

# The Wisdom of Wisdom Teeth Removal

Ronald Achong, M.D., D.M.D.

Ruben Cohen, D.D.S.



Lico Publishing 1541 South Robertson Blvd Los Angeles, CA 90035

# The Wisdom of Wisdom Teeth Removal

By: Dr. Ronald Achong & Dr. Ruben Cohen

Copyright 2014 by Ronald Achong. M.D., D.M.D. & Ruben Cohen. D.D.S.

ALL RIGHTS RESERVED under International and Pan-American Copyright Conventions. Except for brief quotation in reviews or articles, no part of this book may be reproduced by any means.

Inquiries should be addresses to:
Lico Publishing
1541 South Robertson Boulevard, Los Angeles, CA 90035

First Edition 2014 Cover design: Chad Carpenter. Inside design: Chad Carpenter and RoseMary H. Cohen

Contact the authors:

Dr. Ronald Achong: <a href="mailto:rachong1@gmail.com">rachong1@gmail.com</a>

Dr. Ruben Cohen: rcohen@ParkAvenueFaces.com

ISBN: 978-0-9667361-7-5

DISCLAIMER: The information provided in this book is not intended as a substitute for professional medical advice, diagnosis or treatment. It is provided to help you communicate effectively when you seek the advice of your oral and maxillofacial surgeon.

# **Table of Contents**

Removal of Wisdom Teeth: A Wise Move?	4
Why Should Wisdom Teeth Be Removed?	. 4
When Should Wisdom Teeth Be Removed?	5
Cavities, Pain and Infection	. 7
Gum Disease and Wisdom Teeth	. 8
Wisdom Teeth and Dental Crowding	. 8
Pathology	8
The Health of the Second Molar	. 10
Age and Wisdom Teeth	10
How Are Wisdom Teeth Removed?	10
X-rays, Imaging and Oral Surgery	. 12
Anesthesia and Oral Surgery	. 13
Benefits of Office-Based Anesthesia	. 14
Post-Op Instructions	. 14
You've Made It through the First Day. Now What?	. 15
Things to Avoid Post-Op	15
Risks of Removing Wisdom Teeth	16
Conclusion	17
Frequently Asked Questions	17
About the Authors	19
References	21

#### Removal of Wisdom Teeth: A Wise Move?

Your dentist probably has been telling you for years to have your wisdom teeth removed, but you may be hesitant to have the procedure done for a multitude of reasons: you may have heard horror stories from friends or colleagues, you may be anxious about surgery, you may not know what's involved, or you may think that you can continue to wait since your wisdom teeth are not causing pain.

Several factors need to be considered when evaluating wisdom teeth: the health of the second molar (which sits right in front of the wisdom tooth), the presence of gum disease, the age of the patient, and the risk of dental crowding.

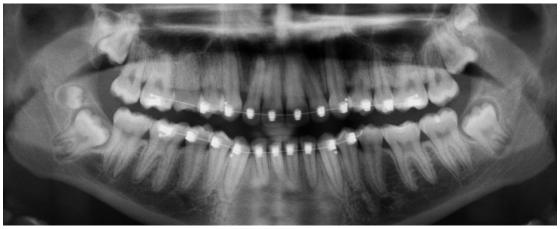
Your dentist's recommendation to have your wisdom teeth removed probably is correct. In this book, the authors — both of whom have many years of experience in evaluating and removing wisdom teeth — will describe what wisdom teeth actually are, reasons to have wisdom teeth removed, how they are removed, and what to expect after surgery. In short, this is a guide for patients considering or planning to have their wisdom teeth removed. The process is usually quick and easy, and most patients are pleasantly surprised by how smooth the whole experience really is.

## Why Should Wisdom Teeth Be Removed?

One reason for the removal of wisdom teeth is lack of space in the jaws. Often, our jaws are not wide enough to accommodate all of the wisdom teeth. This results in overcrowding and misaligned teeth. Patients can also experience an unpleasant smile, or develop gum disease, cavities, infections and pain.

The average jaw has room for only fourteen teeth, but most adults have sixteen teeth on the top jaw and sixteen on the lower jaw for a total of thirty-two teeth. The four additional teeth, which are the last teeth in the back of the jaw, are the third molars, commonly known as "wisdom teeth."

All four wisdom teeth do not always develop. Most individuals have a total of four wisdom teeth in their mouth; however, others may have fewer or more than four. Some lucky people have none, and some unlucky people have more than four. Look at the x-ray below and guess how many wisdom teeth are in this patient. The answer is seven: two on the top right, two on the top left, one on the lower left, and two on the lower right.



