

what? who
when? how

THE WISE GUIDE TO WISDOM TEETH EXTRACTION

Making Engaged Decisions
About Your Wisdom Teeth Extraction



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2010 by H. Ryan Kazemi, DMD

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The **Wise Guide** to **Wisdom Teeth** Extraction

Making engaged decisions about your wisdom teeth extraction

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**“The Only Source
of Knowledge Is
Experience”**

...Albert Einstein

Your dentist has recommended that you have your wisdom teeth removed. Or perhaps you've just started to have soreness and other problems with your wisdom teeth. Most likely, you have some questions. You may have heard conflicting opinions, stories, or others' poor experiences about the process of removing wisdom teeth. You may be looking for facts and accurate information to help you make the best decision about wisdom teeth removal.

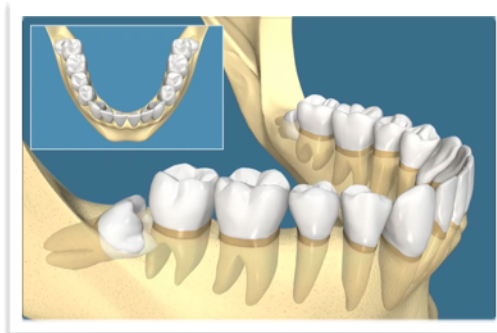
You may be thinking:

- Is it necessary to extract the wisdom teeth?
- What is the best age for extraction?
- What is the best approach?
- How many visits are needed?
- What is the best anesthesia?
- Is the surgery safe?
- How is the recovery?
- How soon can I eat and return to work or school?
- What are the possible complications?
- Where should I have the surgery?
- Who is the most appropriate dentist?
- How much does it usually cost?
- What are the insurance benefits and payment options?



In this e-book, I'll explain the key facts about wisdom teeth, the science behind extractions, and recommendations based on collective experiences and the current literature.

Wisdom Teeth: Facts & Fiction



It seems to be a right of passage for 15- to 21-year-olds to have wisdom teeth extracted. The name “wisdom teeth” implies that between the ages of 17 and 25, a person will have gained some wisdom. The dental name for wisdom teeth is third molars.

Wisdom teeth frequently come in crooked and malpositioned. They often get stuck behind the second molars, a condition commonly referred to as ‘**impaction.**’ Many people develop pain and swelling around these teeth at an early age. Frequently, wisdom teeth develop cavities or gum disease in older patients who never had them removed. Whatever the circumstances, wisdom teeth are usually associated with numerous problems.

Functionally, wisdom teeth play a small role or none at all in chewing. There are normally four wisdom teeth (teeth #1, 16, 17, and 32) but some patients may have more or fewer. Sometimes the teeth are missing altogether and never form.

Wisdom teeth are vestigial third molars that our ancestors used to grind down plant tissue or raw food. It is commonly thought that the skulls of our human ancestors had larger jaws with more teeth, which were possibly used to help chew down foliage for easier digestion. As human diets changed and became more easily digestible, smaller jaws gradually evolved. However, the third molars, or wisdom teeth, still develop in human mouths.

As our jaw size and teeth development has evolved, so has our understanding of the effects, treatments, and healing associated with wisdom teeth.

Here are some facts and fiction about wisdom teeth:

Facts

- Wisdom teeth often cause localized inflammation, infection, tooth decay, and gum disease.
- Wisdom teeth frequently cause damage to the jaw bone and adjacent teeth.
- Complications are extremely rare when extractions are performed with proper techniques and expertise.
- The best treatment approach is removal of all four wisdom teeth early, between the ages of 15 and 20.
- Recovery is typically fast, with most patients returning to work or school in one to two days.

Fiction

- Removing the wisdom teeth causes already crowded teeth to shift back. **Not True:** Teeth don't shift backward, and removing wisdom teeth does not correct teeth crowding.
- Teeth that are not problematic shouldn't be removed. **Not true:** Wisdom teeth left intact can develop any of a number of problems.
- Since wisdom teeth are close to a nerve, removal can cause nerve damage. **Unfounded:** There is usually a space between wisdom teeth and the nerve. Problems with nerve function are rare.
- Removing wisdom teeth causes the cheeks to sink in. **Not True:** Wisdom teeth removal has no effect on facial appearance.
- If it does not hurt, leave it alone. **Poor Rational:** Decay, gum disease, and other forms of pathology can develop quickly in wisdom teeth with no symptoms and cause irreversible damage to adjacent structures.

Most problems associated with wisdom teeth are related to difficult access for proper hygiene and build up of plaque causing inflammation and infection.

Why Remove the Wisdom Teeth?

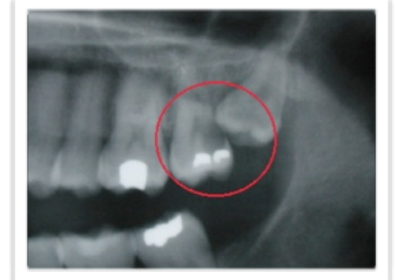
Wisdom teeth frequently become impacted or stuck behind the second molars and are extremely difficult to clean. Plaque, along with poor access for oral hygiene, results in inflammation that can cause infection, tooth decay, or gum disease. Wisdom teeth may also cause jaw cysts. They also have been implicated in causing shifting of the adjacent teeth.

The most common problems associated with wisdom teeth:

- **Pain and swelling:** These are the most common initial symptoms. They are caused by inflammation (pericoronitis) or infection of gum tissue.
- **Gum disease (periodontal disease):** Gum disease can develop between the second molars and wisdom teeth. They share the same bone and gum tissue, and when the tissue is damaged, repair or regeneration is extremely difficult, if not impossible. This greatly compromises the health of the second molars, which are very important for chewing.
- **Decay (caries):** Cavities may occur on the wisdom teeth or on the root surface of the second molars. This is very difficult, if not impossible, to treat. If a second molar develops deep decay on its side, it often has to be extracted.
- **Cysts in the jaw bone:** Cysts cause significant destruction of bone and damage to surrounding structures (teeth, nerve, jaw bone). Some can get quite large and weaken the jaw bone with a potential fracture.
- **Shifting of adjacent teeth:** This is not entirely understood by dentists, but impacted wisdom teeth may be a contributing factor in teeth crowding. Orthodontists often recommend removal of the wisdom teeth to prevent shifting.



Gum Disease with Loss of Bone



Decay on the Second Molar

The literature and collective experiences of many dentists support one fact: wisdom teeth predictably cause problems in a large percentage of people.

According to an extensive literature review* by the American Association of Oral and Maxillofacial Surgeons (AAOMS), it is reported that:

- Impacted wisdom teeth adversely affect the gum tissue health of adjacent teeth.
- Impacted third molars may still change position after age of 23.
- Erupted third molars (non-impacted) do not necessarily imply a good state of health. They are associated with increased gum disease and loss of bone.
- Absence of symptoms such as pain and swelling does not indicate absence of disease.
- Bacteria exist in high numbers around third molars.
- Gum disease progresses even in the absence of symptoms and as one ages.
- Incidence of post-operative complications following third molar removal is higher in patients over 25 years of age.
- Early removal is recommended in both impacted and non-impacted scenarios, and in both symptomatic and asymptomatic patients.

The AAOMS literature review concludes:

- Early removal of wisdom teeth is recommended to prevent infection, pathology, and damage to surrounding teeth.
- The philosophy, “If it doesn’t hurt you, keep it” is not supported by dental literature.
- The risk of complications with wisdom teeth removal may increase as one ages.
- Disease process can occur in both impacted and non-impacted (erupted) third molars.

The dental and oral surgery literature does not support the “If it doesn’t hurt you, keep it” philosophy.

* White paper on third molar data, AAOMS, 2008

The Mysteries & Commonly Asked Questions

As an oral surgeon, I've heard many fallacies and misconceptions over the years. Here are a few:

“My lower wisdom teeth are causing pain and need to be removed. But why do I need to remove the upper ones? They don't bother me.” Upper wisdom teeth are highly prone to decay and gum disease and shift downward after removing the lower teeth. They eventually have to be extracted, so better to have the upper and lower teeth removed at the same time.

“My wisdom teeth are visible and they are not causing any problems. Do I need to get them out?” Effective oral hygiene is very difficult around wisdom teeth, resulting in frequent decay and gum disease. Plaque builds up easily, and there is usually poor access for effective cleaning. Extraction is recommended to achieve long-term health of bone and gum tissue behind the second molars.

“I get occasional pain around my wisdom teeth, but it always goes away. Can I just leave them?” You are experiencing pericoronitis, inflammation of gum tissue around the crown of wisdom teeth. This type of inflammation recurs frequently, but it can progress to significant infection, pain, and swelling. Chronic inflammation often causes gradual bone loss (gum disease) or decay to adjacent teeth which can be irreversible. Early extraction is the best approach even when symptoms are sporadic.

“My wisdom teeth are crowded and not coming in. If I wait long enough, will they become straight and come in normally?” The answer is no. There is usually inadequate space between the second molars and jaw bone to allow proper eruption of the wisdom teeth. This spacing does not significantly change with growth or time. Furthermore, once the roots are fully formed, usually between the ages of 18 and 21, teeth do not erupt any more.

“I am 52 years old and still have my wisdom teeth. They are not impacted and they don’t cause me pain or problems. I just have some bone loss around them but it does not bother me. Do I need to worry?” Long-standing wisdom teeth are highly susceptible to bone loss and gum disease. This is a progressive disease and will continue to destruct healthy bone. Extraction is the best long-term treatment. If there is no pocketing in the gums and the area can be easily cleaned, then the teeth may be monitored for disease process. Healthy and asymptomatic erupted or impacted wisdom teeth in individuals older than 65 may be monitored closely with X-rays every six months.

“My wisdom tooth has been deeply broken for some time but does not hurt. Do I need to remove it?” Yes. broken teeth, even if asymptomatic, harbor bacteria and can progress to further decay, gum disease, bone loss, and infection. Root canal procedures and fillings are significantly more difficult to perform on wisdom teeth and therefore not recommended.

“Can removal of my wisdom teeth cause a change of my jaw position and how I bite?” No. Extraction of wisdom teeth does not affect jaw position, movement, or function in anyway, unless the wisdom teeth themselves are already interfering with normal bite and function. In this case, removal will *improve* jaw function and bite. Following extraction of a wisdom tooth, the teeth in front do not shift backward. However, the opposing wisdom tooth can super-erupt, or shift downward if not removed at the same time.

“My teeth are getting crowded. Will they straighten after I remove my wisdom teeth?” No. There is some belief that wisdom teeth may contribute to teeth crowding but they are unlikely to be the sole cause. Removal of wisdom teeth does not correct teeth that have shifted or crowded. Orthodontic treatment is recommended to correct teeth crowding.

Wisdom teeth may contribute to crowding of other teeth, however removal does not correct teeth that have already shifted or crowded. When correction is necessary, wisdom teeth removal often makes orthodontic treatment easier.

“My wisdom teeth have decay. Is it possible to do fillings?” While placing restorations on wisdom teeth is possible, it is extremely difficult to do well. Lack of space and access creates challenges for a dentist to place proper restorations. Plus, wisdom teeth are always prone to additional decay due to difficult access for hygiene. Any wisdom tooth with decay should be extracted.

“I have TMJ problems. Can wisdom teeth surgery make it worse?” Routinely, the jaw and its joint (TMJ) are protected during surgery by use of a special rubber block that allows the patient to rest their teeth. Excessive pressure on the joints is prevented by gentle surgical techniques and the use of proper instruments. Increased TMJ problems are unlikely with wisdom teeth removal if these precautions are taken.

