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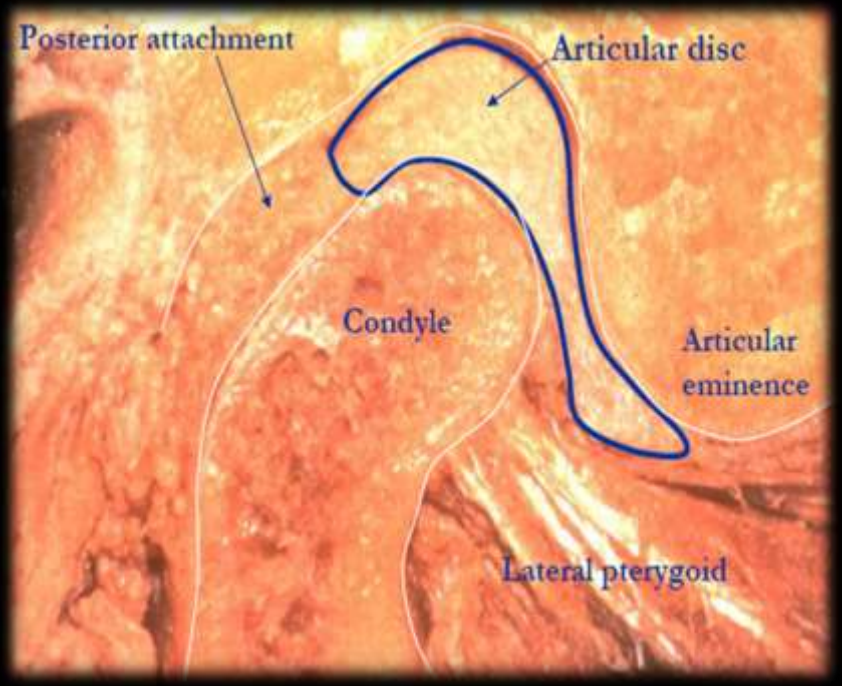
Temporomandibular Joint Disorders

The reciprocal action of the lateral pt. muscle to hold the meniscus in it is position by:

Superior bilaminar zone: elastic fibers hold the meniscus to the temporal bone.

Inferior bilaminar zone: less elastic fibers holding the meniscus to the neck of the condyle posteriorly



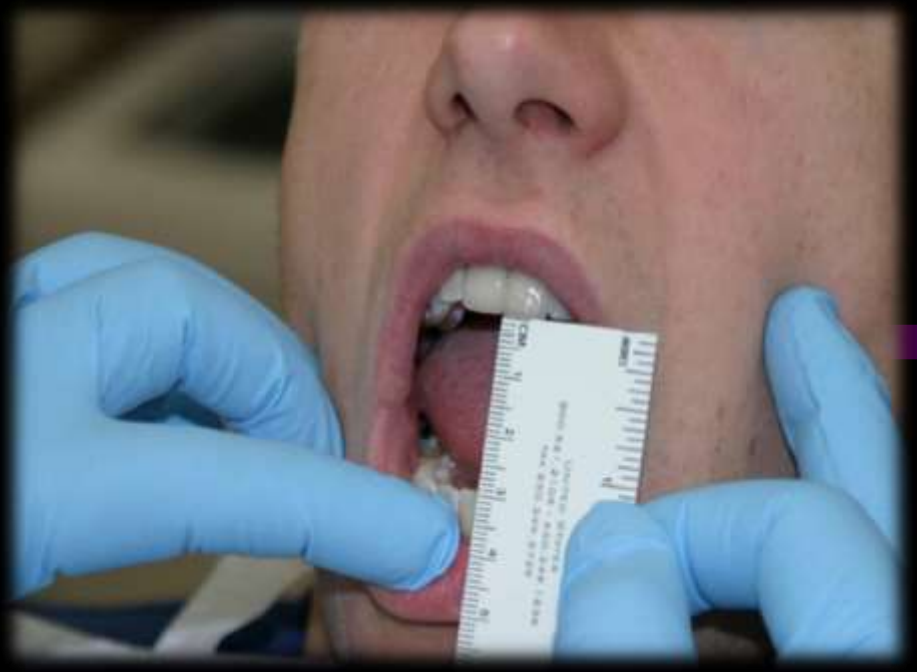
PHYSICAL EXAMINATION OF THE JOINT

- History taking
- Measuring maximum interincisal opening
- Palpation of pretragus area ; the lateral aspect of TMJ
- Intra – auricular palpation ; the posterior aspect of TMJ
- palpation of masseter muscle
- Palpation of lateral pterygoid muscle
- Palpation of medial pterygoid
- Palpation of temporalis
- Palpation of sternocliedomastoid
- Palpation of digastric