**Figure 1:** X-ray showing 7 wisdom teeth in a patient

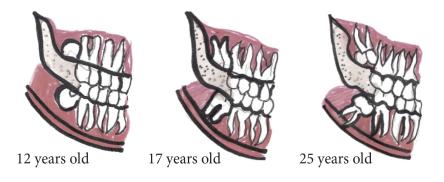
Each tooth has a specific name and each tooth has a specific function. The front teeth (incisors, canines and bicuspids) are used to bite into food, while the back teeth, called molars, are used to chew food. Technically, wisdom teeth are called third molars; they are usually non-functional and provide no cosmetic benefit. A number of studies have defined the development and eruption pattern of third molars. The lower wisdom tooth bud is usually visible on x-ray by the age of nine. The crown of the wisdom tooth is usually formed completely by age fourteen, and the roots are approximately 50 percent formed by age sixteen.

When a tooth is unable to fully grow through the gum and enter the mouth, it is referred to as an "impacted" tooth. In general, impacted teeth are unable to break through the gums because there is not enough space present. The most common impacted teeth are wisdom teeth.

Most wisdom teeth do not erupt into the mouth and instead become impacted , or unerupted. It is important to remember that the eruption of wisdom teeth is usually complete by the age of twenty, so if they are not visible by that age, one or more of the teeth may be impacted.

#### When Should Wisdom Teeth Be Removed?

The optimum time to remove wisdom teeth is in your teenager years. Look at the x-rays below that show the growth of the wisdom teeth at various ages. Wisdom teeth are easier to remove when patients are younger, since the roots are not completely formed, the surrounding bone is softer, and there is less chance of damaging nearby nerves or other structures. Removal of wisdom teeth at a later age becomes more complicated because the roots are fully developed, the roots grow closer to the mandibular nerve, and the resulting defect (from the removal of the wisdom tooth) may be so large that a bone grafting procedure may be needed to fix the defect.



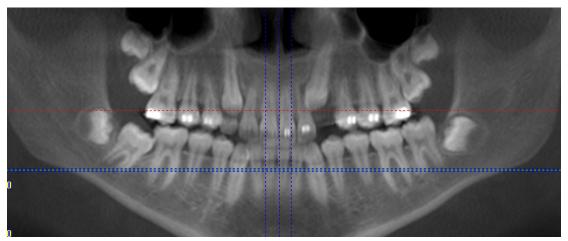


Figure 2: X-ray showing the development of wisdom teeth on a 12 year-old patient

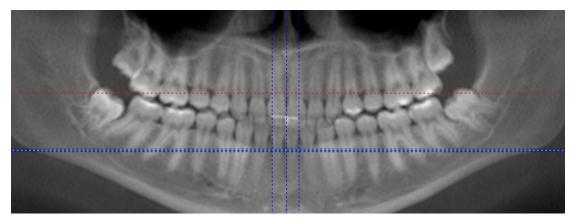


Figure 3: X-ray showing the development of wisdom teeth on a 15 year-old patient

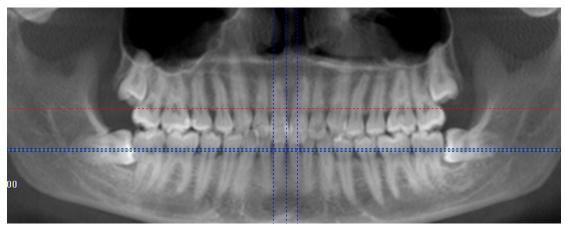


Figure 4: X-ray showing the development of wisdom teeth on a 23 year-old patient

## **Cavities, Pain and Infection**

It is challenging to maintain good oral hygiene near wisdom teeth. Subsequently, food becomes trapped around the wisdom teeth. The food will attract bacteria that can cause cavities in both the wisdom teeth and the second molars.

When wisdom teeth erupt through the gums, pain can be felt in the back of the mouth, making it difficult to chew and speak. As the teeth try to erupt through the gums, food may get trapped around these erupting teeth. This area becomes a magnet for bacteria, causing the wisdom tooth and the surrounding area to become infected. This chronic infection can lead to an abscess. Such an abscess can grow significantly within hours, causing severe swelling of the face and neck. This situation can be life-threatening if not treated immediately and may require hospitalization for intravenous antibiotics and surgical drainage.