“I’ve been told it is very difficult to numb me.” There are several local anesthesia techniques that are effective in patients who are resistant to numbing. Providing an adequate amount of local anesthetic and giving it more time to take effect can be helpful. However, IV sedation is the best option for patients who, for various reasons, are difficult to numb.

“How soon can I wear my retainers after the surgery?” Most retainers are made for upper teeth and extend to the second molars. Patients can safely wear retainers in 24 hours post-surgery without interfering with the healing process. Although, if uncomfortable, patients may wait up to a week before using their retainers again without any concerns.

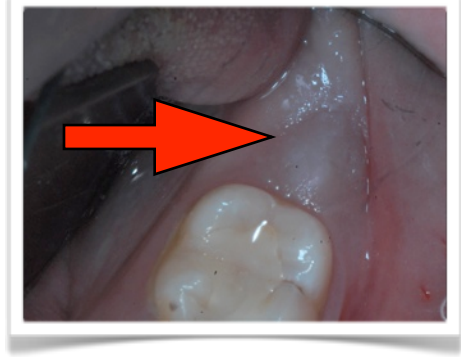
“I have a cold and I am scheduled to have my wisdom teeth removed. Should I postpone the surgery?” If the cold is mild, with no coughing or impeded nasal breathing, surgery is usually OK. If the cold is severe, with productive coughing, chest congestion, or stuffy nose, it’s best to wait. This is especially important with IV sedation. If it is an emergency extraction, it can also be done safely under local anesthesia with nitrous oxide.

Types of Wisdom Teeth Positions

- **Erupted:** The tooth has completely emerged through the gum tissue and is visible. This occurs when there is adequate space in the jaw bone. Most erupted third molars are malpositioned, meaning they are not aligned with the adjacent teeth. An erupted tooth that has been in use for several years can be more difficult to remove, as the jaw bone becomes more dense around its root. Removal of an erupted tooth can be simple or may require complex surgical techniques.



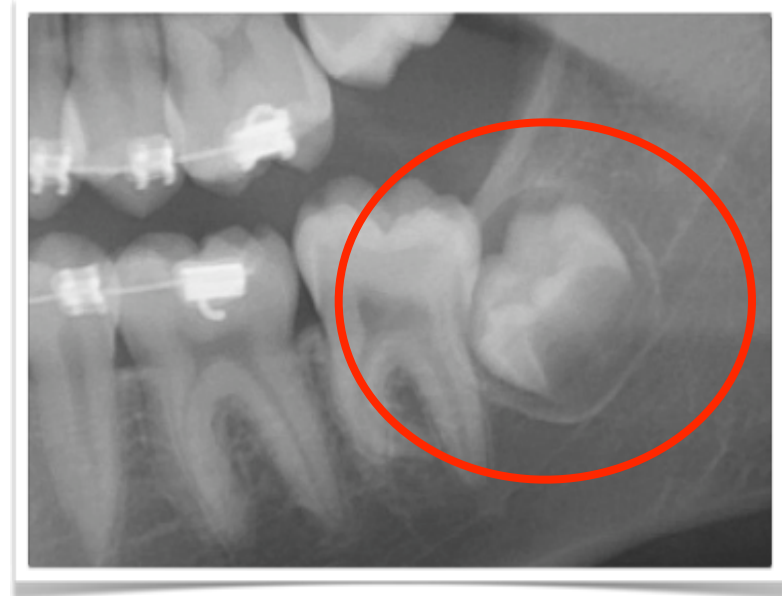
- **Soft tissue impaction:** The tooth is somewhat erupted beyond the bone, but is still covered partially or completely with gum tissue. The pocket under the gum tissue frequently retains plaque causing inflammation and pain. Removal typically requires a small incision over the gum tissue to expose the tooth and allow extraction.



- **Partial bony-impaction:** The tooth has emerged partially beyond the bone level. This occurs when there is less available space. Occasionally, the top of the tooth may be visible, but usually, the tooth is hidden under the gum and bone tissues. The tooth may be positioned upright, similar to adjacent teeth, or angled behind the second molar. Extraction involves making an incision and moving the gum tissue aside (known as a flap), possible removal of some bone, and cutting the tooth into smaller fragments as necessary to remove it easily and gently. Conservative gum tissue flaps, minimal bone removal, and gentle surgery help to prevent post-operative swelling and significant pain.



- **Full bony-impaction:** The tooth is completely stuck in the jaw bone and has not emerged beyond the bone level. It may be level with the bone or slightly beneath. This type of wisdom tooth is completely covered with gum tissue and bone. Patients ages 15 to 21 typically have full bony-impacted wisdom teeth, mostly because there isn't enough space in the mouth. Full bony-impacted teeth may be in various positions -- including completely upright, partially angled forward (mesial impaction), partially angulated backward (distal impaction), completely on the side (horizontal impaction), and other variations. Extraction involves incision, gum tissue flap, removal of bone as necessary, and cutting the tooth into smaller fragments to remove it easily and gently. While more difficult, it is possible to extract a full bony-impacted tooth without a significant gum flap and minimal bone removal. This unique approach will reduce or eliminate swelling, minimize pain, and speed up recovery and healing.



- **Complicated full bony-impaction:** The tooth is severely impacted and malpositioned. This makes access to the tooth difficult, and extraction requires more complicated surgery. Patients will experience swelling and perhaps more discomfort.



Symptoms of Wisdom Teeth Problems

Symptoms can vary from slight discomfort to advanced swelling, significant pain, infection, and pus formation. Early treatment will prevent disease and potentially dangerous complications.

Early inflammation (pericoronitis) is caused by plaque and may cause the following symptoms: pain over the gum near the back teeth, mild swelling of the gum, bleeding, or pain radiating to other teeth, and/or to the head, neck, and ears.

A localized abscess or infection results if the source of inflammation is not treated. Those with an abscess or infection may have increased pain, mild to moderate swelling of the gum, sinus problems, or pus drainage from a gum boil (fistula) often accompanied by a bad taste and a foul smell.

Severe infection occurs when a localized infection persists and spreads to other facial areas. Symptoms include swelling over the face or neck, severe pain, difficulty opening the mouth, pus drainage, fever, general weakness, and breathing or swallowing difficulties if the infection extends to the throat. Such infections may have dangerous consequences if not treated immediately. They can spread to deeper spaces in the head and neck region and potentially reach the brain or heart.

Sometimes pain is caused by adjacent teeth with decay or gum disease that is induced by the wisdom teeth. Crowding of other teeth is also a potential and related symptom.

*Lack of symptoms does not indicate lack of disease.
Infection may be low, chronic, and come with no pain or
swelling, but still cause disease and damage.*

Managing Pain and Swelling Related to Wisdom Teeth

Pain and swelling from wisdom teeth can occur suddenly and progress rapidly. Early evaluation, antibiotics, and immediate extractions are the only way to solve the problem. Until you can see an oral surgeon, here is what you can do to manage the pain and swelling.

Anbesol or other topical anesthetics are NOT effective for relief of pain associated with wisdom teeth. DO NOT place aspirin over a tooth to relieve pain. It will cause a burning irritation to your gums.

Pain only: No associated swelling, drainage, or difficulty opening the mouth.

- 1) Take 400-600 mg Ibuprofen (2-3 tablets of Advil) or 500-1000 mg of Tylenol every four hours for pain.
- 2) If pain becomes more severe, you may take Vicodin or Tylenol #3 prescribed by your dentist.
- 3) Call your dentist immediately for evaluation or referral to an oral surgeon.
- 4) Mild inflammation may resolve by simply brushing the area and keeping it clean.
- 5) Extractions should be done as soon as possible before a potential increase in pain and infection.

Pain and swelling: Pain associated with facial or gum tissue swelling with possible drainage of pus or difficulty opening mouth.

- 1) Take 400-600 mg Ibuprofen (2-3 tablets of Advil) or 500-1000 mg of Tylenol every four to six hours.
- 2) Call your dentist immediately for evaluation or referral to an oral surgeon.
- 3) Begin antibiotic therapy immediately. If you can not see an oral surgeon right away, ask your dentist to prescribe antibiotics and pain medication.
- 4) Extractions should be done as soon as possible, before infection spreads and involves other areas of the face with potential life-threatening consequences. **It is not necessary to be on antibiotics for a few days before surgery.** This approach is outdated and no longer recommended.
- 5) Do not apply ice. It does not improve swelling caused by infection.
- 6) Do not place a heat pack on the face as it can draw the pus from the infection towards the skin and cause scarring.

Sole use of antibiotics does not cure wisdom teeth problems. Infact repeated exposure to antibiotics can increase the risk of hypersensitivity, allergy, and increase resistance to certain strains of bacteria. Removal of the tooth is the only definitive treatment.

Best Age for Removal

It is recommended that wisdom teeth be removed between the ages of 15 and 20* for many reasons.

- Better and faster healing in younger patients.
- Incomplete root formation and softer bone make removal easier and less traumatic.
- In the absence of infection or periodontal disease, the bone and gum tissue heal more completely and with fewer complications.
- Decreased chances of damage to nerve in proximity to the lower wisdom teeth because the roots are shorter and less developed.
- Prevent decay or gum disease that can damage the adjacent teeth and result in tooth loss.



Sometimes it is acceptable to remove wisdom teeth before age 15. Early removal is recommended in the following situations.

- When inadequate space results in overcrowding and impaction of the second molars, extraction of the third molars along with continued jaw development may provide the second molars adequate room for eruption.
- When there is an infection.
- When there are cysts or other forms of pathology.
- When there are advanced 'dental age:' Some patients have advanced development of their wisdom teeth relative to their actual age. Typically, when the wisdom teeth have reached bone level, their removal can proceed with relative ease.

The ideal age for removal of wisdom teeth is between the ages of 15 to 20

Wisdom teeth should be removed before they cause pain. When pain is present, it is often too late, and some irreversible damage may have already occurred.

*Actual age and dental age may not coincide. It is best to correlate the position of the teeth and symptoms with patient's age for optimal

Best Treatment Approach

Patients often ask: “Is it better to have one side done and the other side later so I can eat easier?” or “Will I have more pain with all of the wisdom teeth removed rather than extracting one or two of them?”

The fact is, removing all four wisdom teeth at the same time is the best and the most comfortable approach. Here are the reasons why.

- Pain is not an additive process, which means the amount of pain does not correlate with the number of teeth being removed. The amount of pain is the same whether one or four wisdom teeth are removed.
- Pain medications work effectively regardless of the number of teeth removed.
- Antibiotics, pain medication, and anesthesia medications are taken only once when all the teeth are removed at once.
- The recovery remains the same and does not increase when more teeth are removed.
- Absence from work or school is needed only once.
- Diet restrictions and instructions remain the same.
- Extraction of all four wisdom teeth is typically a 20- to 30- minute procedure and is well tolerated by patients.
- Extracting all of the teeth at once saves money, as patients pay for anesthesia only once.
- Anticipation and related anxiety are experienced one time.
- Saves time over repeated surgeries.

The surgery is best performed in an oral surgery office that is designed specifically for such procedures. Oral surgery suites are equipped with all the necessary instrumentations and equipment for a safe and predictable outcome. Occasionally, wisdom teeth that are extremely complicated or associated with large cysts may be extracted in the hospital under general anesthesia.

