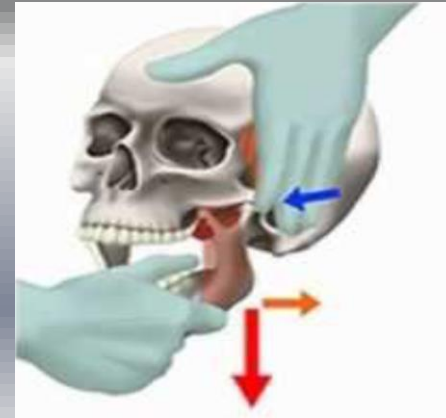
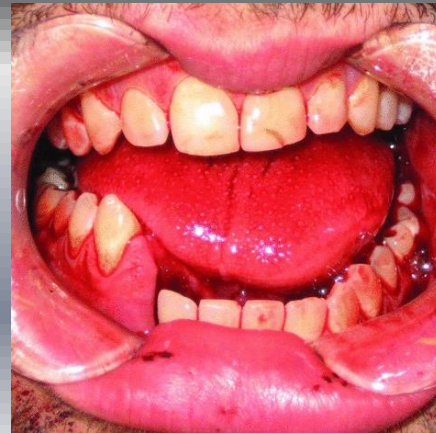


Dislocated Jaw Joint On Expedition ! What can I do ?



**WILDERNESS
EXPEDITION
DENTISTRY**

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DOC I CAN'T CLOSE MY MOUTH !

- ▣ TMJ dislocation may occur with trauma, but most often follows extreme opening of the mouth during eating yawning, laughing, singing, vomiting, or dental treatment .



- ❖ **Symmetric** mandibular dislocation is most common, but **unilateral** dislocation with the jaw **deviating** to the **opposite side** also can occur.



OR



- ❖ TMJ dislocation is **painful** and **frightening** for the patient.



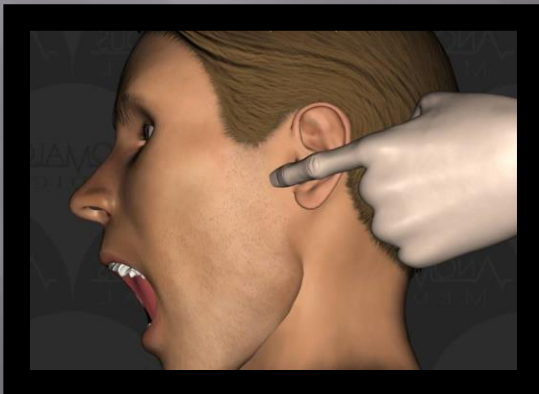
- ❖ Often associated with **severe muscular spasms**.

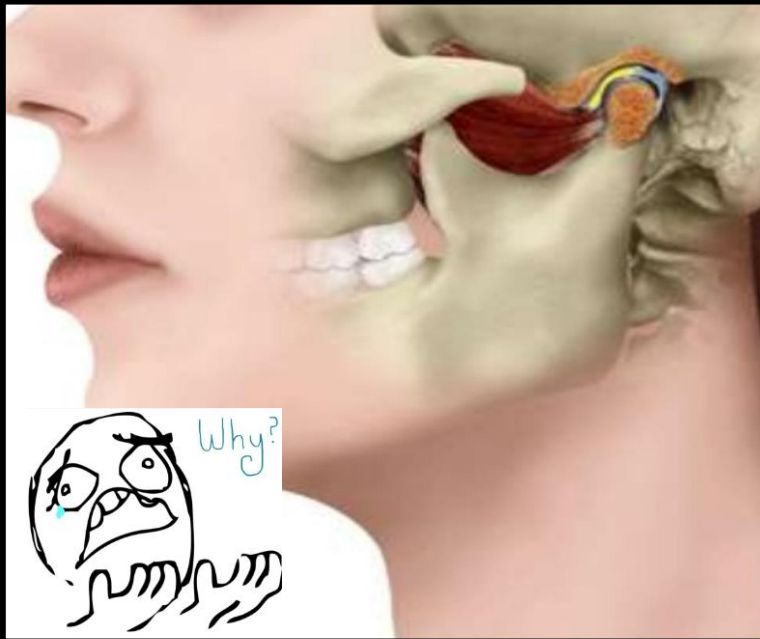


▣ The patient is unable to close the mouth and there is **excessive salivation**.