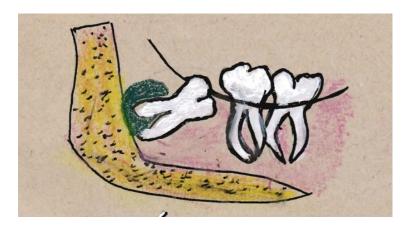


Figure 5: Illustration showing an infection (green) at the roots of the wisdom tooth

#### **Gum Disease and Wisdom Teeth**

Another factor to consider in the removal of wisdom teeth is the depth of the gum pocket behind the second molars. A gum pocket depth of five millimeters or more can compromise the second molars. These pocket depths have been shown to increase over time and attract bacteria that cause gum disease. Therefore, impacted wisdom teeth can have a detrimental effect on the health of the gums. Notably, the bacteria count around the molars has been shown to decrease after removal of wisdom teeth.

After wisdom teeth are removed, the holes left behind in the jaw bone can have a detrimental effect on the second molar, which is right in front of it. Some surgeons advocate packing bone in that hole to improve the health of that second molar. This procedure, known as bone grafting, prevents a defect from developing behind the second molar, especially in adults twenty-six years of age or older with pre-existing gum disease. Bone grafting will preserve the health and integrity of the bone and the second molar.<sup>5</sup>

It is also important to note the effect of wisdom teeth on gum disease and inflammation. Even pregnant women whose wisdom teeth show no signs of distress tend to experience more problems than women whose wisdom teeth have been removed.<sup>6</sup> In short, the mere presence of wisdom teeth tends to cause inflammation, which can negatively impact physical health, including pregnancy outcomes.

### **Wisdom Teeth and Dental Crowding**

While patients and dentists are always quick to blame wisdom teeth for dental crowding, a definitive and clear correlation between wisdom teeth and dental crowding is difficult to determine. Dental crowding is caused by a variety of conditions, and while wisdom teeth may play a significant role in some patients, a direct effect is difficult to establish conclusively. It is commonly believed in the dental community that pressure from erupting wisdom teeth will cause shifting of the remaining teeth, which may eventually disrupt the natural alignment of teeth, and adversely affect your smile.

## **Pathology**

Cysts or tumors may form around an impacted wisdom tooth causing destruction of the adjacent jawbone and teeth. Removal of the offending impacted wisdom tooth

or teeth usually remedies this problem. Early removal is recommended to avoid future problems and to decrease the surgical risk.

A cyst can form around a wisdom tooth, as shown in Figure 6 below. This patient is in his late fifties and this cyst was found on a routine panoramic x-ray. The cyst is large in size and is affecting the lower right second molar and the wisdom tooth. Note also the amount of bone that has been destroyed by the cyst, which is represented by a dark area around the crown of the wisdom tooth. To minimize such damage, it is recommended that patients with wisdom teeth have an x-ray of the upper and lower jaws taken every few years.

This patient had the cyst removed along with the involved wisdom tooth and the second molar. Six months later, the area from which the cyst was removed has healed well and new bone has formed.

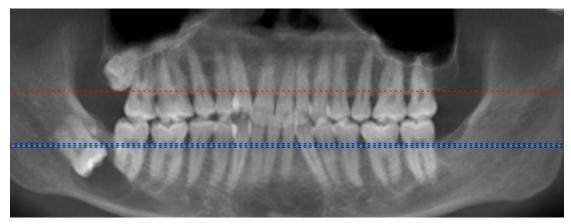


Figure 6: X-ray showing a cyst (black shadow) around the crown of the lower right wisdom tooth

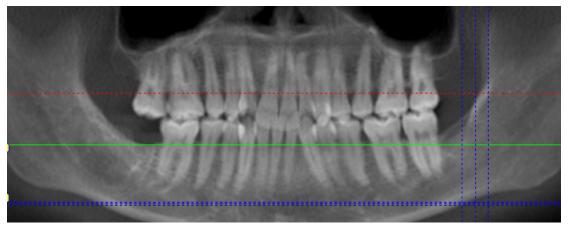


Figure 7: X-ray of the same patient, taken 1 year after removal of the cyst and teeth

#### The Health of the Second Molar

Second molars are important functioning teeth used to grind food. They are located immediately in front of the wisdom teeth. When evaluating wisdom teeth, it is important to evaluate the health of the second molars to determine if they are compromised by the position of the wisdom teeth. Wisdom teeth can grow in a variety of positions. Sometimes they erupt straight up like the rest of the teeth, but other times they will grow sideways or toward the second molars. Research has shown that the ligament surrounding the second molars and their roots can be negatively affected by wisdom teeth, especially as the patient gets older.<sup>7</sup>

