



**Kokomo Implant and Oral Surgery**

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## **INTRODUCING**

### ***Kokomo Implant and Oral Surgery***

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\*\*\*Previous Office of  
Dr. Jerry Kerr

*Oral and Maxillofacial Surgeons Robert Alderman and Patrick Kelly practice a full scope of oral and maxillofacial surgery with expertise ranging from corrective jaw surgery to wisdom tooth removal. We can also diagnose and treat facial pain, facial injuries and TMJ disorders, and perform a full range of dental implant and bone grafting procedures.*

***FULLY trained in performing I.V. sedation within the office setting.***

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## **Third Molar Clinical Studies: The Link Between Third Molars and Periodontal Disease**

Having wisdom teeth removed during young adulthood not only improves dental and oral health, but it may also reduce the chance of illness later in life, according to research from the American Association of Oral and Maxillofacial Surgeons (AAOMS), surgeons and academics.

The evidence-based data confirmed what dentists and health professionals have been telling patients for years: having your wisdom teeth removed while you are young helps you stay healthy. Even when wisdom teeth are not diseased or symptomatic when they come into the oral cavity, their position and location in the mouth makes them more difficult to keep clean and supports the accumulation and spread of harmful bacteria which can lead to more serious conditions later in life. Importantly, the local and systemic health implications of asymptomatic wisdom teeth are far broader than previously thought.

Third molar clinical studies were initiated because of the scarcity of published scientific data on the incidence of pathology associated with retained third molars and on outcomes after third molar surgery. These targeted studies focused on three areas:

1. Analyses of outcomes with subjects who retained third molars
2. Analyses of the impact of third molar surgery on the subjects' quality of life
3. Analyses of third molar data from population and clinical studies conducted for other purposes.

Two-thirds of the young adult subjects with symptom-free third molars were found to have periodontal pathology in the third molar region. This indicates that an absence of symptoms does not equate to an absence of disease. In a subsequent study, periodontal pathology affected four-fifths of the subjects who had third molar symptoms when they enrolled. **Over time, those subjects had increased odds of a deteriorating periodontal condition not just around the third molars but also other teeth.**

These findings are compatible with known models of periodontal inflammatory disease, which results when the anaerobic pathogens that have collected in deep periodontal probing sites react to the patient's immune system. Tissue adjacent to the periodontal site contains immune system cells that, in response to the threat posed by the pathogens, produce what are called "inflammatory mediators". Unfortunately these mediators destroy local tissue and produce a systemic inflammatory response.

Periodontal probing depth refers to the space between gum and tooth and reaching under the gum line that is readily accessible with a dental probe. The more shallow the depth, the better. Once deep periodontal probing depths exist around third molars, third molar removal is effective treatment. In study subjects with third molar periodontal pathology, removal has improved periodontal status not only on teeth adjacent to third molars but also on teeth more forward in the mouth. The following graphs illustrate these findings relating to the need for third molar removal.

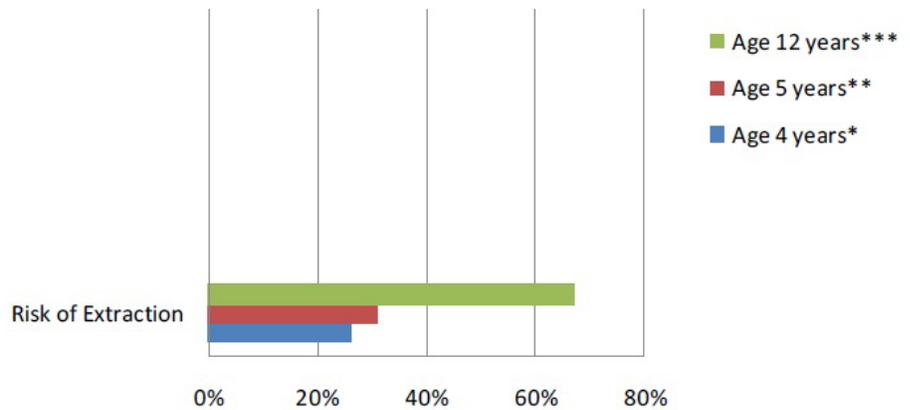
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### Why should third molars be removed?