INSPECTION

- Facial asymmetry, swelling , masseter or temporalis muscle hypertrophy muscle.

- Assessment of range of mandibular movements: maximum mouth opening , lateral movement , deviation while opening , protrusive movement.



The maximum opening distance between the incisal edges of upper and lower incisor is measured using scale , Boley gauge or ruler.

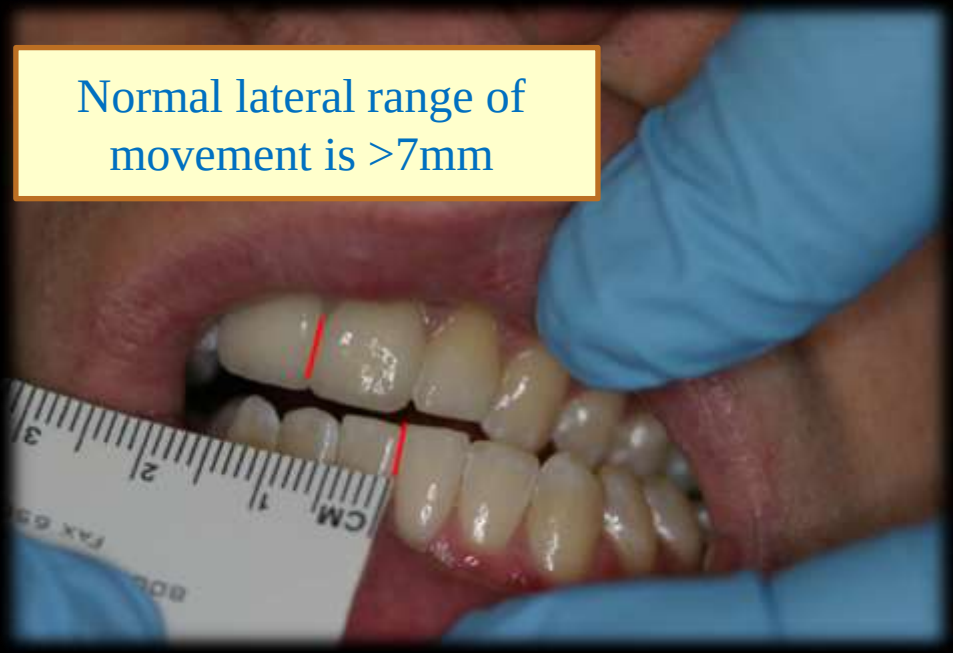
- Normal opening – 40 to 55 mm

Normal opening can also be estimated by patient's own fingers

Normal : three finger end on end

Two finger opening reveals reduction in opening but not necessarily reduction in function.

One finger opening indicates reduced function.



Maximum mouth opening should be measured

- without pain
- as wide as possible , with pain
- after opening with clinical assistance

Mouth opening with assistance is accomplished by applying mild to moderate pressure against the upper and lower incisors with thumb and index finger .
passive stretching is a technique for assessing limitation due to muscle or joint problem.
Assisted opening can be compared with active opening (≥40 mm)
This procedure provides the examiner with the quality of resistance at the end of the movement.

muscle restriction are associated with soft end feel and results in increase of >5mm above the active opening (wide opening with pain)

joint disorders such as acute non reducing disc displacement have hard end feel and characteristically limit assisted opening to <5mm

