Principles of extraction:

Surgical removal of wisdom teeth is very common but there are limitations because 3rd molars are sometimes in position that are difficult to reach that’s why we need to allocate special time on how to assess patient for removal of 3rd molars.

Why do people have impacted third molars?

Not enough space in the jaw to allow the eruption of these teeth or the jaw its self is small compared to the size of the teeth, its mostly genetics that’s why there are differences in presentations of the impactions.

How common are impacted teeth?

There are many studies about it but in general:  
1- Maxillary&Mandibular around 20% (because it’s the last to erupt)  
2- Canines  
3- other teeth

Etiology:

There are many theories that try to explain failure of eruption, some talk about differences of growth between mesial and distal roots if one root has more growth than the other we’ll end up with tilted teeth or partially erupted teeth. The second most common theory is the relation between the arch length and the sum of the meso-distal width of all the teeth. Others talk about retarded maturation of 3rd molars that’s why it may not erupt.

How do we approach patients that complain about symptoms that have to do with 3rd molars?

We always have to take a full history of the patient and examination; we also must take in special considerations for these patients.

Clinical Examination:

1. Patient attitude (anxiety, phobia): to know if we would need L.A or L.A plus or even general sedation. In Sedation we use I.V sedation with Midazolam (which is a shorter acting version of diazepam)
2. Age and general fitness.
3. We need to look for specific signs and symptoms like infections, facial swellings, lymph nodes. Like Pericoronites, it is not simply treated by the incision of the operculum because there will be recurrence, so if pericoronitis happens more than 2 times a year for 2 years then this is an indication for the extraction of the 3rd molar.
4. Good access (good mouth opening)
5. We need to check the adjacent teeth (if there is pocketing or carries it may affect the tooth)
6. Check the opposing tooth (if we extracted the lower 3rd molar and the upper was erupted then there will be over eruption this will lead to ulceration on the lower ridge due to mechanical trauma so we may need to extract the opposing tooth if its erupted)
7. It may be used as an abutment but it is not recommended nowadays.

Classification systems:   
  
1-According to angulation:

Mesio angular teeth (most common, easiest case)  
Disto angular teeth (hardest case)  
Horizonatal teeth  
Vertical teeth

2-Penn&Gregory:

a) Depth:

Class 1: M-D diameter of crown is totally anterior to the ant. Border of the ramus

Class 2: Half of the crown is covered by the ramus

Class 3: Completely within the ramus

b) M-D relation to the ramus:

Class A: occlusal is level with occlusal plane of 2nd molar

Class B: occlusal surface between occlusal plane and cervical line

Class C: occlusal surface below cervical line

Radiographs:

An ordinary P.A is not enough it does not show the inferior dental canal, the apex of 3rd molars is very related even involved in this canal so we need a panoramic x-ray, we may even need a more specialized radiograph like the OPG. This we will have a good treatment plan.

Root shape is very important is its straight or curved in the case of curved we may opt not to extract the tooth or remove is surgically. Also the path of elevation that will be shown in the x-ray.



This is a panoramic x-ray for an adult patient multiple restoration. The lower left wisdom is impacted, if take the long axis of the adjacent tooth we will see that the 3rd molar is distally inclined, bl pell&Gregory classification: 2B. the lower right molar, pell&Gregory classification: 2A.



Upper 3rd molars and lower right 3rd molar are all impacted, the lower left 3rd molar is impacted at the lower border of the mandible because there is a lesion blocking it  
(the lesion can be anything but mostly related in this case is the dentegerous(related to impacted teeth) cyst.)  
if we want to remove it there is a chance of mandible fracture  
one of the indications of 3rd molar removal is pathology to the area.

Panorama x rays show impacted third molars on right and left lower teeth and there is radiolucent lesion in the left side extended from distal root of lower 6 to the retromolar aria and the lower border of the lesion extended beyond the lower border of the mandible it is a Keratcyst and it is worse because has a rate of recurrence (contain a daughter cells)

Indication for extraction :

1-Pericoronitis more than 2-3 years

2-Food packing between the crown of the impacted tooth and the second molar –( caries on distal surface of 7). even thought the patient is asymptomatic we have to examine the pt because there will be In later life -periodontal disease (bone loss)

3- Suppuration around the impacted tooth (pus around the gum and swollen gum)

4- Orthodontists if the orthodontic want to imbrication of the anterior teeth, orthodontic movement of molars distally,orthognathic surgery.

Lower anterior crowding is not an indication for removal of wisdom teeth because even so that happened crowding will still be present

5-presense of pathology such as

Keratocyst

Dentigerous cyst

Ameloblastoma

6-Prevention of jaw fracture – not a common indication in aggressive sports such as boxing might indicate wisdom teeth removal because the anatomic position of the wisdoms is relatively weak

7. resorption of alveolar bone in elderly pt so the third molars which were impacted will appear on surface

8. unexplained plain a 50% there are chance of improvement

dr show us panoramic X-ray for 28 years female pt :   
  
In this patient extraction of wisdom teeth was performed under general anesthesia and due to the poor assessment and lack of experience of the GP that performed the extraction a bilateral fracture of the mandible happened. With subsequent trials to correct the occlusion and fix the mandible together, nonunion resulted and bone failed to heal.

another case :

This patient is presented with a fracture going exactly with the socket of the lower left wisdom,the tooth was at the angle and the bone is weak. This is not really common.

Contraindications for removal the wisdom teeth :

1-Extremes of age in young pt we don’t really remove them

2-Compromised medical status

3 Surgical damage to adjacent structures as we said we have to assessment the proximity of inferior alveolar canal and nerve to avoid damage them

some questions from students but I couldn’t hear all of them

does the impacted third molar case clicking to Tmj??

If the extraction was traumatic and and the pt was opening his-her mouth for long period so may have dysfunction and spasm for tmj

Does the parasthesia that could happen reversible or irreversible??

It depend on the injury ;;as any nerve there are scale (very simple hypoparastheisa reduction of sensation to parasthesia with tingling to sever parasthesia complete loss of sensation )

Prognosis also depend on severity of injury: If its mild last for a week but if its sever can be permanent .

Numbness

2 factors determaim :

1. Anatomy (if the impacted tooth away from the nerve the possibility less )
2. Operator skills