The most preferred and recommended approach is removal of all four wisdom teeth at the same time.

Number and Length of Visits

The number of visits for wisdom teeth surgery may be tailored to your needs*. If you cannot take too much time off from work or school or your teenager has limited time because of school, sports, or other obligations, then you can pick the **All-in-One** visit, and have the consultation and surgery all on the same day. If you prefer to meet the oral surgeon, learn about the surgery, visit the office to become more comfortable, and discuss treatment options prior to surgery, you can choose the **All-in-Two** visit option.**



There are three types of office visits:

1. **Consultation:** Typically 20 to 30 minutes, when X-rays are taken, an exam is given, and your oral surgeon discusses the recommended surgery and anesthesia, reviews consent forms, pre-operative instructions, and prescriptions. The financial coordinator also discusses fees and payment options.
2. **Surgery:** Typically 20 to 30 minutes for all four wisdom teeth to be removed followed by 30 to 45 minutes of recovery from anesthesia. Additional time may be required for more complex wisdom teeth extractions.
3. **Follow-up appointment:** Usually a five-minute visit to evaluate healing, remove sutures if necessary, and give other recommendations for improved healing.

*Choose the number of visits based on your
availability and personal needs:
All-in-One, -Two, or -Three visits.*

* Number of visits and length of procedures can vary between different surgeons and offices.

** All-in-One, -Two, or -Three visits are offered in the office of Dr. H. Ryan Kazemi.

All-in-One Visit

You can arrange your consultation and surgery all on the same day, and dissolvable sutures can be placed so there is no need for a follow-up visit. A telephone or email follow-up is usually adequate. This is suitable if you have limited time, especially for students who have to return to school, have exams, work, or other responsibilities that make it difficult to take time off.



Necessary forms are completed prior to your visit via website or fax.



On the day of your appointment, necessary X-rays are taken, consultation is done, and surgery is completed as planned-- All on the same day!



In 5-7 days, the oral surgeon will check up on your progress by phone or email.

Who is the ideal patient for the All-in-One Visit?

- A healthy patient with no need for special medical precautions.
- A patient with uncomplicated impacted or non-impacted wisdom teeth (i.e. no major cyst, pathology, or severe and unusual impactions).
- One who requires no significant financial assistance (i.e. insurance work up, payment plans, etc.)
- A patient who is comfortable with the information provided online and by phone, and has good confidence in the recommended oral surgeon.
- A patient for whom multiple visits would be difficult due to limited time or distance.

If you are healthy, have no special financing needs, prefer time efficiency, and have confidence in the oral surgeon, then an All-in-One Visit is for you.

All-in-Two Visits

Having the consultation and surgery on the same day may not be for everyone. Some patients might want a separate consultation or follow-up appointment to make sure everything is healing well.

You might consider a separate consultation appointment if:

- You are very anxious, and meeting the oral surgeon and the staff might help put you at ease.
- The wisdom teeth are highly complex in nature (e.g. deeply impacted or malpositioned teeth, presence of cysts or other pathology).
- You have a lot of questions or are anxious about the surgery or anesthesia and want to make sure you have thoroughly reviewed the plan with the surgeon prior to your surgery.
- You have special financial needs or require assistance with insurance, payment plans, etc.

You might consider a separate follow-up appointment if:

- You are able to return to the surgical office in five to seven days for a routine check.
- Parents have flexibility to bring their teenagers back for suture removal and a quick check-up. (No need to accompany patients older than 18.)
- The surgery was long or difficult, so the oral surgeon recommends a follow-up appointment to evaluate healing.

All-in-Three Visits

Sometimes, patients decide to have the consultation, surgery, and follow-up visits on different days. This is recommended for complicated wisdom teeth or when extraction is combined with other procedures such as dental implants or biopsies. A second follow-up visit may be recommended as necessary.

Necessary X-rays for Wisdom Teeth

Panoramic X-ray (or “panorex”) is the standard image for proper diagnosis and planning. It provides important information regarding the number of wisdom teeth, their position, any disease or abnormality, and proximity to nearby nerves and sinus cavities. It also detects caries, periodontal disease, and any areas of infection. A panoramic X-ray is easy to obtain and quite comfortable for the patient as it rotates around the head and does not require placement of film in the mouth. Digital X-rays like this one require significantly less radiation and provide an immediate image that can be easily shared between doctors electronically.



Panorex is the standard diagnostic x-ray for wisdom teeth extractions.

Concerns about the tooth being on the Nerve

While panorex is the standard diagnostic X-ray for evaluation of wisdom teeth, it has certain limitations. It is only a two-dimensional image. Some patients, solely based on these X-rays, are discouraged from having their wisdom teeth removed because they are **advised that their teeth are on top of the nerve** and extractions would damage the nerve. But this X-ray appearance of wisdom teeth on top of the nerve canal is not unusual and, in fact, is common in most patients. Regular X-rays are 2-dimensional images, and overlapping structures do not necessarily mean they are in contact. Therefore, despite X-ray appearances, there is almost always space between the lower wisdom teeth and the nerve canal, and nerve damage during extraction is quite unlikely. Even in rare instances where the tooth and nerve are in contact, gentle, meticulous, and careful techniques used by the oral surgeon help to minimize nerve damage.

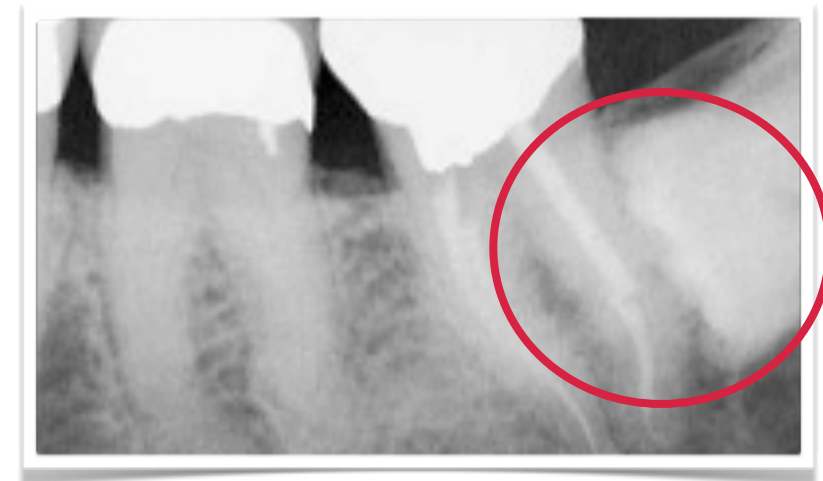
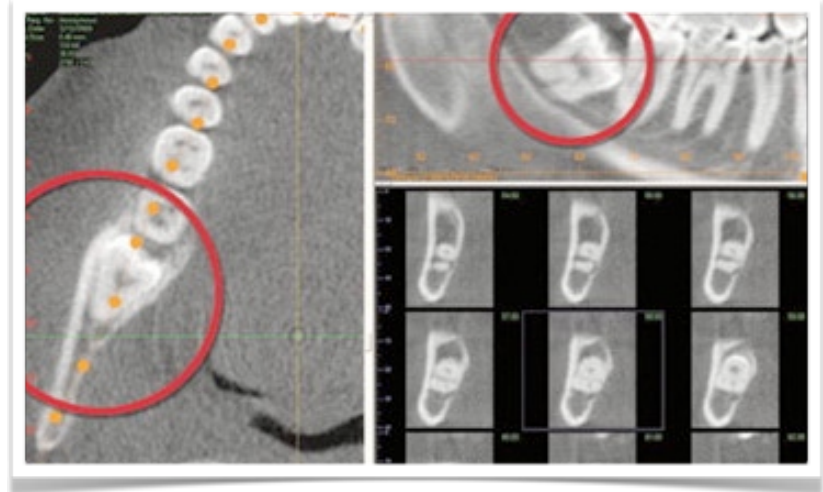
An X-rays image showing overlapping of the wisdom teeth roots and the nerve canal does not necessarily mean they are in contact. More commonly, they are separate and there is no concern about nerve damage.

A **CT-scan** provides more detailed information about the position of wisdom teeth and their proximity to nerves and sinuses. While not indicated routinely for wisdom teeth, this type of image is helpful for patients who have severe or deeply impacted wisdom teeth and whose oral surgeon is concerned about proximity to nerves, sinuses, or cysts. Recently, cone beam CT-scan (CBCT) machines have become more readily available in dental offices. With less cost and significantly less radiation, CT-scan is being used more often instead of a panoramic X-ray.

The CT-scan is typically utilized for very complex and severely impacted wisdom teeth or when significant abnormalities are present.

A **peri-apical X-ray** is a routine dental X-ray obtained by placing a film inside the mouth. The image is small and does not capture the entire wisdom tooth or its surrounding structures well. Therefore, it is insufficient for wisdom teeth diagnosis.

Any X-ray or CT-scan should be taken **within six months of the planned surgery** for proper diagnosis and planning. Radiation from dental X-rays, especially when digital, is extremely low and insignificant. Therefore, it is quite safe to have multiple X-rays taken as necessary. Any X-rays already available may be sent to your oral surgeon prior to your visit.



Anesthesia Options

Wisdom teeth surgery does not have to be traumatic. Poor experiences in a dental or oral surgery office can change one's outlook on dentistry for life, especially for young adults. Wisdom teeth removal while routine, is not simple, and the right choice in anesthesia can make all the difference in your experience.

There are three options for anesthesia.

- 1) IV sedation:** This is the most common approach and desired by most patients. The patient is asleep during the procedure and awakened immediately upon completion. This is a very safe technique, with continued monitoring of breathing, heart rate, blood pressure, EKG, and oxygenation during the procedure. Patients can often go home after a 20- to 30- minute recovery.
- 2) Nitrous oxide:** This is commonly referred to as “**laughing gas**.” While it provides some relaxation the patient is awake and aware of the procedure. This approach may be good for simple procedures, or for patients who are less anxious.
- 3) Local anesthesia:** This is the “**numbing**” only approach. The patient is fully awake. Although he or she is numbed adequately so there is no pain, there are other sensations that may be uncomfortable, like pressure, vibrations, or sounds.

Oral sedatives such as Valium or Xanax can provide a patient with some relaxation when taken one hour prior to a procedure. The medication is absorbed through the digestive system, therefore, its clinical effect and degree of relaxation is highly variable and unpredictable.

More than 98% of wisdom teeth patients choose IV sedation for optimal comfort and experience.

More About IV Sedation

More than 98% of patients choose IV sedation for optimal comfort and the most pleasant experience. Wisdom teeth surgery is a difficult procedure and is most safely performed when the patient is sedated and comfortable. The surgeon is working in a small area with vital structures nearby and it is important for patients to remain still during surgery. IV sedation makes you very comfortable, allowing the surgeon to focus on performing the procedure safely and quickly.

What makes IV sedation safe?

- Continued monitoring techniques.
- Supplemental oxygen during procedure.
- Use of short-acting medications that are safe and predictable when given properly.
- Each medication is given in small doses as a part of a “cocktail” to minimize adverse effects.
- Anesthesia is “titrated to effect,” meaning that a small dose is given initially and then the patient is monitored for level of sleepiness. Small increments are then given as necessary until the patient is comfortable and asleep enough to proceed.
- Emergency equipment is available if needed.
- Oral surgeons receive hospital-based anesthesia training and are licensed to administer office-based IV sedation anesthesia.