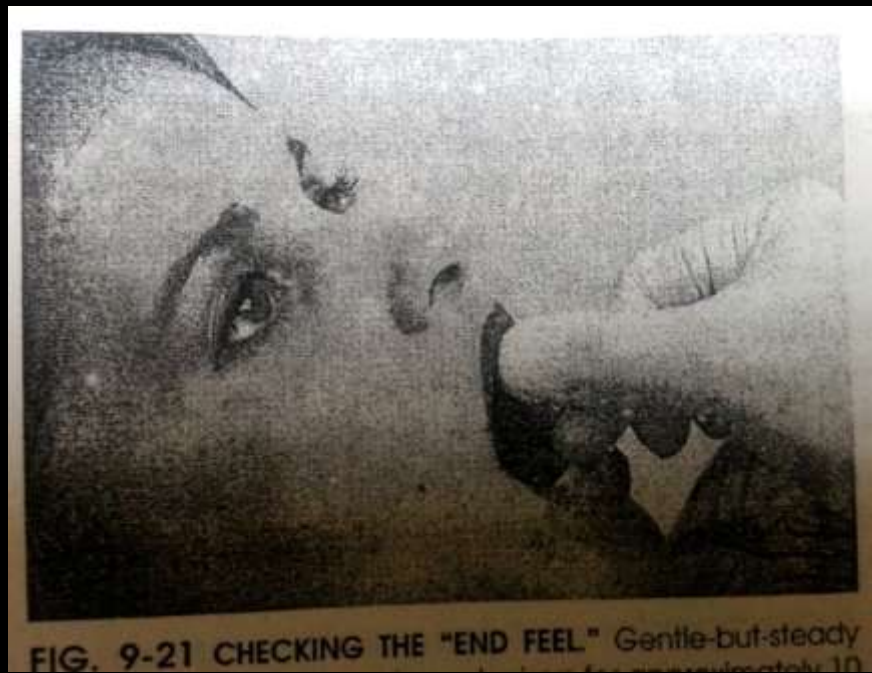
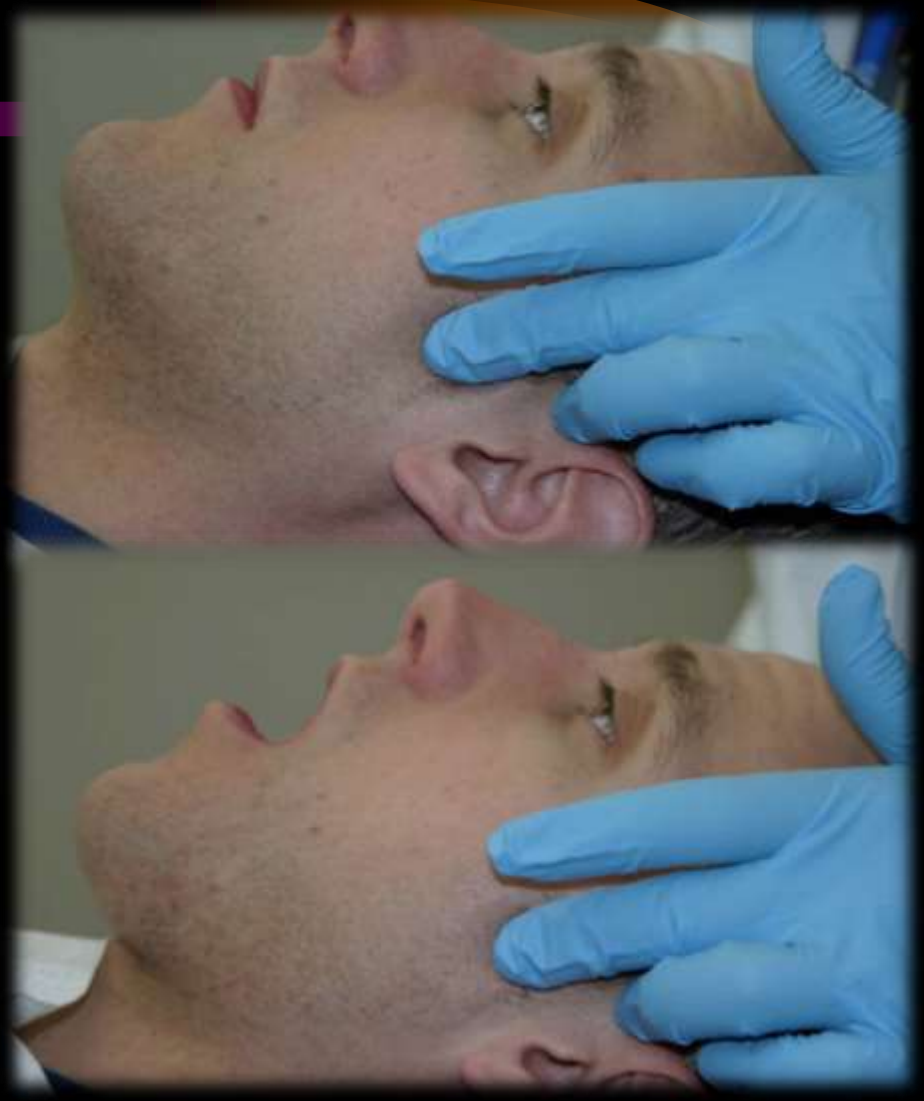