It isn't wise to wait until third molars start to bother you. In general, earlier removal of wisdom teeth results in a less complicated healing process. The AAOMS/ OMSF study strongly recommends that third molars be removed by the time the patient is a young adult in order to prevent future problems and to ensure optimal healing. The researchers found that older patients may be at greater risk for disease, including periodontitis, in the tissues surrounding the third molars and adjacent teeth. Periodontal infections, such as those observed in this study, may affect your general health.

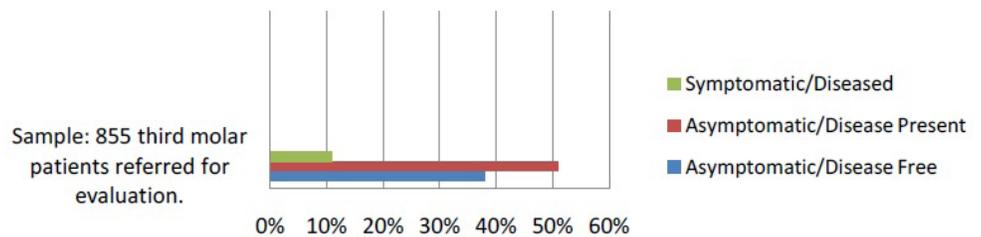
### Time vs. Risk for Extraction among Patients with Asymptomatic Third Molars



\*\*\*Venta I, Ylipaavalniemi P, Turtola L. Long-term evaluation of estimates of need for third molar removal. J Oral Maxillofac Surg 58:288-91, 2000  
\*\*Hill CM, Walker RV. Conservative, non-surgical management of patients presenting with impacted lower third molars: A 5-year study. Br J Oral Maxillofac Surg 44:347-50, 2006  
\* von Wowern N, Nielsen HO. The fate of impacted lower third molars after the age of 20. A four-year clinical

Among patients who retain their third molars, at four years 26% of the patients have had one or more third molars removed due to disease; at five years it was 31%; by 12 years 67% of patients had to have one or more third molars removed.

### Third Molar Disease Status



In a sample of 855 third molar patients referred for evaluation, 38% were asymptomatic and disease-free, 51% were asymptomatic but had disease present and 11% were both symptomatic and diseased.

The prevalence of periodontal pathology encountered in the studies suggests that few individuals are without third molar pathology. **Eighty percent of young adult subjects (averaging 25 years of age) with no previous symptoms had developed periodontal pathology or caries experience within seven years.** Cross-sectional data was obtained from 800 seniors who averaged 72 years of age and were studied for oral health status; a fifth had retained at least some third molars pathology-free. In contrast, cross-sectional oral health data of retained third molars from a study of 6,700 subjects enrolled to study cardiovascular disease suggested that few subjects, less than 2%, had disease-free third molars.

### Why are third molars, particularly lower third molars, prone to accumulate periodontal pathogens?

When all other teeth erupt, the jaw is still growing and sufficient jaw space to accommodate the teeth is not a problem. The situation differs for third molars. On average, jaw growth is complete by age 18; yet the peak eruption of third molars is at 19.5 years. Thus, third molar emergence is often incomplete, leaving deep probing depths that are conducive to the collection and reproduction of anaerobic pathogens. Once established, these bacteria can spread to adjacent molars and other teeth.