Medications commonly used for IV sedation include:

- Narcotics (e.g. Fentanyl)
- Benzodiazepines (e.g. Valium or Midazolam)
- Barbiturates (Brevital) or Propofol (Diprivan)

Other medications that may be given during IV sedation:

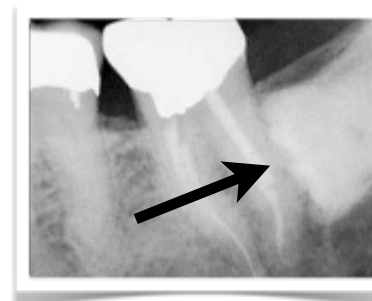
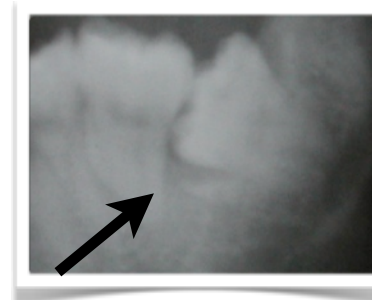
- Steroids to minimize swelling, given as a single IV dose.
- Antibiotics if there is existing infection.
- Anti-nausea medication (e.g. Zofran).

The drug combination technique makes IV sedation safe, as smaller doses are used to reach the desired state of sleepiness.

Bone Grafting for Wisdom Teeth

During wisdom teeth extraction, bone grafting may be indicated if there is significant bone loss due to infection, cysts, gum disease, or proximity of the wisdom tooth to the second molar. Bone graft is best performed at the same time as the extraction, allowing guided regeneration of bone where needed. Bone graft materials most often used are freeze-dried human bone, bovine bone, or synthetic bone in the form of calcified granules in pre-packed bottles. These materials are very safe with no concerns for disease transmission. Once placed, the bone graft material is covered with a re-absorbable membrane that protects it and allows it to mature into actual bone over four to six months. Bone grafting may be indicated in the following situations.

- **Bone loss due to gum disease:** This occurs commonly with long-standing wisdom teeth. The defect that results adversely affects the second molar as the teeth share the same bone for support.
- **Bone loss due to cysts:** As cysts grow, they destroy surrounding bone. Once the tooth is extracted and the cyst is removed, the defect may be grafted to restore lost bone, allowing a more complete bony healing, and providing better bony support to the adjacent tooth.
- **Bone loss due to wisdom tooth proximity:** Bone may be very thin in the presence of severely horizontally impacted wisdom teeth where the crown is in intimate contact with roots of the adjacent teeth. Without bone grafting, chronic pocketing (periodontal defect) can develop, resulting in inflammation of the gum tissue, pain, bleeding, and gradual loss of bone.



Extraction Techniques for Best Results

Wisdom teeth extractions have dramatically changed over the years, largely due to improved techniques, specialized instrumentations, and better knowledge. The surgery has become significantly less invasive and shorter, which ultimately translates into a faster recovery, less pain and swelling, and significantly fewer complications. Here are the contemporary techniques for removal of wisdom teeth.

- **Small incisions:** Utilizing a mini incision, wisdom tooth extraction can be done with minimal disturbance of gum tissue and less disruption of muscle fibers. This promotes quicker healing and less pain and swelling after surgery.
- **Non-flap approach:** Swelling is directly proportional to the amount of gum tissue flap and bone removal. While more difficult to perform, avoiding a gum tissue flap through a small access can help to eliminate or minimize the swelling, decrease post operative pain, and promote faster healing.
- **High-tech surgical drills:** These tools are made specifically for wisdom teeth surgery and allow the surgeon to remove teeth and bone efficiently, non-traumatically, and quickly. Non-surgical air-powered drills used for regular dental procedures are not recommended, as the pressured air flow can cause tissue air pockets, and contamination that may result in infection.
- **Specialized extraction instruments:** These tools allow the surgeon to more easily remove even the toughest impacted wisdom teeth within minutes. Each instrument is specific to a certain location, impaction type, and characteristics.
- **Enhanced knowledge and techniques:** Changes in modern oral surgery enable oral surgeons to gently remove the most challenging wisdom teeth in a relatively shorter time, with great precision, and ease than ever before. These advances have greatly improved patient experience and recovery.

Recovering from Extractions

Most patients are primarily concerned about pain and swelling after surgery, what they can eat, and when they can return to normal activities. While recovery is different for everyone, patients undergoing wisdom teeth extraction may expect the following.

Pain

The level and duration of pain depends on the complexity of the surgery, the surgeon's technique, and the patient's tolerance. Most patients experience three to four days of elevated pain, commonly managed with pain medications such as Vicodin, or Percocet. Tylenol #3 is an effective analgesic for relief of mild to moderate pain. As pain gradually diminishes over the next two to three days, ibuprofen (Advil) or acetaminophen (Tylenol) can be used. After seven to ten days, most patients no longer have pain and may stop their medications.

Swelling

Any swelling related to surgery will maximize in 36 to 48 hours following the procedure, and gradually taper over the next five to seven days. Ice helps to reduce swelling in the first 24 hours. If extractions were done in a conservative fashion, you may experience no swelling at all.

Diet

Upon arrival home, patients may have water, juices, soups, shakes, purees, and very soft foods. A soft diet is recommended for up to five to seven days. Do not eat hard, crispy, or very spicy foods during this period. If you have to chew it, it's probably too hard. After seven days, patients may gradually return to normal foods.

Activity

Get plenty of rest on the day of surgery. Some patients may feel well enough the following day to walk and go out. That's alright, but take it easy. Avoid any strenuous activities for the first two to three days. No active sports, lifting heavy objects, or anything that requires exertion. After three days, if you feel more comfortable, you can walk, go for a gentle swim, or do low impact exercise. Mild activities may cause some pain but not enough to disturb the surgery site or open the sutures.

Medications Following Extractions

Antibiotics

Antibiotics are generally prescribed for five to seven days after surgery. If there is an existing infection, antibiotics are initiated immediately and extractions done as soon as possible. It is not advisable to delay surgery for several days to take antibiotics first.

There has been some debate about the efficacy of antibiotics used as a prevention in healthy, non-infected wisdom teeth that were extracted without significant surgical intervention. It is best to discuss this with your surgeon. Antibiotics are recommended in cases of inflammation, infection, or to reduce the chances of post-operative infection with more invasive surgical interventions.

Penicillin is the antibiotic of choice for routine wisdom teeth surgery or for mild infection. Amoxicillin and Cephalosporins are also acceptable. If allergic to Penicillin, patients may use Erythromycin or Clindamycin.

When infection is severe (swelling, pus, difficulty opening mouth, pain, etc), antibiotics with a wider spectrum may be recommended. Augmentin (a combination antibiotic containing Amoxillin and Clauvanic acid), Clindamycin in higher doses, or Penicillin/Flagyl may be prescribed. Intravenous administration or hospitalization may be recommended if an infection is very severe and has spread to other facial regions.



Penicillin is the antibiotic of choice for most routine third molar surgery or in presence of mild infections.

It is important to take the antibiotics as prescribed and continue until completed.

Pain medication

Pain medication is essential in managing post-operative pain. Most medications contain narcotics and therefore should be taken with care and only as instructed by your dentist or oral surgeon. Medications commonly prescribed include the following.

- **Vicodin:** Contains 5.0 mg of Hydrocodone (a synthetic codeine) and 500 mg of acetaminophen. The slightly stronger Vicodin ES contains 7.5 mg and 750 mg of the same drugs, respectively.
- **Percocet:** Contains Oxycodone (also a synthetic codeine) and acetaminophen. It is considered slightly stronger than Vicodin ES.
- **Tylenol #3:** Contains Acetaminophen and Codeine. It is a less potent analgesic ideal for mild to moderate pain.
- **Ibuprofen (Advil):** This is a good analgesic for mild pain for up to four to seven days after surgery as a step-down from narcotic pain medications.
- **Acetaminophen (Tylenol):** A mild analgesic that may be used for several days after surgery to manage discomfort.

Narcotic pain medications are recommended for two to three days after surgery. Patients may then taper to non-narcotic medications as necessary.

Facts about pain medications

- Percocet is slightly more potent than Vicodin ES, but may cause more nausea.
- One Tylenol #3 is as effective as two Advils (400 mg).
- Advil provides maximum pain relief at 400 mg (two tablets). Dosages of 600 mg or 800 mg add more anti-inflammatory effect, but no increased pain relief.
- Those with allergy or reactions to Codeine can usually take synthetic Codeine derivatives such as Hydrocodone or Oxycodone with no complications.

Patients with Medical Conditions

Precautions and special considerations are necessary in patients with certain medical conditions. You should consult with your physician or speak to the oral surgeon for specific recommendations.



Heart murmur: Patients with heart valve disease may require antibiotic prophylaxis prior to surgery to prevent bacterial endocarditis. High-risk patients requiring antibiotics include those with artificial heart valves, a history of prior infective endocarditis, certain congenital heart conditions, constructed shunts, any repaired congenital defects with prosthetic valves or devices, and cardiac transplant patients with valve problems. **Antibiotics are no longer necessary** for patients with mitral valve prolapse, rheumatic heart disease, bicuspid valve disease, calcified aortic stenosis, and congenital heart conditions such as ventricular septal defect, atrial septal defect, and hypertrophic cardiomyopathy. These new guidelines were updated in 2007 by The American Heart Association*.

Heart disease: Patients with a history of heart attacks, chest pains, enlarged hearts, arrhythmia, and valve disease may require special precautions. First, it is important to have a proper physical exam by your physician to make sure your condition is stable. You may continue all of your medications without change throughout your treatment. To minimize risks, patients who have had a heart attack (myocardial infarction) may have elective oral surgery after six months. However, with a good functional status, necessary oral surgical procedures may be done between six weeks and three months after a heart attack without undue added risk.

Local anesthesia with epinephrine is used with caution and limited dosage in patients with cardiovascular disease. To minimize stress on a patient's heart, sedation is highly recommended along with continued monitoring and supplemental oxygen. Your oral surgeon may consult with your physician for other necessary precautions.

*Reference: 2007, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Fever, Endocarditis, and Kawasaki Disease Committee, Council on Association: A Guideline From the American Heart Association Rheumatic Prevention of Infective Endocarditis: Guidelines From the American Heart Association.

High blood pressure: Hypertension must be controlled with proper blood pressure medications prior to your surgery. Do not alter your regimen; all medications should be taken normally throughout your treatment.

Patients on blood thinners: If you are on Coumadin (warfarin), it is best to stop it 72 hours before surgery, if approved by your physician. Patients on low dose Coumadin with an INR value between two and three may have extractions performed safely without stopping the medication. If it is not advisable to stop the Coumadin, your physician may change the dosage and perform a blood test for INR to check its therapeutic effect. Patients on aspirin or Plavix may continue the medication as routine, although bleeding might be slightly more prolonged. Patients with bleeding disorders should see their hematologist prior to any oral surgery.

Asthma: If you are having IV sedation, bring your inhaler with you on the day of surgery. Two puffs are usually recommended right before surgery. Patients with severe asthma who have required hospitalization may require additional therapy by their physician before surgery.

Diabetes: Patients with uncontrolled diabetes have significant risk of infection and poor healing. Proper control is essential for overall health and healing after any surgery. Well controlled diabetic patients can have oral surgery safely with no more risk for infections than non-diabetic patients. If you are insulin-dependent and having IV sedation, take half of your normal dose on the morning of surgery as you cannot eat or drink anything. You will be given IV fluids with dextrose to help keep your sugar level up during surgery. Non-insulin-dependent patients may continue other medications as normally as possible. Antibiotics are often prescribed after the surgery as prophylaxis.