FIG. 9-21 CHECKING THE "END FEEL." Gentle-but-steady

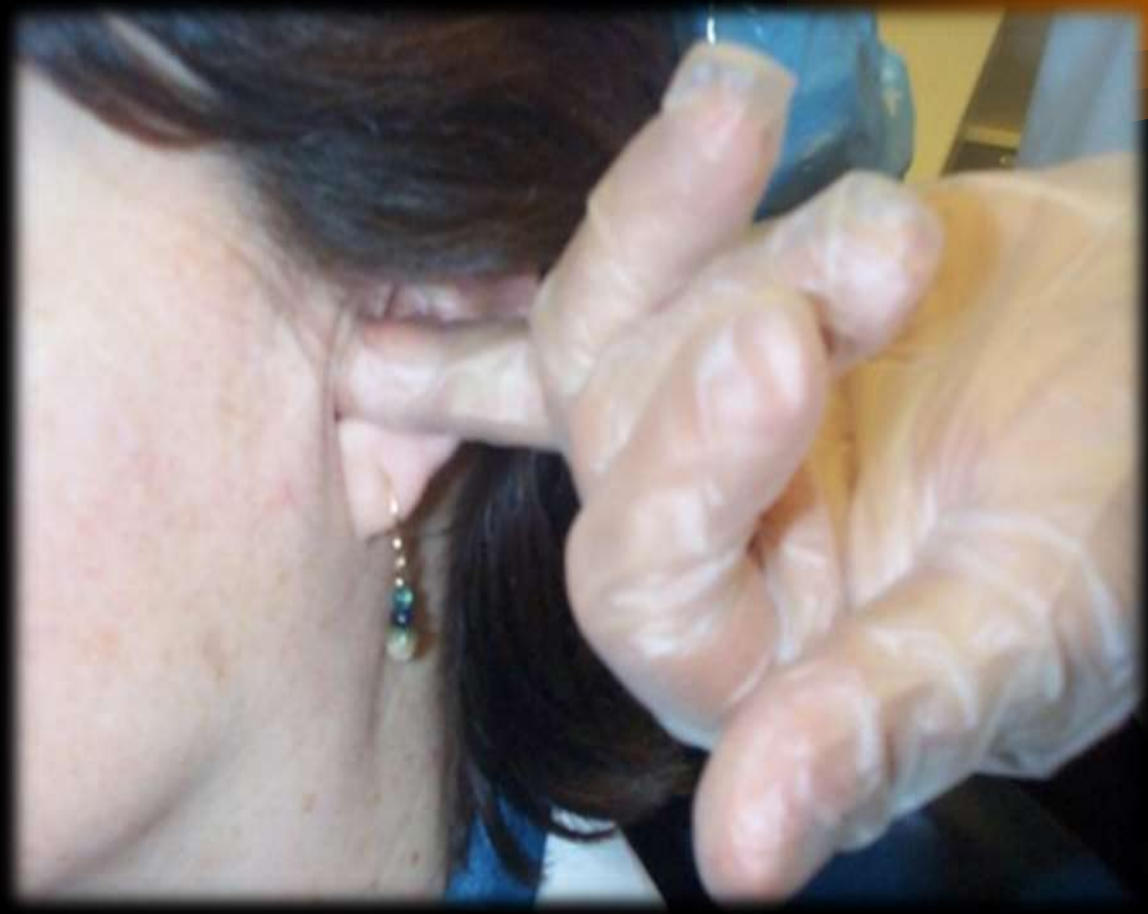
Palpation of pretragus area ; the lateral aspect of TMJ

Palpate directly over the joint while the patient opens and the mandible, and the extent of mandibular condylar movement can be assessed .