▣ A **depression** may be noted in **the preauricular area**.

▣ Palpation of the TMJ reveals one or both of the condyles trapped in **front of the articular eminence** and spasm of the muscles of mastication.

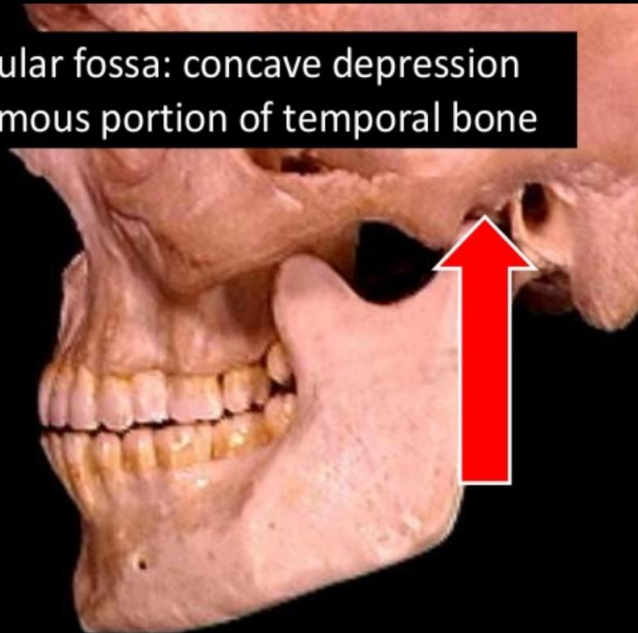




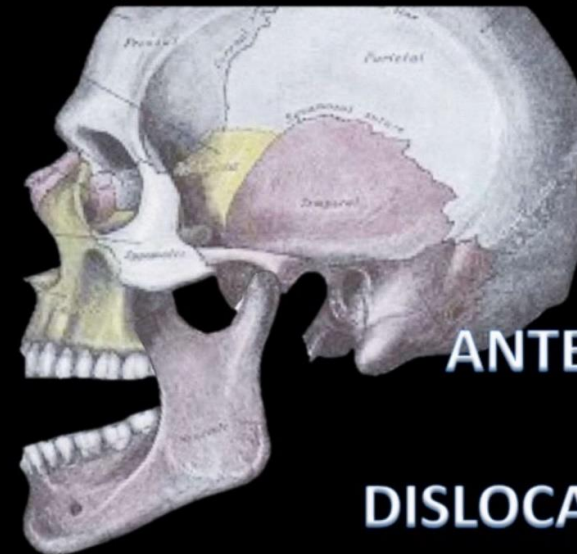
Mandibular condyle articulates with temporal bone in mandibular fossa