Patients with significant health issues may require a pre-operative evaluation by their physician prior to wisdom teeth surgery. The oral surgeon will collaborate as necessary for optimal safety.

Patients on steroids: Patients with adrenal insufficiency or on long term steroid therapy for various medical conditions have decreased production of natural steroids, which are critical in many regulatory functions of the body. These patients are advised to take steroid supplements by doubling their normal dose on the morning of surgery. It may also be administered intravenously during surgery.

Patients on bisphosphonates: Patients taking bisphosphonate drugs may have an increased risk of osteonecrosis of the jaw bone following teeth extraction. Patients using the oral form (Fosamax, Actonel, and Boniva) for more than three years should ideally discontinue medication for 3 months before surgery. Those on IV form (Zometa, Aredia, and Boniva) are advised to avoid surgery and seek non-surgical options. Risks and benefits should be discussed thoroughly with your surgeon.

Patients on antidepressants or medications for ADHD: Antidepressants or medications for ADHD are not uncommon in teens. These medications do not interfere with anesthesia or post-operative medications or cause any complications.

Pregnancy: It is always best to defer any elective oral surgery until after delivery. Treatment in the first or last trimester is avoided, unless absolutely necessary. However, if oral surgery must be performed due to pain or infection, local anesthesia is the only method of choice. Medications considered safest are acetaminophen, Penicillin, Codeine, Erythromycin, and Cephalosporin. Aspirin and Ibuprofen are not used because of possible bleeding.

Breastfeeding: Medications known to enter milk and potentially affect infants should be avoided. Acceptable drugs can be administered based upon the age and size of the baby. The older the child, the less chance of a problem with the drug. Drugs that can be used sparingly include acetaminophen, antihistamines, Codeine, Erythromycin, Fluoride, Lidocaine, and Clindamycin. Drugs that are potentially harmful to the infant include Ampicillin, aspirin, barbiturates, Diazepam, Penicillin, and Tetracyclines.

Gag reflex: Patients with gag reflex may have difficulty tolerating upper wisdom teeth surgery. IV sedation is highly recommended to prevent gag reflex and make the patient comfortable during surgery.

What to Plan Prior to Surgery

Some simple preparation before surgery can make your overall experience better and safer:

If having IV sedation:

- Avoid food or drinks (including water) for eight hours before surgery.
- Medications may be taken with a very small sip of water.
- Avoid smoking for at least 48 hours before surgery.
- Remove fingernail polish to allow for oxygen monitoring.
- Arrange for an adult to escort you home.

Prescriptions: You will be given pain medications and antibiotics for use after your surgery. It is best to get your prescriptions at your consultation and have them filled prior to surgery. Some offices may provide the medications for convenience and save you a trip to the pharmacy. Either way, it's a good idea to have them ready at home. If you have existing pain or infection, your oral surgeon may recommend starting the antibiotic and pain medications right away.



Food: Prepare some foods beforehand, such as soups, shakes, ice cream, mashed potatoes, eggs, yogurt, and pasta or rice. Drinks or shakes with high protein, carbohydrates, and vitamins will provide you adequate nutrients for a smooth recovery. Have plenty of juice and ginger ale, which can alleviate nausea on hand.



Easy access to essential things: It's a good idea to place essential things you might need near your bed so you don't have to get up frequently following surgery. This is especially important if you live alone. Some items to keep close by include: medications, gauze, tissues, water, drinks, a phone, a good book, your laptop, TV remote control, and DVDs.

What to Expect on the Day of Surgery

You should arrive fifteen minutes before your scheduled surgery. The coordinator will greet you, answer last minute questions, and complete any remaining forms and transactions. You may be a bit anxious and hungry. A friendly and personable nurse will greet you to help reduce your anxiety and escort you to the treatment room.*

Nitrous oxide gas is a great way to get comfortable right before the oral surgeon starts an IV. This is probably the most anxious part for most people, yet by far, the simplest and most painless. The assistant will place vital monitors on, including a blood pressure cuff, pulse oximeter (which measures oxygenation level), and EKG pads. Oxygen will be administered through a nasal mask. The anesthesia medications are then given through the IV line. A minute or two later, you'll feel quite tired and sleepy. Once you are completely asleep and comfortable, the surgeon will place local anesthesia to numb the extraction areas.

A rubber bite block will help to keep your mouth open while you are asleep. It also protects your TMJ by preventing excessive pressure during surgery. The surgeon will then extract the wisdom teeth as planned, with the help of his or her assistants.

Sutures will be placed to close the extraction sites to improve the healing process. It is common practice to always place sutures on the lower wisdom teeth, while sutures are optional on the upper teeth. The sutures may be either re-absorbable, which dissolve in five to seven days, or require removal. Both types work well, and selection is based on the surgeon's preference. If you cannot return to the office for suture removal, re-absorbable suture will be used.

Do not worry about waking up in the middle of surgery. Anesthesia medications are given as needed to make sure you remain asleep and comfortable the entire time. At end of surgery, you will awake to a tap on your shoulder and a gentle voice saying: "Hi, can you open your eyes?"

The surgeon will reassure you that surgery is finished and everything went well. Monitors and IV will be removed and you will be escorted to the recovery room. A few minutes later, your loved ones can keep you company as you recover from the anesthesia.

*This is the protocol followed routinely at office of Dr. H. Ryan Kazemi. Your experience may vary greatly with other offices and dentists.

What to Expect After Surgery

Your recovery from surgery and anesthesia will depend on your physiology and personal experience. Most people need one to two days of recovery before getting back to their routine. Some may need an extra day or two to rebound and regain their strength.

Immediately after surgery*

If IV sedation was administered, you will awaken shortly after surgery and be escorted to the recovery room. Your mouth will feel numb from the local anesthesia which will help keep you comfortable and pain free. You'll bite down on gauze to help reduce bleeding, which will be replaced periodically by the assistant. Most people rest for 20 to 30 minutes before being ready to go home. During this time, you will become increasingly awake and alert and gradually able to stand up by yourself. Rarely, nausea or vomiting may occur. If it does, it often resolves spontaneously. You may be given some pain medication which will begin to work as the numbness wears off. This will help to keep you comfortable in the coming hours.

When you are ready to go home, the assistant will review detailed post-operative instructions with you and your escort, both verbally and in written form. You will be given a home-care kit that contains gauze, ice packs, written instructions, office contact information for questions or emergencies, and an appointment card for a follow-up visit. You will then be escorted to the car.

The recovery usually takes about 20 to 30 minutes. Important instructions will be reviewed and provided in written form.

* This is the protocol followed routinely at office of Dr. H. Ryan Kazemi. Your experience may vary greatly with other offices and dentists.

Evening of surgery

Upon arrival home, you should change the gauze packs and take your antibiotics and pain medication as instructed. It is best to take the pain medication as soon as you get home while your mouth is still numb. This way, it will start to work as the numbness wears off. Pain typically begins to diminish after one to two doses of the pain medication. You may also have juice, soups, ice cream, shakes, yogurt, apple sauce, mashed potatoes, or anything that is liquid or very soft. Remove the gauze when you eat or drink and replace it after with a new one.

Most patients feel tired and drowsy for the rest of the evening and take a nap. The numbness from local anesthesia gradually wears off over two to three hours.

Bleeding gradually diminishes and often stops in a few hours. You should continue changing your gauze every 30 to 45 minutes and bite down with lots of pressure until bleeding has completely subsided. You'll notice that every time you change your gauze, there will be less blood. You can stop using the gauze once bleeding has completely stopped.

You should place an ice pack on your face and continue it for 24 hours to help reduce swelling.

Nausea and vomiting may occur on the evening of surgery. This is most likely a response to the narcotics used during anesthesia or your pain medication. If there is mild nausea, ginger ale may help. If more significant, you may stop use of the narcotic pain medication and substitute with ibuprofen or Tylenol.

Rest, take your medications, bite firmly on gauze, place ice packs on face, and have some liquids or soft foods. Avoid rinsing and spitting.

Nausea often resolves after a few hours. Anti-nausea medications such as Compazine may be prescribed. It is available in both pill and suppository forms. Call your oral surgeon for assistance if you develop nausea.

No rinsing, brushing, spitting, and definitely no smoking. Just relax, watch a movie, and enjoy your company when they come to visit.

Day after surgery

The day after your surgery you may continue to feel somewhat tired and drowsy, probably from the pain medication or late effects of IV sedation. It is a good idea to rest, even though you might feel awake and alert enough to walk around and even go out. If taking the prescribed narcotic pain medication, be careful, as it can cause lightheadedness and dizziness. It's best to avoid driving or any significant physical activity.

You'll notice that there is not much swelling and you are feeling fairly good. But continue using the ice pack for up to 24 hours to minimize any swelling. After 24 hours, ice does not help much, but you may continue to use it if it makes you feel better. Continue your antibiotic and pain medications as prescribed.

You may begin gentle rinses with salt water, or just plain water, every two to three hours, and after you eat. Remember, gentle rinsing!

About Salt Water Rinses

Salt can potentially kill bacteria and prevent infection but adding more is not necessarily better. In fact, the main purpose of salt is to make the water more physiologic or "tissue friendly" for rinsing. Add a tablespoon of salt to a gallon of water, shake, and use it for your rinsing needs. The real benefit from rinsing with salt water is the washing away of plaque and food debris from the extraction site. For that matter, you can use plain tap water, especially if you are at school or work and don't have salt-water on hand. Avoid rinsing with alcohol-based mouth rinses because they can irritate healing tissues.

36 to 48 hours after surgery

Swelling related to wisdom teeth extraction gradually increases and usually reaches its maximum during this period, but don't be alarmed. It's normal and expected. The use of ice packs at this time will no longer help. The swelling will gradually diminish over the next three to five days. If you have no swelling, you can thank your oral surgeon for his or her meticulous and conservative technique and surgical approach.

Continue with oral rinses every one to two hours, but you can now be more aggressive in cleaning your mouth of food debris. Continue a soft and liquid diet. You might also have some difficulty opening your mouth but it is temporary and will gradually improve. Continue your medications as prescribed.

Three to seven days after surgery

Discomfort and swelling will begin to subside gradually in three to seven days post-surgery. Continue with medications and, most importantly, rinse every two to three hours, especially after you eat. You can be even more aggressive with your oral rinses to make sure all plaque and food debris is washed away. The most common reason for increased pain at this time is plaque retention from inadequate rinsing. So keep rinsing. It's best to continue on a soft diet, although you might feel comfortable advancing to a more normal diet by day five to seven. Be gentle. It's still too early for pizza or steak. Take your antibiotics until finished, but you may taper off the narcotic pain medication and take ibuprofen or Tylenol as needed. Swelling will continue to resolve gradually. You may experience some difficulty opening your mouth as it feels "tight." This is temporary and will gradually resolve in seven to 10 days. You should see your oral surgeon in five to seven days for suture removal.

Pain and swelling will begin to decrease, but continue rinsing every 1-2 hours, and maintain a soft diet. Follow-up with your surgeon in 5-7 days for suture removal.

Seven to 14 days after surgery

Some minimal discomfort may linger by day 7, requiring ibuprofen or Tylenol, but usually resolving completely by the 10th day. Swelling typically resolves mostly by day 7 and then completely by day 10-14. Continue with aggressive rinsing and brushing. The extraction sites will heal as they become more filled in and smooth over the next six to eight weeks.

