion, not a replacement for formal DC/TMD examination training.

This guide addresses a frequent clinical problem: a patient reports clicking, locking or limited jaw opening, and an MRI may or may not show a displaced articular disc. The diagnostic task is to connect the history, function and physical examination before selecting imaging or treatment.

The four questions

- What exactly does the patient experience: noise, pain, locking, or functional restriction?
- What clinically observable signs are present today?
- Would imaging change a specific clinical decision?
- What is a proportionate, reversible next step?

What is inside

PART	PAGES / MATERIAL
Fundamentals	Disc mechanics and diagnostic distinctions
Clinical reasoning	Interview, examination and differential
Imaging	MRI vs CT/CBCT and interpretation safeguards
Decisions	Patient conversations, conservative care and review
Practice tools	Two cases, templates, worksheet and evidence notes

Key principle

A displaced disc on imaging is not automatically a pain generator or an indication for occlusal adjustment, full-mouth rehabilitation, or surgery. Correlate all structural findings with the clinical presentation.

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01 / TMJ anatomy in 90 seconds

Know what the imaging is trying to represent.

The temporomandibular joint consists of the mandibular condyle, temporal bone articular surface, articular disc, capsule and associated soft tissues. The disc participates in load distribution and joint movement. Its position changes relative to the condyle and eminence during translation and rotation.

Three clinical ideas

- Disc position: anatomic relationship assessed most directly by appropriate MRI sequences.
- Reduction: whether a displaced disc returns to a more typical relationship during opening.
- Function: what the person can do, and whether pain or limitation occurs.

Anterior disc displacement

Displacement pattern	Mouth closed	Mouth open
With reduction	Disc is displaced anteriorly	**Intermediate zone between** condyle and articular eminence
Without reduction	Disc is displaced anteriorly	**Disc remains anterior** to the condyle

MRI examples in the full guide MRI assessment criteria ↗

Terms that should not be merged

TERM	WHAT IT DESCRIBES
TMJ	The joint (anatomical structure).
TMD	A group of musculoskeletal and joint-related conditions.
Internal derangement	Alteration in intra-articular relationships; not a single clinical diagnosis.
Disc displacement	A disc-condyle relationship assessed using clinical criteria and, when needed, imaging.

Avoid the “broken joint” story

The words “disc displacement” do not automatically mean permanent injury. Use accurate, non-alarming language that also makes room for persistent or clinically significant symptoms.

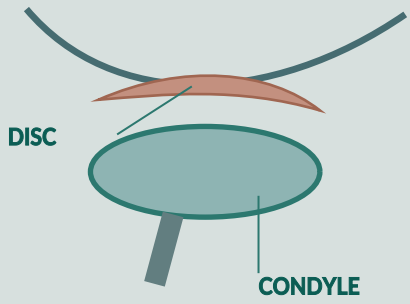
MODULE 01 / FUNCTIONAL ASSESSMENT

TMJ: TWO PLANES
TWO DIFFERENT QUESTIONS

Disc position and condylar kinematics are different data.

01 / MRI: DISC

SAGITTAL PLANE

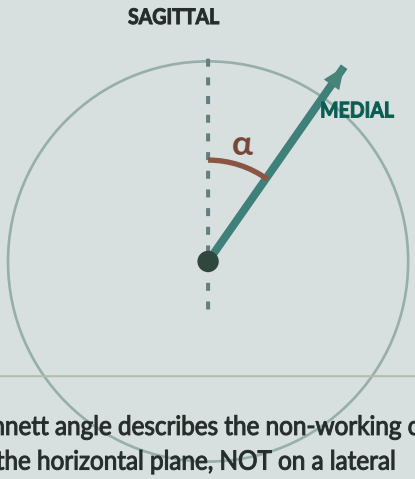


Assess disc–condyle relationships in closed- and open-mouth views. Use MRI when clinically indicated.

Sources: GPT-9 [6]; DC/TMD [1]; AAOMR/AAOP [3].

02 / KINEMATICS

HORIZONTAL PLANE



The Bennett angle describes the non-working condylar path in the horizontal plane, NOT on a lateral cephalogram.

CLINICAL TAKEAWAY / 90 SECONDS

- MRI can assess the disc and other joint soft tissues.
- Jaw-motion recordings describe kinematics; they do not replace MRI.
- Disc displacement alone does not establish pain or treatment need.

REMEMBER

Conceptual diagrams only. Clinical decisions require history, examination and the full available record.

04 / History that changes your diagnosis

A structured 5-minute interview before touching the patient.

ASK	WHY IT MATTERS
“Where do you feel pain?”	Separates joint, muscle, dental, neurologic and other possible origins.
“Is it modified by jaw use?”	Helpful for identifying musculoskeletal pain patterns.
“Do you hear clicks, and since when?”	Establishes temporal pattern.
“Have you ever locked closed or open?”	Different locking mechanisms require different questions.
“Did locking interfere with eating?”	A key feature in DDwoR history criteria. [1]
“How wide could you open then, versus now?”	Distinguishes historical episodes from present limitation.
“What treatments have you already tried?”	Avoids repetition and supports shared decisions.
“What is the biggest everyday limitation?”	Defines a patient-centred endpoint.

Translate the story into a concise clinical summary

Example: “Patient reports an 8-week history of left preauricular pain with chewing and a 3-day episode of restricted opening that interfered with eating. No trauma. Current opening measured and documented; further evaluation planned.”

> **Safety question**
>
> Ask about recent trauma, fever/swelling, dental infection, progressive facial symptoms, neurologic deficits and other atypical features. TMD is a diagnosis made in the context of a differential.