Mandibular fossa: concave depression in squamous portion of temporal bone



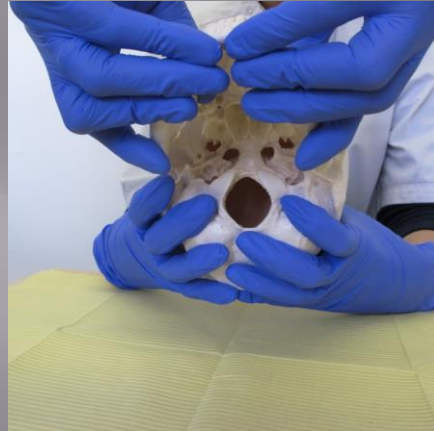
Usually after yawning or chewing



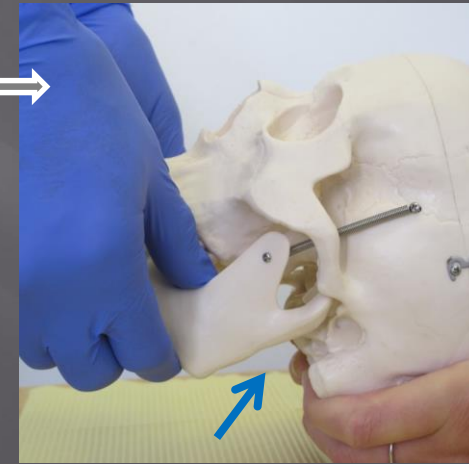
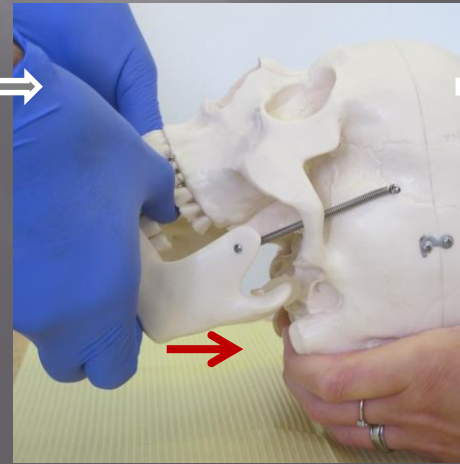
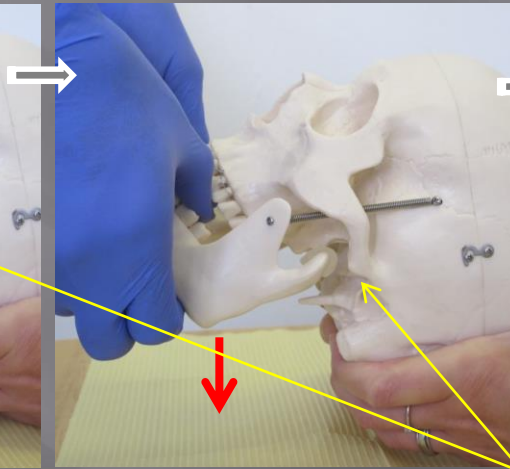
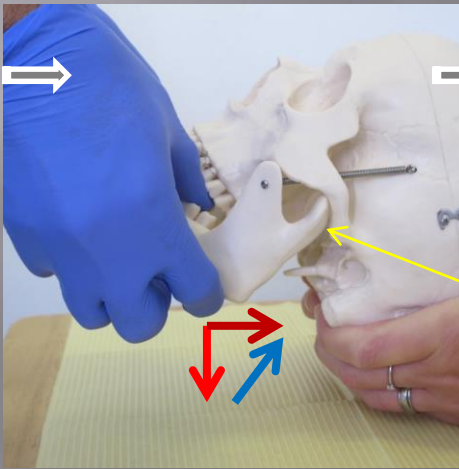
**ANTERIOR
JAW
DISLOCATION**

WHY DOES THE JAW DISLOCATE?

Hippocrates/ Traditional Technique- Both sides same time



Thumb Rests on **top** surface of **last lower tooth**. **Rest of Fingers** on **lower border** of Mandible

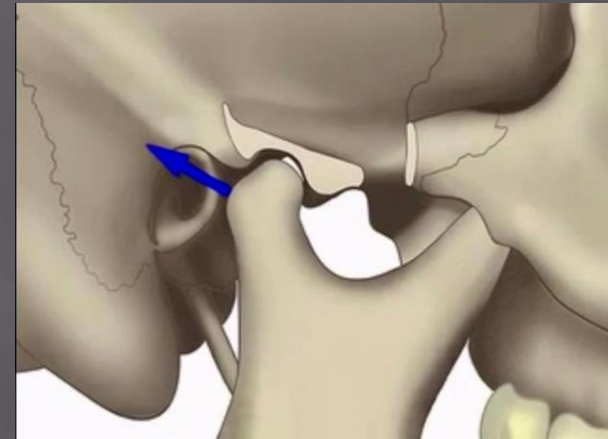
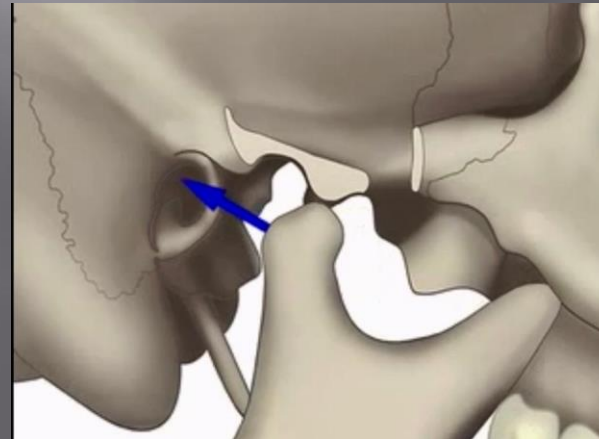