## **Age and Wisdom Teeth**

Numerous studies have shown that older adults who still have wisdom teeth have a higher risk of complications. They have a higher risk of gum defects around the second molar. The incidence of cavities on wisdom teeth also increases with age. The risk of complications after surgery and the recovery time both increase with age, especially in patients twenty-five years of age and older. 10

Therefore, early removal of wisdom teeth (when the teeth have hardly any of the roots formed) has been shown to result in very predictable and successful outcomes, with hardly any gum pockets, dry sockets, nerve injury or infections developing post-operatively.<sup>11</sup>

Alternatively, it is well documented that there is increased difficulty and an increased risk of complications when removing wisdom teeth later in life.<sup>12</sup>

#### **How Are Wisdom Teeth Removed?**

Some of you may be curious about how impacted wisdom teeth are removed. How does the oral surgeon get down into the bone and remove a tooth that is deep under the gums and surrounded by bone? The following diagrams will clearly explain these procedures.

Wisdom teeth can be present in various configurations: tilted forward, straight up, tilted backwards, or sideways.

1. A wisdom tooth that is tilted forward: When removing an impacted wisdom tooth that is tilted forward, a surgical drill is used to create a small trough around the crown of the tooth. This provides space to allow removal of the tooth. The back part of the tooth is sectioned off and then gently removed. The tooth is loosened with an instrument. Afterwards, the tooth is then rotated back and out of the extraction socket.

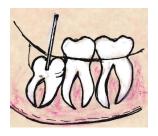


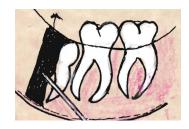




Figure 8: Removal of a wisdom tooth tilted forward

2. A wisdom tooth that is in the straight up position: When removing an impacted wisdom tooth that is straight up, a surgical drill is used to create a small trough around the crown of the tooth. This provides space to allow for the removal of the tooth. The tooth is then sectioned in half and each half is gently loosened with an instrument. Next, the back half of the tooth is removed out of the socket. This provides adequate room to allow removal of the front half of the tooth.







**Figure 9:** Removal of a wisdom tooth that is in the straight up position

3. A wisdom tooth that is tilted backwards: When removing an impacted wisdom tooth that is tilted backwards, a surgical drill is used to create a small trough around the crown of the tooth. This provides space to allow removal of the tooth. The crown of the tooth is sectioned off and then gently removed. The roots of the tooth are loosened with an instrument. The roots are then removed from the extraction socket.





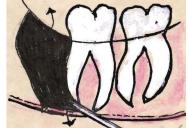


Figure 10: Removal of a wisdom tooth that is tilted backwards

4. <u>A wisdom tooth that is lying sideways:</u> When removing an impacted wisdom tooth that is lying sideways, a surgical drill is used to create a small trough around the crown of the tooth. This provides space to allow removal of the tooth. The crown of the tooth is sectioned off and then gently removed. The roots of the tooth are loosened with an instrument and removed one at a time.



**Figure 11:** Removal of a wisdom tooth that is lying sideways

## X-rays, Imaging and Oral Surgery

Traditionally, wisdom teeth have been evaluated by obtaining a panoramic x-ray. Such pictures give an excellent preliminary evaluation of someone's jaws, enabling the surgeon to detect the presence and position of wisdom teeth and to discover any cysts or other pathology. However, due to distortions present in the image, panoramic x-rays do not provide the amount of specificity and detail needed to properly plan and prepare for an actual surgery. Some oral and maxillofacial surgeons may order a cone beam scan, which is similar to a medical CAT scan in that it reveals minute details in a view that allows the surgeon to look at hundreds of individual slices of the scanned area, including three-dimensional images.

When planning the removal of wisdom teeth, one important consideration is the position of the mandibular nerve (the main nerve that is present inside the lower jaw) in relation to the roots of the lower wisdom teeth. This nerve often runs in close proximity to the lower wisdom teeth, and injury to it can cause temporary or permanent numbness of the corner of the mouth, chin and/or lower lip. While research suggests that the immediate risk of numbness after surgery is between 1 and 5 percent, and persistent numbness six months after surgery is less than 1 percent, it is always desirable to minimize the risk of any complications during surgery. <sup>13, 14</sup>

A cone beam scan allows the surgeon to view the position of the mandibular nerve in fine detail, evaluate the position of the second molar, and carefully plan the surgery. Just as surgeons who specialize in lung operations use both a chest x-ray and a CAT scan to plan procedures, oral and maxillofacial surgeons use both x-rays and a cone beam scan to minimize the risk of complications and trauma to the surrounding healthy tissue.