Normally,condylar movement is easily felt . Have the patient close slowly, and you will feel the condyle move posteriorly against your finger.



TMJ can also be palpated through anterior wall of external auditory meatus



EXAMINATION OF THE MUSCLES

Functional disorders of the masticatory muscles are probably the most common TMD complaint of the patients seeking treatment in the dental office.

With regard to pain , they are second to odontalgia in terms of frequency.

They are generally grouped in large category known as “masticatory muscle disorder”

As with any pathologic state two major symptoms can be observed:

1.Pain

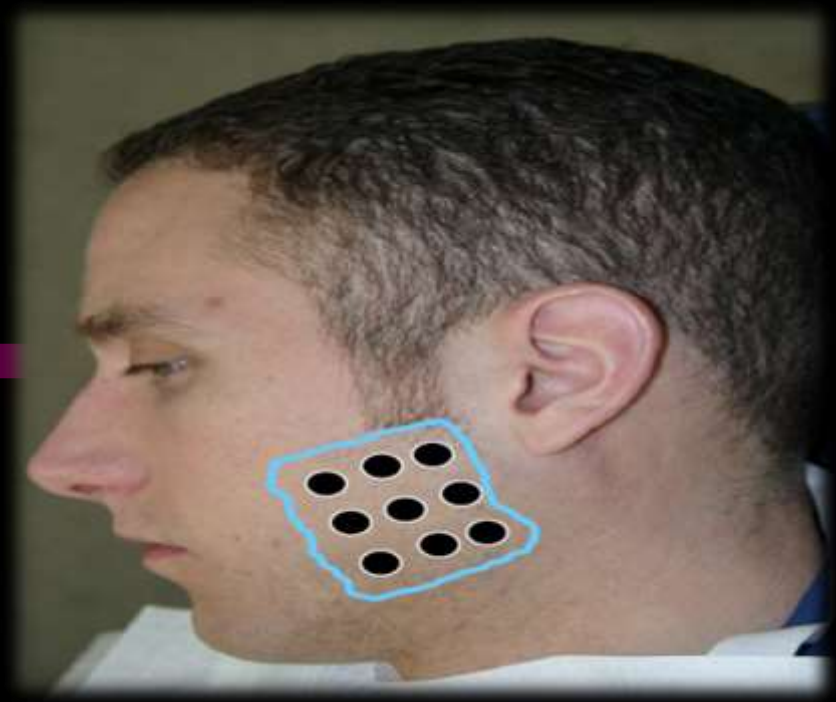
2.dysfunction

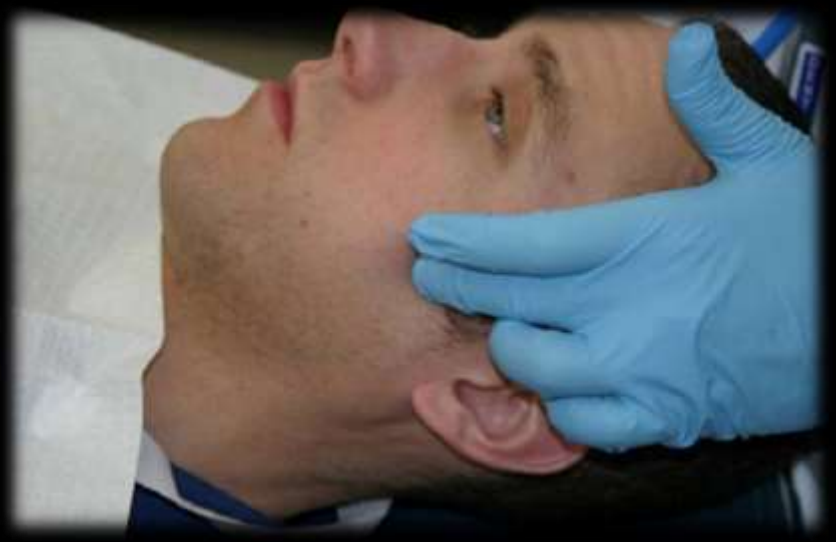
Temporalis muscle can be seen and readily palpated throughout entire length and breadth when the patient's teeth are firmly clenched