A recent review of population and clinical studies totalling over 8,000 subjects suggests that the presence of third molars is associated with a worsened periodontal status on

Oral and maxillofacial surgery requires additional 4-6 years of hospital-based surgical and anesthesia training after graduation from dental school. As oral and maxillofacial surgeons, Drs. Kelly and Alderman manage a wide variety of problems relating to the mouth, teeth and facial regions. Drs. Kelly and Alderman practice a full scope of oral and maxillofacial surgery with expertise ranging from dental implant surgery and wisdom tooth removal to corrective jaw surgery. We can also diagnose and treat facial pain, facial injuries, and fractures.

other teeth as compared to when third molars are absent. In addition, average third molar probing depths were always deeper than average probing depths on teeth toward the front of the mouth. **Data from those subjects having third molar surgery confirmed that more difficult surgery leads to delayed clinical healing, and older age at surgery is associated with more post-surgery pain and delayed return to usual lifestyle and oral function.**

### **Why is the data on third molar pathology so limited?**

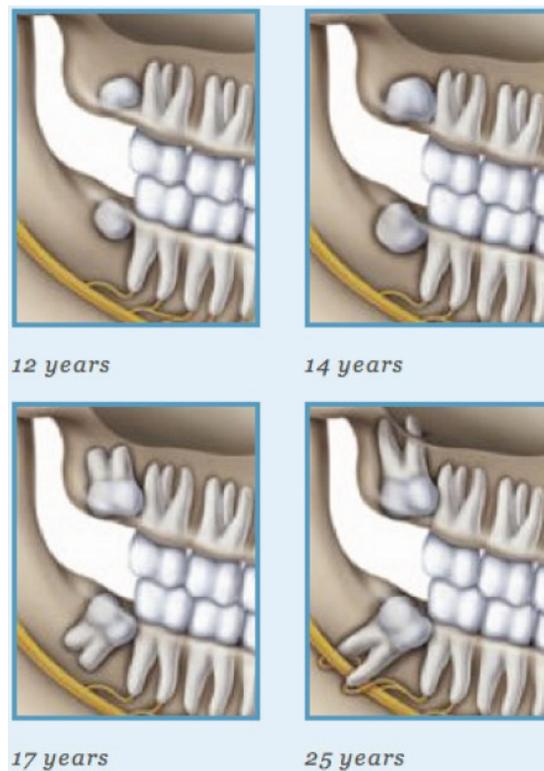
No clear answer exists. In a recent review of periodontal studies by Savage et al, third molar periodontal data were either not collected or they were excluded from analyses. Subsequently, Eke et al studied methods for estimating the prevalence of periodontal pathology in population and clinical studies and suggested that the current reported prevalence may be higher if third molar data were collected.

### **Do options exist to third molar surgery since so many individuals are affected?**

Currently, no. However, studies currently underway suggest that, in the future, the anaerobic bacteria colonized in deep periodontal probing sites might be altered in such a way that virulence factors are not expressed, which in turn would lead to an immune system response that does not destroy tissue.

In summary, it is important to realize that while not all third molars need to be extracted, all of them still need to be managed, as an absence of symptoms does not equate to an absence of periodontal disease. The decision to retain third molars is a lifetime decision, and while retaining them may be an option, monitoring those retained third molars may be more expensive than extraction in the long term.

Pocketing around third molars is an important indicator of periodontal disease, especially when bleeding occurs on probing, as this is a sign of local inflammation that may have systemic effects. Retaining wisdom teeth with probing depths greater than 4mm increases the risk for developing increased pocketing anteriorly. Epidemiological studies support the concept that the retention of third molars with pocketing increases the risk for several broader conditions that are associated with increased systemic inflammation, including preterm birth and cardiovascular disease. Extracting third molars at an early age greatly reduces the risk for periodontal disease in young adults and can aid in having a more positive effect on a patients overall health.



Third molars are easier to remove when the patient is younger, since their roots are not completely formed, the surrounding bone is softer and there is less chance of damaging nearby nerves or other structures. Removal of third molars at a later age becomes more complicated as the roots have fully developed, may involve the nerve and the jawbone is denser.