Potential Complications

The risk of complications associated with wisdom teeth removal is less than 0.5 percent when performed by an experienced oral surgeon who uses contemporary techniques and surgical instrumentations. Patients' response to surgery and healing can also vary based on their health, physiology, and compliance with instructions. Occasionally the oral surgeon may modify the original surgical plan to achieve proper results, while keeping the patient safe. These 'judgment calls' are part of a surgeon's responsibility to make the right decisions when faced with a specific challenge or an unexpected event.

Surgical and medical complications are prevented by careful planning, meticulous techniques by experienced surgeons, and appropriate precautions.

Potential Complications During Surgery

Nerve injuries:

Lower wisdom teeth are close to a sensory nerve that runs through the lower jaw bone. This nerve provides sensation to the lower lip, chin, gum, and teeth on the same side. Commonly, there is a distinct space between the nerve and roots of the wisdom teeth. However, in rare instances, the nerve and roots may be in contact, causing potential irritation to the nerve during extraction. This can result in some numbness of the lower lip and chin which usually resolves in six to eight weeks. On extremely rare occasions, this numbness may be prolonged or permanent if the nerve was severely damaged. The incidence of numbness from nerve injury is about 1 to 5 percent in the first week after surgery. However, after six months, the incidence diminishes from a high of 0.9 percent to none at all. The mean figure from all studies is around 0.3 percent.* Contemporary techniques in extraction help to avoid or minimize such complications.

* White Paper on Third Molars, AAOMS, 2007

Another possible complication is disturbance to the nerve that provides sensation to the tongue. This is avoided by careful placement of incisions and the use of proper surgical techniques. The incidence of injury to this nerve one day after surgery varies from 0.4 percent to 1.5 percent. Persistent involvement (still present at six months) varies from 0.5 percent to none. When currently accepted techniques are used, complications can be minimized or completely avoided.

Both types of nerve injuries are extremely rare, but the oral surgeon should discuss with you the likelihood and follow-up requirements in the unlikely event of this type of complication.

Bleeding:

Excessive bleeding during surgery is quite rare and is easily managed by the surgeon using pressure, special packing, and suturing techniques.

Sinus involvement:

Upper wisdom teeth are always in close proximity to sinus cavities above them. Once a tooth is extracted, it is possible to have a small hole between the sinus and the extraction site. If this occurs, a special packing and suture may be placed, and the patient will be asked to follow special sinus precautions (avoid nose blowing and smoking, do gentle rinses, and avoid use of straws) for about a week. This kind of incident often heals well, and long-term problems are extremely rare.

Broken roots:

The roots of wisdom teeth can occasionally break during extraction. It is important to remove all the roots during extraction to prevent infection. The only exceptions are roots less than 2 mm in length, and if positioned next to vital structures such as nerves. In this case, an X-ray should be done for documentation and the patient should be informed. This usually does not cause any problems and the site heals well.

Key Principles to Prevent Complications During Surgery

- Accurate medical history
- Proper diagnosis
- Proper X-rays & imaging
- Thorough pre-operative instructions
- Meticulous surgical skills
- Proper instrumentation
- Well equipped facility
- Proper monitoring
- Knowledgeable staff

Medical emergencies:

Potential medical emergencies during surgery include irregularities in blood pressure, pulse, breathing, nausea, and allergic reaction. The majority of these emergencies are prevented by obtaining good medical history and taking appropriate precautions.

Oral surgeons are well trained and have the necessary emergency equipment and medications to manage such emergencies. Doctors are CPR- and ACLS-certified and have trained staff to assist them during potential events. Proper diagnosis, surgical approach, and preparation, along with a trained team, help to minimize complications during surgery.

Complications with Extractions when performed at a Dental Office

Some dentists, who are not oral surgeons, may choose to perform wisdom teeth surgery, however they may not be able to complete the procedure due to several complications. Wisdom teeth may break during extraction or become extremely challenging to remove due to abnormal root anatomy, difficult tooth position, poor access, or poor visibility.

Specialized instruments and techniques are necessary for wisdom teeth extraction, and if a dentist does not have them, it makes it very difficult to complete the surgery.

I recommend the 15-minute rule: If a tooth can not be extracted within 15 minutes, it's best for the dentist to stop and contact an oral surgeon for assistance. Patients may be referred directly to the oral surgeon for completion of the surgery. If it is not possible to be seen immediately, then it is acceptable to stop the procedure, place a suture if necessary, pack gauze, begin antibiotic and pain medications, and see the oral surgeon within one to two days.

Potential Complications on Day 1-2

Slight **intermittent bleeding** may occur one to two days after surgery, most likely due to local inflammation or eating food that is too hard. If this occurs, continue biting on the gauze firmly, rest, and rinse very gently throughout the day; it will stop.

Any disturbance in **nerve function** may present itself at this time by numbness over the lower lip or chin areas. Mild nerve disturbances may present as a slight and partial feeling of numbness. You can feel your touch over the lip/chin area, but it is less than normal. This sensation usually resolves in six to eight weeks as the nerve gradually returns to normal. More significant nerve injuries may result in a more profound numbness or complete lack of sensation.

Depending on the degree of nerve injury, some normal sensation may return, but it will take time. Close follow-up with the oral surgeon is recommended.

Any **allergies** during this period are often related to antibiotics. If you experience itching, hives, or rashes, stop the antibiotics and contact your oral surgeon. A new antibiotic may be prescribed along with Benadryl to treat mild allergic reactions. If you experience more severe allergies presenting with significant hives, rashes, or breathing difficulties, go to the nearest hospital emergency room immediately.

Nausea is still possible at this time and is most likely due to narcotic pain medication. Consider changing to a non-narcotic medication such as Ibuprofen or Tylenol and anti-nausea medication, if more severe.

Potential Complications on Day 3-7

Infection is the main concern during the third to seventh day after surgery. It is characterized by increased pain, swelling, and possible presence of pus. What makes this swelling indicative of infection is its timing. Surgical swelling (edema) associated with the surgery is normal and reaches its maximum level in 36-48 hours after surgery. It gradually resolves in five to seven days. If infection occurs, it usually causes swelling three to five days after surgery. If this happens, call your oral surgeon immediately.

Treatment of infection may consist of antibiotics (which may be changed), oral rinses, and drainage. Do not apply heat to an area of swelling caused by infection. It can cause drawing of pus and drainage from the facial skin, which can lead to scarring. Infections typically resolve in seven to 10 days, if properly treated.

Another possible complication is “**dry socket**” which can occur in three to five days after surgery. Dry socket is a wound-healing complication that occurs when the initial blood clot is dislodged resulting in “dry and exposed” bone. Dry socket is thought to be related to traumatic surgery, meaning the surgery was done with excessive and aggressive access, bone removal, and tissue handling, poor oral hygiene, or smoking. Dry socket is extremely rare if surgery was done in a non-traumatic and minimally invasive fashion and the patient closely adheres to all post-operative instructions.

Any **increase in pain** four to seven days after surgery is mostly related to inflammation from inadequate rinsing and plaque accumulation in the extraction sites. This inflammation can be prevented by aggressive rinsing and gentle brushing.

Non-invasive and gentle surgical techniques, along with patient compliance with instructions, can help prevent dry socket.

Potential Complications on Day 7-21

Infection can occur beyond seven days, even up to 21 days. The most common reason for this delayed infection is plaque entrapment in the extraction sites due to inadequate rinsing. The inflammation caused by plaque can cause pain and may progress to infection characterized by more pain, swelling, and possible pus formation. If this occurs, contact your oral surgeon for an immediate evaluation. Antibiotics may be initiated with possible drainage as necessary.

A thin bony fragment of ridge occasionally may form on the inside aspect of the extraction site right next to the tongue. This is known as bony dehiscence or sequestrum, and occurs when gum tissue is very thin over an anatomically normal bony ridge. This bony fragment can cause tongue soreness as it rubs over it. It is easily treated by smoothing out the exposed bone and snipping any bony fragments or ridges.

Beyond Three Weeks

An infrequent late complication (beyond six weeks) is periodontal pocketing behind the second molars. This can occur when the wisdom tooth is deeply impacted against the second molar with very thin or no bone in between. The pocket may become a chronic site of plaque retention and inflammation, similar to gum disease. It can be prevented by a minor bone graft at the time of extraction. The treatment consists of periodontal therapy to reduce the pocket depth to make it more accessible for cleaning. Very rarely, patients report sensitivity of the adjacent teeth, but this is often temporary in nature and resolves over a few weeks.

Numbness over the lower lip, chin, teeth, and gum tissues at this period is indicative of some level of nerve damage. Mild disturbances can cause partial numbness that will gradually resolve in six to eight weeks. Moderate disturbances can take up to six months to heal, and some may not recover completely. Severe disturbances to the nerve manifest as very profound numbness that does not seem to improve over time. It may resolve partially or be permanent in rare situations, in which case a neurological examination is recommended. Neurosurgical procedures may be necessary if the sensory function does not return to normal or if a patient is having an unpleasant, painful feeling from the damaged nerve.

Post-Operative Instructions

The healing process is different in every individual. It depends on multiple factors, including health, age, healing physiology, tissue health surrounding the surgical site, type of surgery, and post-operative care.

Overview ...

- Bite firmly on gauze; replace every 30 to 45 minutes until bleeding stops
- Ice for 24 hours; 20 minutes on, 10 minutes off
- Avoid spitting or using straws for 24 hours
- No strenuous activities for 48 hours
- Do not rinse or brush on the evening of surgery
- On the day after surgery, begin oral rinses with water or salt water (saline) every two hours; continue for at least 10 to 14 days
- Do not smoke for seven to 10 days (first 24 hours for bleeding problems, thereafter to avoid healing complications such as dry socket, infections, poor closure)
- Follow a soft diet for three to five days; advance as you feel comfortable

Do Not Be Alarmed By ...

- Slight bleeding up to six to eight hours or very slight oozing into the next day
- Increase in swelling 36 to 48 hours after surgery
- Bruising of skin over neck or chest areas
- Sutures loosening
- Small openings of incision site
- Radiating pain to different parts of head and neck

Call Your Oral Surgeon Immediately If ...

- Pain increases after three to five days
- Swelling increases three to five days after surgery with pain and drainage
- Significant bleeding continues more than eight hours after surgery
- Any drainage or infection marked by swelling and increase in pain
- Rashes, hives, itching following use of medications
- Significant opening of incision lines over grafted regions

Swelling: Swelling is expected for more invasive oral surgical procedures. Surgical swelling reaches its maximum in 36-48 hours after surgery. It will gradually resolve over three to five days. To minimize surgical swelling, apply ice to the affected facial area for 24 hours. Place an ice bag over the face for 20 minutes on and 10 minutes off. If swelling develops three to five days after surgery, this is most likely due to infection. In this case, continue with prescribed antibiotics and call your oral surgeon for instructions.

Pain medication: It is best to start the pain medications while local anesthesia is still in effect. Take medications with plenty of water. For additional pain relief, narcotic pain medication (Vicodin, Tylenol #3) may be supplemented with Ibuprofen (200-400 mg) or Tylenol, staggered every two hours. If nausea develops, discontinue the narcotic pain medication and take only ibuprofen (Advil, two to three tablets). It is normal for discomfort to last up to five to seven days, gradually decreasing each day.