MASSETER MUSCLE

Palpate multiple areas of the masseter muscle.

As with temporalis muscle , it can be located when patient’s jaw are forcibly closed . the body of masseter can be palpated with thumb and index finger . index finger can palpate the entire body of masseter.



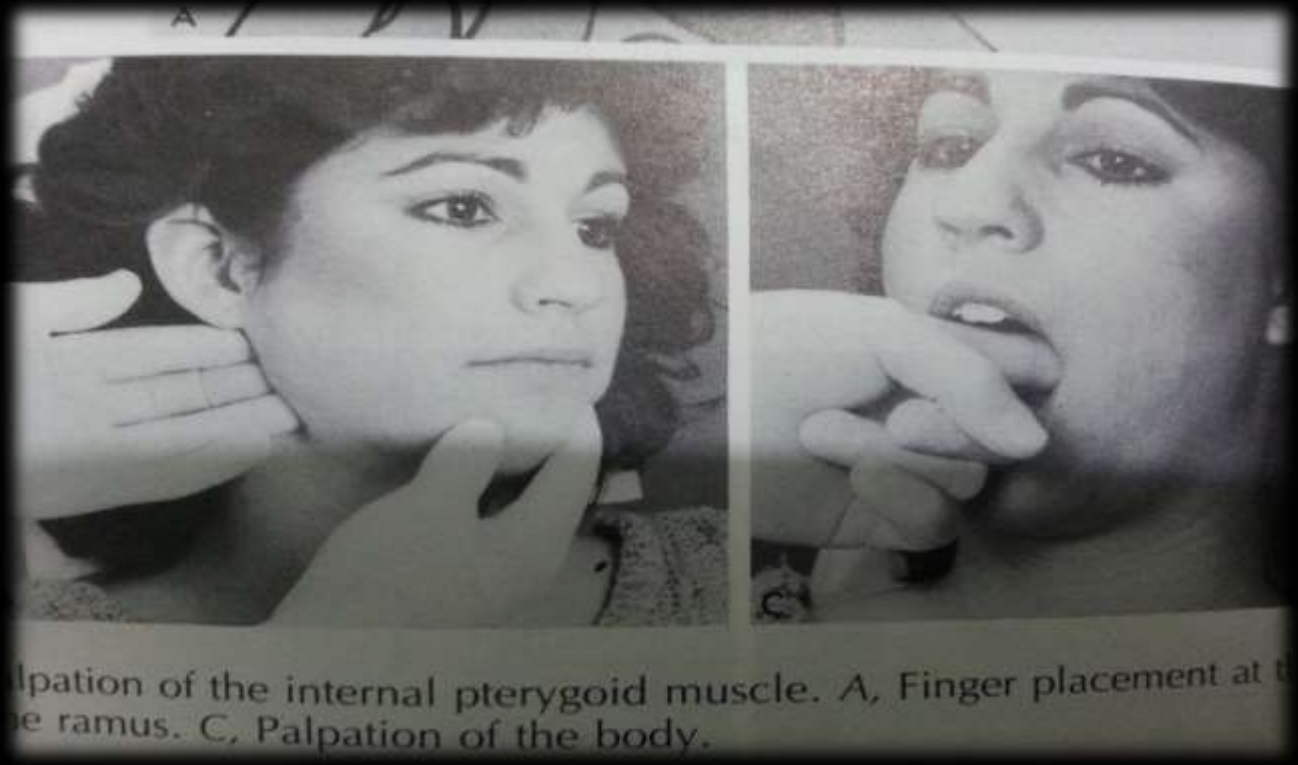


MEDIAL PTERYGOID / INTERNAL PTERYGOID

Anterior part of insertion can be palpated by placing the finger at 45 degrees in the floor if the patients mouth near base of the relaxed tongue.