While the level of radiation exposure is always a cause for concern anytime someone gets an x-ray, it's important to note that cone beam scans can deliver as little as 0.087mSv of radiation, which is comparable to natural background radiation exposure for eleven days. In contrast, a typical CAT scan of the head delivers about 0.86mSv of radiation, which is comparable to natural radiation exposure for one hundred and eight days. 15

## **Anesthesia and Oral Surgery**

Before removing a wisdom tooth, the surgeon will administer a local anesthetic to numb the tooth to be removed and the surrounding gum. However, most patients prefer full-body sedation so that they are not awake during the procedure. In this section, different levels of anesthesia will be reviewed.

Oral and maxillofacial surgeons (OMS) are trained in all aspects of anesthesia administration. Following dental school, they complete at least four years of training in a hospital-based surgical residency program alongside medical residents in general surgery, anesthesia and other specialties. During this time, resident OMS serve on the medical anesthesiology service, where they evaluate patients for anesthesia, deliver the anesthetics, and monitor patients during and after surgery.

As a result of their extensive training, OMS are well prepared to appropriately administer not only local anesthesia but all forms of sedation and general anesthesia in an outpatient setting. They are experienced in airway management, endotracheal intubation, establishing and maintaining intravenous lines, and managing complications and emergencies that may arise during the administration of anesthesia.

Before scheduling your surgery, your oral surgeon will review all types of anesthetic available in order to meet your expectations. This is the time to discuss any concerns you may have about any facet of the procedure.

The following are various anesthetic options that may be used to control a patient's pain and anxiety. Most of these options are used in conjunction with local anesthesia.

**Local Anesthesia:** The patient remains totally awake and will be fully aware of everything during the procedure. A local anesthetic (e.g., lidocaine) is administered in the area where the teeth are to be removed.

**Nitrous Oxide:** This is also known as laughing gas. A mixture of nitrous oxide and oxygen is administered through a nasal breathing apparatus. The patient is awake but typically feels relaxed, even giddy, which usually lessens the uncomfortable sensations associated with the procedure.

**Intravenous Anesthesia:** Also known as "twilight sleep," this is when sedation medications are administered through an intravenous line, causing the patient to become calm and sleepy. The patient is less aware of the actual procedure and thus less able to remember it.

**General Anesthesia:** Sedation medications are administered through an intravenous line. The patient is completely asleep for the procedure and does not remember the procedure.

#### Benefits of Office-Based Anesthesia

The majority of oral and maxillofacial surgery procedures are performed in the office using one of the anesthesia options listed above. This treatment approach is convenient, safe and cost-effective. The comfortable, personalized setting of the OMS office minimizes waiting and recovery time, as compared to having the same procedure performed in a hospital outpatient surgery center. In addition, in-office procedures and anesthesia delivery are usually less expensive than similar care in a hospital or outpatient surgery center.

OMS offices are often accredited by state agencies or independent agencies — sometimes both — which also accredit and inspect hospitals and outpatient surgery centers. To confirm the accreditation of your oral surgeon's practice, ask the surgeon or office staff at the time of your appointment.

## **Post-Op Instructions**

During the first hour after the operation, bite down gently but firmly on the gauze packs that have been placed over the extraction areas, making sure they remain in place. Do not change them during this time unless the bleeding is not controlled. The packs may be gently removed after one hour. If active bleeding persists, place enough new gauze to obtain pressure over the extraction sites for another thirty minutes.

Do not disturb the areas where the teeth were removed. Do not rinse vigorously or probe the extraction areas with any objects. You may brush your teeth gently. *DO NOT SMOKE* for at least one week, since this is very detrimental to healing and may cause a dry socket.

*Bleeding:* Intermittent bleeding or oozing overnight is normal. Bleeding may be controlled by placing fresh gauze over the areas and biting on the gauze for twenty to thirty minutes at a time.

Bleeding should never be severe. If there is persistent bleeding, it usually means that the gauze packs are being clenched between teeth only and are not exerting pressure on the extraction areas. Try repositioning the packs. If bleeding persists or becomes heavy, substitute a tea bag that was soaked in very hot water, squeezed damp-dry, and wrapped in moist gauze. If bleeding still remains uncontrolled, call your oral surgeon's office or proceed to your local emergency room.