1) First Force is **DOWNWARDS** to push condyle over the Articular eminence. 2) Second is **BACKWARDS** to guide it behind the Articular eminence 3) Guiding **UPWARDS** as it clicks into its fossa

Hippocrates/ Traditional Technique- One side at a time



Fix the patients head between your body and non-dominant hand > Place thumb of your dominant hand onto the occlusal surface of the last molar of the side of the jaw to be repositioned > Grip the mandible with the rest of your hand > Apply gentle but increasing downward pressure > Gradually increase the force for upto 5 minutes. Until you feel condyle move > Guide upwards and backwards very slightly > Until you feel condyle slide into fossa.



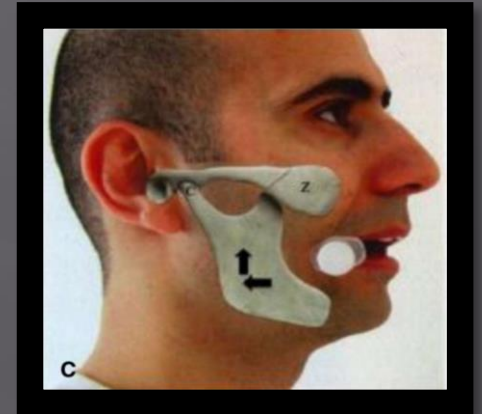
After reducing one TMJ. Hold it in position with your non-dominant hand by positioning a finger in front of the reduced condyle. > Then reposition the other TMJ in the manner stated above.

Syringe Technique

- ▣ Patient in sitting position.
 - ▣ Syringe size depends on distance between upper and lower molars / gums and patient's ability to open mouth
 - ▣ Place syringe between posterior upper and lower molars or gums. **Syringe** acts as **rolling fulcrum**
 - ▣ Have patient gently bite down and roll syringe (rolling fulcrum) **back** and **forth**.
- As molars / gums **roll over** syringe → mandible glides **posteriorly**



- ▣ Anterior **displaced** condyle moves **posteriorly**
- ▣ Masseter, pterygoid, and temporalis muscles work in **concordance**
- ▣ Condyle **slips** gently back into its **normal** anatomical position

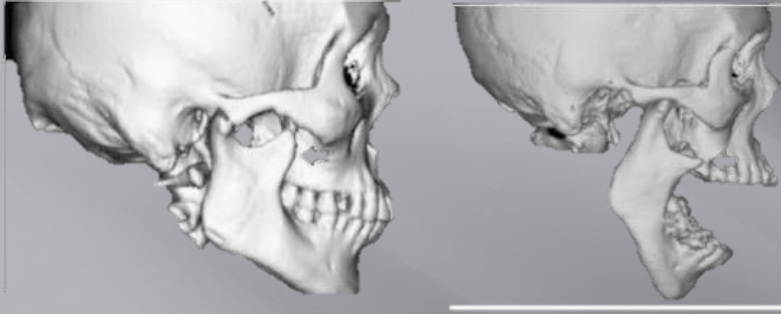


- ▣ **AFTERWARDS-**

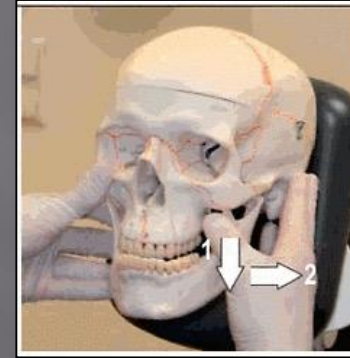
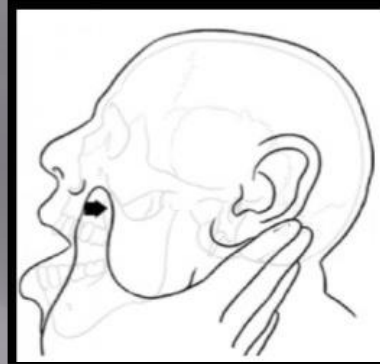
- * Cool Compress
- * Barrel bandage/ Liquid diet- 48 hours
- * Soft diet- 7 days
- * NSAID- 3 days