The opposite hand can be used to extraorally to palpate posterior and inferior portions of insertion.

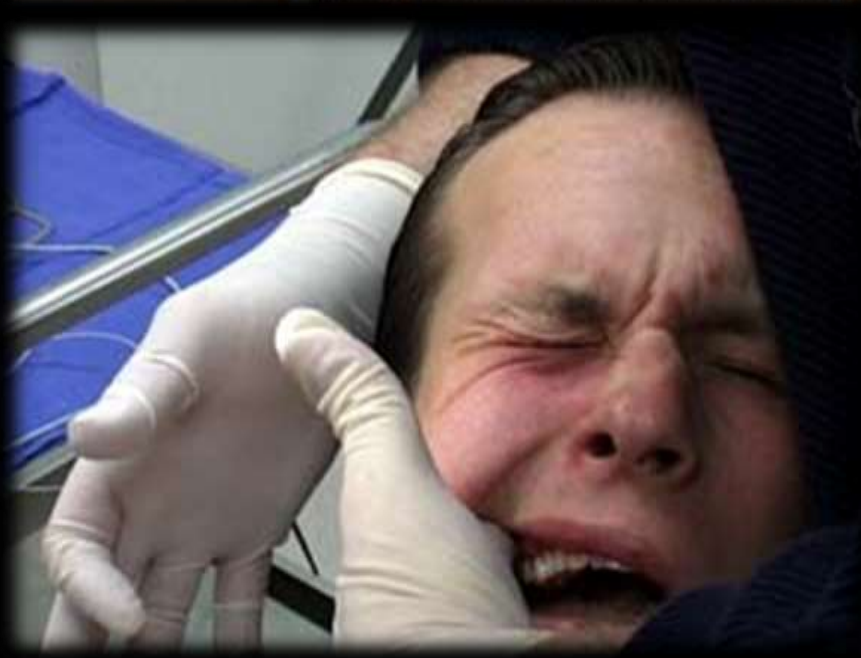
Body of the muscle can be palpated by rotating the index finger upwards against the muscle to near its origin on the tuberosity.



lpation of the internal pterygoid muscle. A, Finger placement at t
e ramus. C, Palpation of the body.

PALPATION OF LATERAL PTERYGOID MUSCLE

The muscle is palpated by using the little or index finger and placing it lateral to maxillary tuberosity and medial to coronoid process . The finger presses upwards and inwards and a painful response can be determined.



The SCM is effectively palpated on each side of the neck when the patient moves the head to the contralateral side

JOINT SOUNDS

There are 2 types of joint sound to look out for:

Clicks - single explosive noise of short duration.

Crepitus - continuous 'grating' noise

CLICKS

A joint click probably represents the sudden distraction of 2 wet surfaces, symptomatic of some kind of disc displacement. The diagnosis of a joint click, and therefore treatment, varies on whether the click is :

left, right or bilateral,
painful or painless,
consistent or intermittent.

The timing of a click is also significant: a click heard later in the opening cycle may represent a greater degree of disc displacement.

Clicks may frequently be felt as well as heard, though they are not normally painful.

Condylar hypermobility , enlargement of lateral pole of condyle, structural irregularity of eminence.

If the click is relatively loud , it is referred to as a “pop”

CREPITUS :

Crepitus: is the continuous noise during movement of the joint, caused by the articulatory surfaces of the joint being worn. This occurs most commonly in patients with degenerative joint disease.

The joint sounds should be listened to with a stethoscope.

Auscultate TMJ noises (not routinely done)

THANK YOU

References

- 1. Greenberg MS, Glick M, Ship J A: Burkett's oral medicine. Eleventh ed. 2008.
- 2. Cawson RA & Odell EW: "Cawson's essential of oral pathology and oral medicine".8th edition Elsevier Science Limited, London 2008.