An increase in pain three to five days after surgery without swelling is most likely due to localized inflammation from inadequate oral rinses. In this instance, increase oral rinses aggressively every two to three hours. However, increase in pain with swelling is most likely a sign of a developing infection. Continue your antibiotics and pain medications as prescribed and call you oral surgeon for instructions.

Antibiotics: Begin the prescribed antibiotics as soon as possible. Take them with plenty of water and food. You must complete the course of antibiotics until finished. Follow the suggested dosage and frequency (at night while asleep, keep as close as possible to your dosage time). If you develop hives, rashes, or itching, discontinue antibiotics, take Benadryl (25-50 mg) and repeat every six hours until resolved, and call your oral surgeon.

Diet: Drink plenty of fluids such as orange or tomato juice, ginger ale, water, tea, etc. Drink at least six to eight glasses of liquids daily to avoid dehydration. DO NOT USE A STRAW. This will cause bleeding by creating suction in the mouth. Soft diet is recommended for three to five days. Chew on the opposite side of the surgical site if possible. A soft diet high in protein and carbohydrates is best. Homemade eggnog, using fresh milk, eggs, and fresh fruit blended into it, is an excellent source of both. We also recommend soups, soft pasta, soft rice, Jello, soft boiled eggs, yogurt, soft cereals, and mashed potatoes. Avoid hard or crispy foods for five to seven days. If bowel habits are irregular, we suggest you take a mild laxative such as Milk of Magnesia.

Smoking: Avoid smoking for at least 72 hours after surgery to prevent immediate complications such as bleeding. For proper healing, avoid smoking for 10 to 14 days to prevent healing complications such as infection, dry socket, or incomplete closure of the surgical site.

Bleeding: Bleeding gradually diminishes in three to four hours after surgery and often stops completely in four to six hours. Occasionally, it may ooze until the next day. Remove the gauze sponges that have been placed in your mouth one hour after surgery. Replace with a clean gauze and bite or press down with pressure. Repeat every 30 to 45 minutes until bleeding stops.

If there is continued bleeding after six hours, do the following. Place a folded gauze pad directly over the extraction socket. Bite down firmly and hold for 30 minutes. Sit upright and remain quiet. Repeat every 30 to 45 minutes as necessary. If bleeding continues, dip a caffeinated tea bag in cold water and place directly over the extraction site. Avoid spitting or using straws, as they cause bleeding by creating suction in the mouth. If you are still unable to control the bleeding, call your oral surgeon.

Nausea: One ounce of carbonated water every hour for four to six hours will usually terminate nausea. Coca-cola syrup may also be taken, two tablespoons every four to six hours. Ginger ale and ginger tea also relieve nausea and vomiting. Follow this with mild tea or clear soup. If nausea persists, antihistamines or a Compazine suppository may be helpful. Call your oral surgeon for more information.

Oral Hygiene: Do not rinse or brush on the evening of surgery. On the next day, begin frequent oral rinses with warm salt water or plain tap water, every two hours, especially after meals. You don't have to wake up in middle of the night to rinse. Continue this for 10 to 14 days. You can brush your teeth as usual, but avoid the site of surgery or be very gentle in that area. After the first 24 hours, you may be more aggressive with oral rinses. A special irrigating syringe may be used to improve cleansing, if necessary. The key benefit of rinsing is washing away of plaque and food, therefore salt or regular water equally work well. Avoid the use of alcohol-containing mouth washes for seven days.

Do Not Be Alarmed by the Following

Loose sutures: Sutures can loosen after the surgery. This is expected in five to seven days but occasionally may occur in two to three days after surgery. Continue with aggressive oral rinses and medications as prescribed until you are seen during your routine post operative visit. Also don't be concerned if sutures come off completely, even if accidentally swallowed. It will not cause harm. Continue with rinses and contact your oral surgeon for any additional recommendations.

Bruising: Bruising after surgery may occur and will present itself as purplish, bluish skin color, gradually changing to brown and yellowish. It gradually resolves in five to seven days as it moves down the neck and chest area.

Opening of incision site: A small opening may occur at the incision site (over extraction socket, implant site, biopsy site, grafted site, etc.) Continue with aggressive oral rinses and medications as prescribed. Continue with a soft or liquid diet and treat the site very gently.

Bone graft material: If a site has been grafted, on occasion, you might notice loose small granules in the area. This is not a problem. Continue with oral rinses and a soft diet.

Whitish tissue: White film over the surgical site might be either plaque or a variation of healing tissue color. Continue with aggressive oral rinses to remove plaque build-up.

Bleeding: Bleeding decreases gradually over three to four hours after surgery and often stops completely in four to six hours. Apply pressure by biting down or placing finger pressure on gauze. A tea bag can also be applied over the surgical site with pressure. Occasionally, some slight bleeding may occur up to 12 hours after surgery; continue with the same instructions. If bleeding increases six to eight hours after surgery, call your oral surgeon.

Drowsiness: Drowsiness is often the result of IV sedation or narcotic pain medications. On occasion, it may last several days, along with weakness. You might decide to change pain medication to non-narcotic, over-the-counter medications such as Advil or Tylenol.

Nutrition For Better Healing

Good nutrition has clearly demonstrated beneficial effects on the immune system and healing process. Better nutrition can also help the incisions heal. Your diet and nutritional supplements will provide the raw materials your immune system needs to protect you against infection. These same nutritional elements are what your body will use to repair your skin, nerves, blood vessels, muscle, and bone. Getting good nutrition will help you make the best of your surgery. Here are some tips and essential nutrients important for healing.



- Calorie needs: 15 to 20 calories per pound of body weight.
- Drink six to eight cups of water per day to avoid dehydration.
- Drink **ginger ale or ginger tea** which provide relief from nausea and vomiting.
- A diet high in protein and carbohydrates is best.
- **Soups** provide great nutrition and help restore water balance to keep blood pressure under control.
- **Yogurt** is a huge source of calcium and boosts the body's ability to build bone. Sometimes women who take antibiotics get yeast infections. Eating a cup of yogurt everyday helps prevent yeast infections.
- **Oatmeal** is a source of beta-glucans which reduce the risk of infection after surgical procedures and boost immunity.
- **Beans** contain a wider variety of healthy nutrients than most foods, including calcium, potassium, vitamin B6, magnesium, folate, and alpha-linolenic acid. These nutrients work together on several key areas of the body to promote total health.
- **Fish** is an excellent source of Omega-3 fatty acids, vitamins, and minerals that benefit your general health.
- Eat soft pasta, rice, Jello, soft-boiled eggs, mashed potatoes, ice cream, and smoothies. Smoothies are easy to make and are full of healthy vitamins and nutrients.
- If bowel habits become irregular, take a mild laxative such as Milk of Magnesia. Papaya and lentils can also help prevent constipation.

- **Protein** helps with healing, tissue repair and re-growth. It is found in meat, poultry, fish, eggs, milk, and cheese.
- **Carbohydrates** provide energy for healing and preventing protein and muscle breakdown. They are found in fruits, vegetables, beans, breads, cereals, rice, pasta, and grains.
- **Lipids (fats)** help with absorption of some vitamins, enhance immune response, and increase energy. They are found in oils, nuts, seeds, avocado, salad dressings, or butter.
- **Calcium** helps to build and maintain bones and muscle contraction. It is found in milk, cheese, yogurt, soy products, turnip and mustard greens, broccoli, and almonds. Recommended daily dose is 1500 mg.
- **Iron** helps formation of hemoglobin and increases its oxygen-carrying capacity. It is best when taken with Vitamin C-rich foods. It is found in liver, lean red meat, poultry, fish, beans, dark leafy greens, and dried fruits. Recommended daily dose is 15 mg.
- **Zinc** is important in wound-healing and is a component of many enzymes. It is commonly found in meat, liver, eggs, and seafood. Recommended daily dose is 15 mg.
- **Vitamin A** helps wound-healing, as well as maintenance of skin. It is found in carrots, sweet potatoes, dark yellow or green leafy vegetables (i.e. spinach and broccoli), milk, cheese, liver, and egg yolk. The recommended daily dose is 5000 IU.
- **Vitamin D** helps in bone healing and calcium absorption. It is found in fortified milk, butter, fortified cereals, liver, fatty fish (salmon), and egg yolk. The recommended daily dose is 400-800 IU.
- **Vitamin E** has antioxidant and disease-fighting properties. It is found in vegetable oils, beef liver, milk, eggs, butter, green leafy vegetables, and fortified cereals. The daily recommended dose is 30 IU.
- **Vitamin K** helps wound healing and blood-clotting. It is found in green leafy vegetables, fatty fish, liver, and vegetable oils. The daily recommended dose is 65 ug.
- **Vitamin C** helps the body build connective tissue and is an essential nutrient for healing. It is found in citrus fruits, strawberries, tomatoes, peppers, greens, raw cabbage, and melon. The daily recommended dose is 60 mg.

Smoothie Recipes For A Healthy Soft Diet

Banana Fruit Smoothie

- 1 cup orange juice
- 2 cups plain yogurt
- 4 small bananas
- Honey to taste

Mango Pineapple Smoothie

- 1 cup pineapple juice
- 1 cup orange juice
- 1/2 frozen banana (chunks)
- 1 cup pineapple sherbet
- 1 1/2 cups frozen mango slices

Easy Blueberry Smoothie

- 1 cup frozen blueberries
- 8 oz fat free yogurt
- Milk to thin

Papaya Smoothie

- 1/2 cup orange juice
- 3/4 cup peeled, seeded and chopped ripe papaya
- Honey to taste
- 1/2 cup ice



Place ingredients in a blender on high speed for 30 seconds.
Add ice as needed and blend until smooth.

Researching the Right Dentist

Your choice of a dentist is probably the single most important decision you will make. The most appropriate dental specialist for performing wisdom teeth surgery is an oral surgeon who is specifically trained for this procedure. There are several ways to find an oral surgeon that meets your needs and personality.

Your dentist can recommend an oral surgeon that he or she has had great experience with and knows, and trusts. You might also get personal recommendations from family members, friends, or co-workers who have had the surgery. Online research has become an increasingly popular way to find dentists, and provides helpful information about their practices, in addition to patient reviews. In some instances, your general dentist may have decided to perform the wisdom teeth surgery.



Just how do you decide? How can you be certain that you have chosen the right dentist or oral surgeon?

Here are some questions to ask to help you make the right choice:

Q: Are you an oral surgeon?

An oral surgeon is the only dental specialist trained specifically in extraction of third molars. Most have treated thousands of patients, so you can be certain that you are in the hands of an expert.

An oral surgeon is the most appropriate dentist to perform wisdom teeth extractions.

Here are the key reasons why you would want to select an oral surgeon to perform your surgery:

- Oral surgeons are the only dental specialists who can provide IV sedation anesthesia in the office.
- Oral surgeons can perform the procedure faster and more conservatively, which translates into less pain, less swelling, and fewer overall complications.*
- Oral surgeons use special instruments and equipment designed for extraction, making it safe, and easier to perform.
- Oral surgeons have the knowledge, experience, and ability to handle challenges, complications, or unusual circumstances that may arise.
- Oral surgery offices are equipped with proper surgical equipment and staff who are specifically trained for surgical procedures, creating a safe environment.

Q: How many wisdom teeth patients do you treat every week?

Some dentists may have specific interests and experience with wisdom teeth extraction and although not oral surgeons, may perform the procedure with same predictability. However, this level of experience requires a dentist to treat at least three to five wisdom teeth patients a week. Be cautious -- ask if wisdom teeth surgery is an occasional procedure for them or something they do routinely. Also, your choice of anesthesia may be limited to local anesthesia only, which means you'll be awake throughout the procedure.