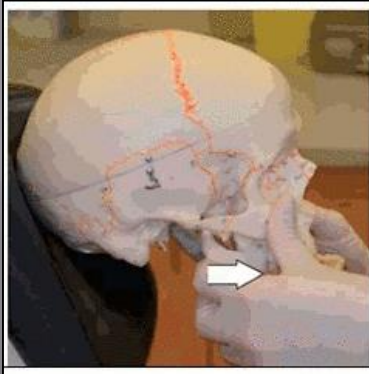
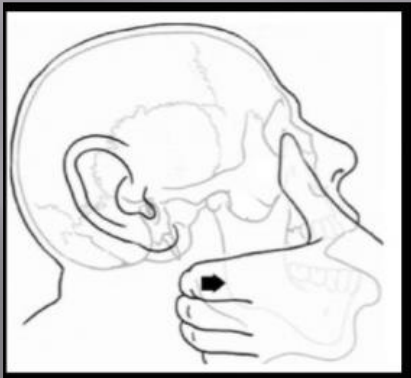
Extra-Oral Technique



Anterior jaw **dislocation**. **Coronoid Process** and anterior border. Easily **palpable** over cheek



Place **thumb on Cheek** , on dislocated Mandibular Ramus & Coronoid Process. Fingers behind angle of mandible. Apply **Persistent posterior pressure**



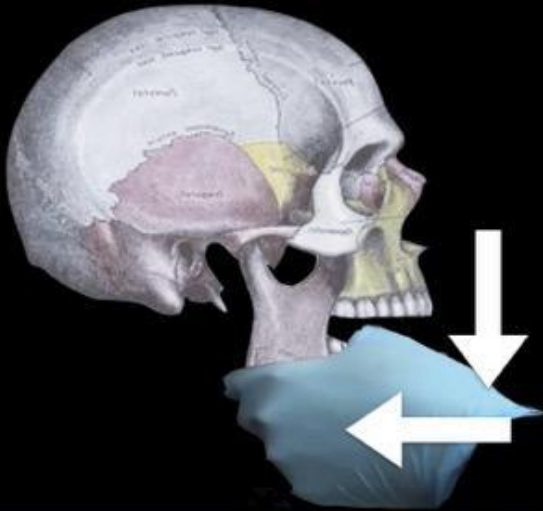
Opposite side- Same time. Fingers of other hand. Angle of Mandible, **Anterior Force (Jaw Thrust)**



Opposite side goes back **spontaneously**. If Not- a) Repeat Same manoeuvre with minimal force. b) Posterior Force on both coronoid process same time

ANTERIOR TEMPOROMANDIBULAR JOINT DISLOCATION REDUCTION

TRADITIONAL

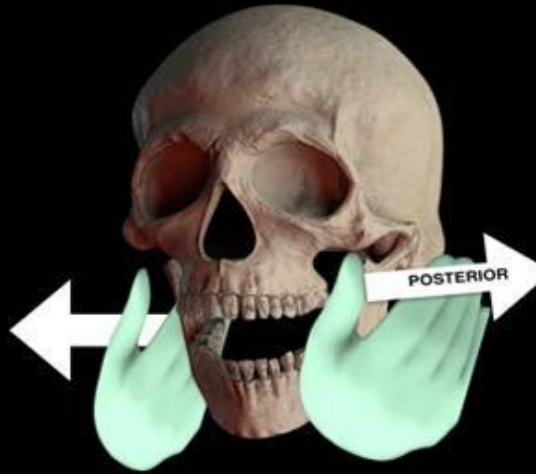


Thumbs of both hands go on molars with hands around inferior mandible with force directed downward and posteriorly

Sedation necessary

NOTE: Risk of bite wound with this technique - wrap hands in gauze

"EXTRA-ORAL"

