

# Prophylactic Extraction of Asymptomatic Third Molars: A review

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## **Abstract:**

**Introduction:** *This article aims to shed light on some of the pros and cons of prophylactic extraction of third molars.*

**Materials:** *Non-intervention in cases of asymptomatic third molars poses the risk of overcrowding in the jaw, the formation of dentigerous and/or other odontogenic cysts, periodontal pathologies, pathological resorption of the adjacent second molar, root caries, infection, etc to name a few. At the same time, less than 12% of impacted teeth are associated with some pathology. Dry socket, secondary infection, and paraesthesia are all complications of extraction of third molars.*

**Results:** *A lot of clinicians' advocate for the prophylactic removal of the third molars in order to prevent pathologies associated with them, the actual occurrence of pathologies is very less. There is also a lot of contradicting evidence about the role of third molars in crowding of the lower anterior teeth. At the same time, there are risks associated with extraction of the third molars like paraesthesia, dry socket, secondary infection etc.*

**Conclusion:** *There is no safe and efficient way to accurately predict which asymptomatic impacted third molars can be expected to eventually develop pathology, and which can be left behind in the jaw safely. Hence, a decision about the prophylactic extraction of asymptomatic third molars should be taken after careful clinical and radiographic examination, and taking into account the concerns of the patient. A lot of consideration must be given to the patient's concerns in these cases, and intervention must be done only after detailed clinical and radiographic assessment of the teeth and after doing a risk v/s benefit analysis.*

**Keywords:** *Prophylaxis, Third Molar, Asymptomatic, Extraction*

## **Introduction:**

Third molar extractions are some of the most common extractions that are performed in the field of Oral and Maxillofacial Surgery. Over the years, this extraction – which may be a complicated procedure to perform, a lot of the time – has become an almost routine procedure undertaken by Oral Surgeons all across the globe. While many surgeons believe that as long as the third molar is not causing any symptomatic problems to the patient, they must be left in the jaw, many contradict this and call for the prophylactic extraction of these third molars. This article aims to shed light on some of the pros and cons of prophylactic extraction of third molars.

## **To extract or not to extract?**

The third molar is known to have the highest incidence of impaction. The dentist, therefore, is put in the situation whether he must decide whether to retain the unerupted asymptomatic tooth or to extract it.

**Non-intervention:**

Non-intervention poses the risk of overcrowding in the jaw, the formation of dentigerous and/or other odontogenic cysts, periodontal pathologies, pathological resorption of the adjacent second molar, root caries, infection, etc to name a few. Many of these pathological lesions aren't revealed till a radiographic examination is performed, hence, "asymptomatic" does not mean "risk-free." Follicular enlargement/ cystic changes that involve impacted third molars are an important concern because if and when such changes develop, the management of the pathological lesion becomes complicated. Third molars very often develop in inappropriate positions in the jaw, which makes their eruption difficult. Third molars, due to their posterior location in the mouth, are more difficult to reach during cleaning. Due to their wrinkled and fissured occlusal surface, these teeth are more prone to developing decay than other teeth. Mandibular third molars often erupt more distally near the vertical mandibular ramus with compromised gingival health; hence, dentists often suggest that these teeth should be removed to prevent future problems. The other reasons for third molar surgery could be periodontal defects in the distal aspect of the second molar, crowding of the lower incisors, removal for orthodontic, prosthodontic or restorative reasons, caries of the adjacent second molar, ulceration of the cheek or tongue mucosa and pain.

**Intervention:**

Less than 12% of impacted teeth are associated with some pathology. The American Association of Oral and Maxillofacial Surgery recommends the extraction of all 4 third molars by young adulthood, before the roots are fully formed, to minimize complications. However, it is found that early removal of third molars is actually more traumatic and painful than leaving asymptomatic, non-pathologic teeth in situ. Dry socket, paraesthesia and secondary infection are less likely to occur in patients aged between 35 to 83 years. The highest risk of complication is observed in the patients aged between 25 to 34 years. It is also not possible for the lower third molars, to push 14 other teeth whose roots are implanted vertically like the pegs of a picket fence, so that the incisors in the middle twist and overlap. Yet, that is the reason often given to justify the prophylactic extraction of asymptomatic third molars. Given the low incidence of pathology, it is baseless to contend that less than 3 days of temporary discomfort or disability is a small price to pay in order avoid the future risks of root resorption, serious infections, and cysts, pain etc. Additionally, the danger of incidental injury like broken jaws, fractured teeth, damage to the temporomandibular joints, temporary and, especially, permanent paraesthesia are complications that are often overlooked while advocating for the removal of asymptomatic third molars.

**Discussion:**

It is seen that prophylactic extraction of third molars is performed in a disorderly manner without any clearly defined criteria. The risks of surgery and its associated complications are considered justified and uniformly accepted by the bulk of dental surgeons and also the patients when there's clinical, radiological and/or laboratorial evidence of presence of acute or chronic periodontitis, caries, pericoronitis, harmful effects on second molars or disease. Partially erupted third molars are considered more susceptible to develop pericoronitis, and are therefore indicated for prophylactic extraction.

At the same time, the complications associated with prophylactic extractions of asymptomatic third molars make us think about whether it really is judicious to extract them when they really aren't causing any clinical problems for the patient, as they can always be extracted later if and when they start creating trouble.

**Conclusion:**

There is no safe and efficient way to accurately predict which asymptomatic impacted third molars can be expected to eventually develop pathology, and which can be left behind in the jaw safely. Hence, a decision about the prophylactic extraction of asymptomatic third molars should be taken after careful clinical and radiographic examination, and taking into account the concerns of the patient.

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