Choosing the right dentist with experience in wisdom teeth surgery is one of the most important factors in achieving predictable results and recovery.

* Recovery is correlated to impaction type, degree of difficulty, level of invasiveness, surgical technique, length of surgery, and patient's physiology.

Q: What anesthesia options do you offer?

Decide whether you want to be asleep or awake for the procedure. More than 98 percent of patients choose IV sedation for wisdom teeth surgery, as offered by almost all oral surgeons. The alternative is being awake with the use of local anesthesia (numbing) only. The decision about the type of anesthesia is often based on the complexity of the surgery, as well as the level of the patient's anxiety.

Q: How long does the surgery take?

In most patients, extraction of all four wisdom teeth takes 20 to 30 minutes when performed by an experienced oral surgeon. The increase in surgical time may contribute to additional pain and swelling following extractions. Depending on the level of experience, staff support, and type of instruments, treatment time may increase to 45 to 60 minutes or more if performed by a dentist other than an oral surgeon.

Q: What formal training do you have?

Oral surgeons receive four to six years of formal surgical training in hospital-based residency programs. Some dentists may take courses on extractions. These courses vary in duration and intensity, from a short weekend course to a series over a year or more. The majority of courses are classroom style and do not provide surgical training to the participants. If your dentist is not an oral surgeon, ask about the extent of his or her training.

Q: If your general dentist has decided to do the surgery, ask about his or her rational for not recommending to a specialist.

If the response is, "I can do it as well as the specialist with the same result," then ask about the difference in care between a general dentist and an oral surgeon. If the rational is, "They are more expensive," ask why. If the response is, "You don't need to be asleep; you'll be fine with just getting numbed," inquire why and how anesthesia will benefit you. Get informed.

How Much Does It Cost?

The overall cost of wisdom teeth surgery depends on the following factors:.

Number of wisdom teeth:

There are usually four wisdom teeth that are best extracted at the same time. You may have extractions completed in two or more phases, based on finances. But this can increase the overall cost due to repeated anesthesia services.

(Note: The following fees may vary based on location, practice type, surgeon's expertise, and service. They only represent a range of fees as reported by a fee-analyzing company.*)

Types of anesthesia:

Anesthesia	Description	Range of Fees*
IV Sedation (first 30 minutes)	Controlled state of sleepiness, most common approach	\$314-\$608
Nitrous Oxide	Light headedness & relaxation	\$95-\$175
Local Anesthesia	Numbing only	No fee; included in the extraction fee

Type of impaction (tooth position):

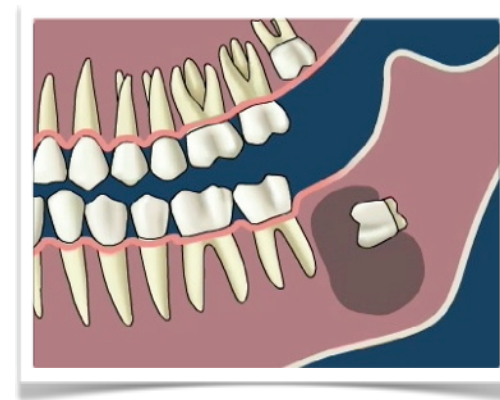
Type of tooth impaction is determined from X-rays.

Impaction Type	Description	Range of Fees*
Non-impacted	Tooth is visible & completely erupted	\$242-\$357 / tooth
Soft Tissue	Tooth is covered with gum tissue only	\$303-\$447 / tooth
Partial Bony	Tooth is partially in jaw bone and partially erupted	\$403-\$595 / tooth
Full Bony	Top of the tooth is at level with bone or completely covered	\$473-\$698 / tooth
Complicated Full Bony	Tooth is severely malpositioned and completely covered with bone	\$594-\$878 / tooth

* Source: Dental Customized Fee Analyzer 2010, Ingenix, Inc.

Complexities related to pathology or bone loss:

Wisdom teeth that present with cystic lesions and related bone loss require removal of the cyst and grafting, as needed, to reconstruct the defect. The additional cost for the cyst removal and grafting is dependent on the size and amount of graft material needed. Discuss this in detail with your oral surgeon.



Type of dentist:

The specialty care provided by an oral surgeon will generally come with higher fees than general dentists, but not significantly.

Type of practice and service provided:

Fees may also reflect the type of practice and level of service provided. You will find that there is a wide range. You will immediately know what type of practice it is in the first few minutes of your telephone conversation. An office that is clean and organized, with a friendly receptionist, knowledgeable staff, a personable doctor, available information, a high degree of attention to details, and that runs on time, and is usually a well-run practice. A service-oriented office like this does not necessarily cost more.



Consultation and X-rays:

A consultation fee may be charged if it takes place on a different day than your surgery. Consultation fees range from \$95 to \$150. Some offices provide no-fee consultations while others may credit the charge toward the cost of your surgery. Panoramic X-ray fees range from \$95 to \$134, and office CT scans may be \$250 to \$400.*

* Source: Dental Customized Fee Analyzer 2010, Ingenix, Inc.

Insurance and Payment Options

Paying for wisdom teeth surgery can be a challenge for many people. Most offices offer various insurance and payment options to make surgery possible. Here is some helpful information about insurance and payment options:

Insurance

Wisdom teeth extraction and anesthesia are usually considered under dental insurances as basic services. Your benefits can vary greatly based on the type of insurance plan, exclusions, and annual limits. Most insurance plans are PPOs that provide you the option to visit both a participating and non-participating oral surgeon. Depending on the plan, the benefits and out-of-pocket expenses may not be significantly different between using a participating and non-participating oral surgeon.

Most dental insurances provide you with a \$1,000 to \$1,500 maximum dental benefit annually, but this may vary. As basic services, wisdom teeth extraction and anesthesia are covered at 50 to 80 percent of a usual and customary rate (UCR) determined by your insurance company. There is also typically a \$50 to \$100 annual deductible. PPO plans will pay 50 to 80 percent of the usual and customary fee for procedures, up to your annual maximum benefits. In most cases, insurance does not adequately cover the entire fee and the patient will be responsible for the co-payment and any amount not covered. Benefits for X-rays may be limited to once every three years.

Insurance companies do not guarantee coverage and make no promises until the surgery has been completed and claims have been submitted. A pre-authorization can provide you with more detailed benefits, however, it usually takes four to six weeks to process these requests.

Wisdom teeth and anesthesia are considered basic services under most dental insurances which typically offer up to \$1,000-\$1,500 annual benefits.

Medical insurances may offer coverage for wisdom teeth that are impacted or associated with significant pathology such as cysts, but this is rare.

Your insurance may offer similar benefits whether you choose a participating or non-participating oral surgeon. It is best to choose an oral surgeon based on his or her skill, treatment style, and confidence, rather than on participation status with a particular insurance company.

Payment plans

Some offices may offer multiple payment plans, either internally through the practice or externally through a health finance company. Patients can choose payment plans that best meet their needs, from two to 12 months or more, if necessary. Most finance companies offer several different interest-free monthly payment plans for qualified applicants. If approved, no payment will be necessary on the day of your surgery. Qualification requires a short and simple application and credit check.

Some offices offer interest-free three- to 12-month payment plans through health finance companies.

Flex spending/health savings account

If available, set aside pre-tax dollars through your work into a health savings account that can be used for medical or dental expenses.

Whatever plan is right for you, the most important decision you will make is choosing the right surgeon in order to have your wisdom teeth removed and prevent serious problems to your overall health.

Final Words of Wisdom

Remove wisdom teeth early before they cause problems.

Seek care from an oral surgeon whenever possible.

Obtain clear instructions for before and after the procedure.

Choose the IV sedation form of anesthesia.
You'll be happy you did.

Following the procedure rinse often, eat healthier, and follow your doctor's instructions.



About the author:

Dr. H. Ryan Kazemi is an oral and maxillofacial surgeon certified by the American Board of Oral and Maxillofacial Surgeons. He received his dental degree from the University of Pennsylvania, School of Dental Medicine in 1990. Following a one-year internship at the Albert Einstein Medical Center in Philadelphia, he pursued surgical training at The Washington Hospital Center in Washington, D.C., where he received his certificate in Oral and Maxillofacial Surgery. Dr. Kazemi has practiced in Bethesda, Maryland, since 1997, providing a full spectrum of oral and maxillofacial surgery procedures with emphasis on extractions, dental implants, bone grafting, and corrective jaw surgery.

Dr. Kazemi is a diplomat of the American Board of Oral and Maxillofacial Surgeons, and an active member of the American Association of Oral and Maxillofacial Surgeons, American College of Oral and Maxillofacial Surgery, Academy of Osseointegration, American Dental Association and Entrepreneur Organization.

He has served as the founder and president of several dental and implant study clubs in the Washington, D.C. area. Dr. Kazemi has published and lectured extensively on dental implants, bone grafting, and practice management. His newsletter, *To-The-Point*, is read by more than 2,000 dentists every month. He is also the founder of DDSForums.com, a professional networking site for dentists.

Dr. Kazemi serves on the medical staff for D.C. United, the major soccer league team in Washington, D.C., and the U.S. national soccer team, for the care of their athletes. He is a passionate triathlete, having completed more than 150 races, including five Ironman competitions.

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Resources

Check out our website for educational resources on various oral surgery procedures:

- Video Podcasts
- Dr. Kazemi's Blog
- E-newsletter
- Patient Reviews
- Success Stories
- Current Topics
- Case Reports
- Reference Articles
- Upcoming Seminars
- Detailed Brochures

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Other Procedures

Dr. H. Ryan Kazemi also specializes in the following procedures

- Dental Implants
- Bone Grafting
- Corrective Jaw Surgery
- Oral & Facial Trauma
- Oral & Facial Pathology
- Office Anesthesia (IV Sedation)

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THE WISE GUIDE TO WISDOM TEETH EXTRACTION

Praised by patients, parents, dental and medical professionals, this book provides clear and concise information about wisdom teeth extraction:

- When and why is it necessary to extract wisdom teeth?
- Common mysteries, misconceptions, and facts about wisdom teeth
- Best approaches and techniques for a speedy healing and recovery
- Ideal age for extraction of wisdom teeth
- Anesthesia options, techniques and recovery
- How to treat wisdom teeth pain and infection
- What to expect before, during and after surgery
- How to find the right dentist for best results
- Post operative care and nutrition
- Fees, insurance, and payment options
- And much more

"In my 25 years of practice, I have yet to find anything as comprehensive and precise on third molar surgery. This book is a MUST READ for doctors and patients alike"

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"WOW! you really did a great job for an in depth education to the general public on such a universal treatment. As busy practicing dentists there is not enough time to inform our patients of all the issues when referring for wisdom teeth extractions, but for the concerned parent this is a great resource for understanding and confidence that they are doing the right thing for their child. I will reference this web site to all my patients that I recommend wisdom teeth extractions. Thanks for a great contribution!"

-- **Dr. Vincent Prestipino- Prosthodontist, Bethesda, MD**



The author, Dr. H. Ryan Kazemi, is a board-certified oral and maxillofacial surgeon in Bethesda, Maryland. He is a noted speaker and clinician on wisdom teeth, dental implants, bone grafting, and practice management. In this book, he describes his techniques, evidence-based recommendations, treatment approaches, and experiences for optimal results.

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