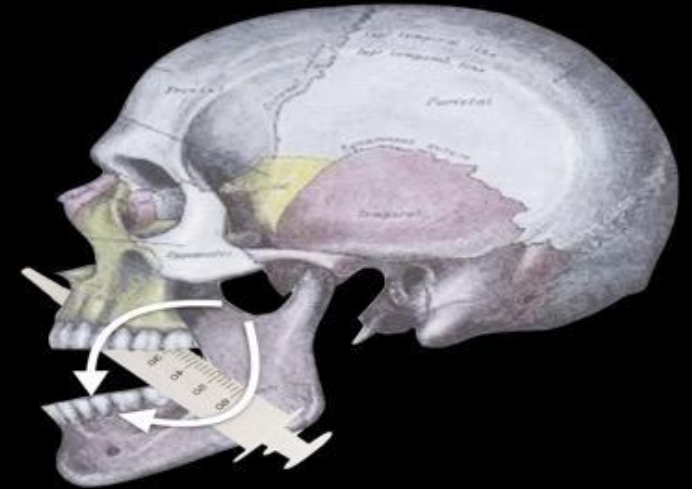


AFFECTED SIDE: thumb on coronoid process, direct pressure posteriorly

Sedation not usually necessary

UNAFFECTED SIDE: essentially a jaw thrust.

SYRINGE

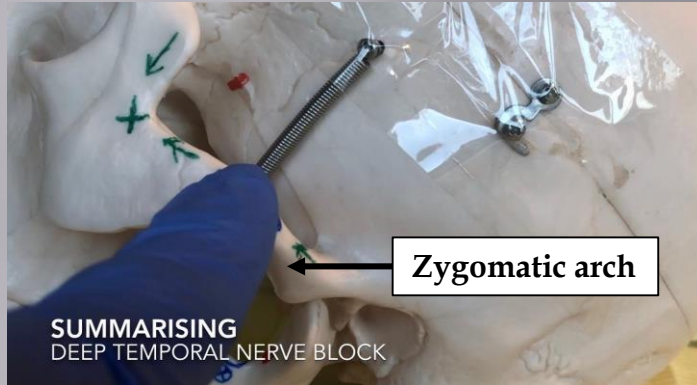


10 mL syringe between molars and patient glides/rolls syringe between molars

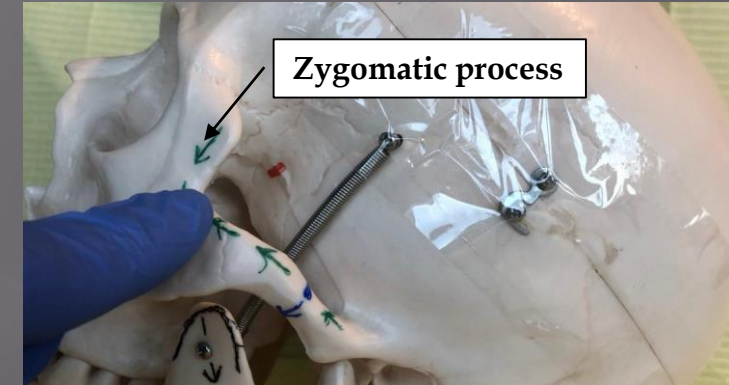
Sedation not necessary

Gorchynski et al Journal of Emerg Med. 47(6):676-81. 2014. PMID: 25278137

Deep Temporal Nerve Block-To Relieve Myospasm



1) Take your index finger and run it on the top surface of the zygomatic arch anteriorly



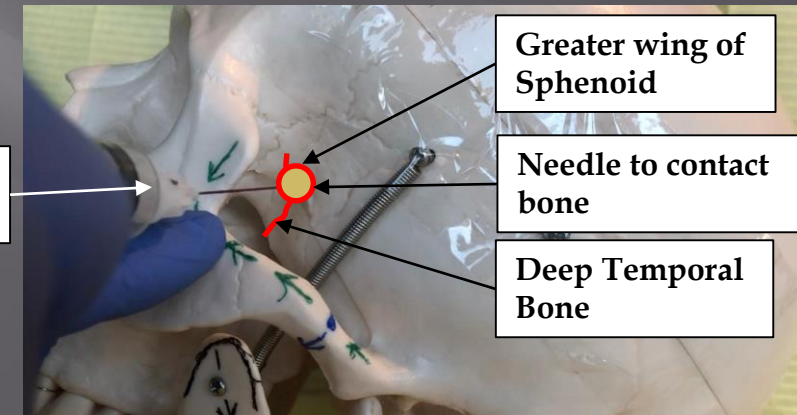
2) Till the horizontal arch meets the vertical zygomatic process.



Horizontal Zygomatic arch
Meets
Vertical Zygomatic process

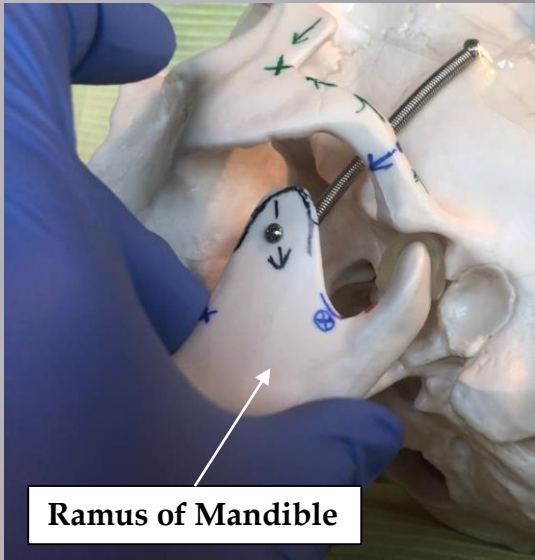
30 Gauge needle to inject approximately .5 to .8 ml
of 2% Lignocaine with 1:100,000 adrenaline

3) This is the area of anterior temporalis muscle

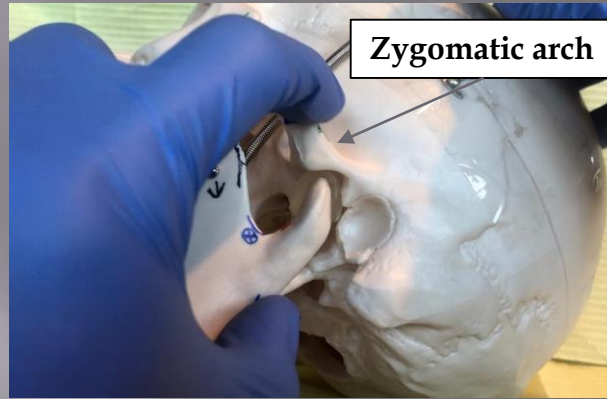


4) Insert needle parallel horizontally to the index finger through the temporalis muscle to contact the bone (greater wing of sphenoid) > Aspirate and inject > Wait at least 2 minutes

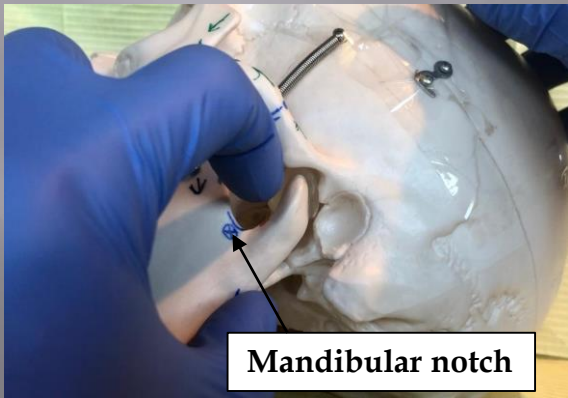
Masseteric Nerve Block- To Relieve Myospasm



1) Take your thumb and middle finger. Grasp the anterior and posterior border of the ramus of the mandible, extra-orally, visualising the width of the ramus



2) With your index finger. Locate the zygomatic arch. Follow to a point midway between thumb and index finger.



3) Slide index finger inferiorly until it reaches the mandibular notch.



4) Insert needle posteriorly, hitting the neck of the condyle approximate depth 7-10 mm > Aspirate and inject. > Wait at least 2 minutes.

Stabilisation Using Barrel Bandage



1) Centre Of bandage below chin. Constant upward traction



2) Tail of bandage crossed over above left ear



3) Tails taken around front and back of head to right ear



4) Tails crossed over above right ear



5) Knot placed above right ear



6) Tuck the ends in

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Expedition Dental Article Library On This Website**

Use of Masseteric and Deep Temporal Nerve Blocks for Reduction of Mandibular Dislocation

Andrew L Young, DDS, Junad Khan, BSc,

**Direct Link To This Video Is Through Expedition Dental
Video Library - On This Website**

PERFORMING MEDICAL PROCEDURES

Repositioning Dislocated Temporomandibular Joints

Daniel F. Zweifel, M.D., D.M.D.

Giorgio Pietramaggiori, M.D.

Martin Broome, M.D., D.M.D.

Department of Maxillofacial Surgery

Lausanne University Hospital, Lausanne, Switzerland

THANK YOU.....



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