Swelling: Swelling often accompanies oral surgery. It can be minimized by using a cold pack, ice bag, or a bag of frozen peas wrapped in a towel and applied firmly to the cheek adjacent to the extraction area. Apply cold compresses to the face for the first twenty-four to forty-eight hours.

*Pain:* Wisdom-tooth removal is not a trivial undertaking. Most patients will experience some degree of discomfort after the procedure. Analgesics such as aspirin or ibuprofen may be sufficient to relieve this discomfort. Sometimes stronger prescription pain medications may be needed. Your oral surgeon will usually prescribe pain medications to use after the surgery.

## You've Made It through the First Day. Now What?

Mouth Rinses: Keeping your mouth clean is essential to healing. Use 1/4 teaspoon of salt dissolved in an eight-ounce glass of warm water and gently rinse out your mouth. You can repeat this as often as desired, but do it at least twice daily. Three times is better.

*Brushing:* After the first day, resume your normal oral hygiene routine as soon as possible.

*Compresses:* Very warm compresses applied to the skin over the areas of swelling may be applied after the first forty-eight hours to soothe tender areas and decrease swelling and stiffness.

# Things to Avoid Post-Op

Avoid spitting for at least a week. Spitting can restart bleeding and lead to pain at the surgical site. If you feel the urge to spit (such as after brushing your teeth), take a sip of water and gently rinse your mouth and then let the water fall out of your mouth and into the sink.

Avoid using a straw for a week. Just like spitting, using a straw can restart bleeding and lead to pain at the surgical site (dry socket). If you want to have a smoothie or milkshake after surgery, eat it with a spoon or drink it out of a cup, but avoid straws.

Avoid solid foods for the first day. Start with clear liquids like water, apple juice or vitamin drinks. If these liquids are tolerated well, then advance to smoothies, milkshakes, protein shakes, ice cream, Jell-O or other nutritious cool liquids for the first twenty-four hours. For the rest of the week, have a soft diet (e.g., mashed potatoes, scrambled eggs, macaroni etc.). To avoid pain and bleeding, do not consume spicy or high-temperature foods; allow a hot soup or hot coffee to cool to room temperature before drinking it.

Avoid flossing around the surgical site. Brush your teeth gently with a soft bristle toothbrush. Rinse gently with an alcohol-free mouth rinse or salt water and then let the water fall out of your mouth and into the sink. Over-the-counter alcohol-free mouth rinses can be found at any pharmacy.

Avoid exercise for one week after surgery, as exercise can cause painful throbbing or bleeding where the teeth were removed. Rest is important after surgery.

Finally, to repeat, avoid smoking for at least a week. Nicotine decreases the amount of oxygen that blood delivers to the healing surgical site, thus delaying the healing process. In addition, smoke irritates the surgical site. Smoking is a double-barreled threat. It can delay healing and increase pain.

## **Risks of Removing Wisdom Teeth**

As with any surgery, there are risks associated with the removal of wisdom teeth. The most common risks are swelling, pain and bleeding. While uncommon, the additional complications listed below may happen during or after surgery:

- Pain and swelling at the gums and tooth socket where the tooth was removed.
- Bleeding that continues for more than twenty-four hours.
- Difficulty and pain when opening the jaw.
- Slow-healing gums.
- Damage to existing dental work, such as crowns or bridges, or to roots of nearby teeth.
- A painful inflammatory process, called dry socket, which happens if the protective blood clot is lost too soon or does not form.
- Temporary numbness in the mouth and lips after the local anesthetic wears off, due to injury or inflammation of the nerves in the jaw.

• An opening into the sinus cavity when a wisdom tooth is removed from the upper jaw.

There are other risks that can occur when removing wisdom teeth. Always discuss the risks of your specific surgery with your oral surgeon so that you know what to expect after your surgery.

#### Conclusion

While all patients do not need to have their wisdom teeth extracted, there are clear indications that warrant removal of wisdom teeth. The age of the patient, the presence of gum disease, the potential for dental crowding, and the long-term health of the second molars are all factors that must be considered when deciding if wisdom teeth need to be extracted.

## **Frequently Asked Questions**

Why can't my regular dentist remove my wisdom teeth?

At one time all dentists would remove wisdom teeth. But because of the difficulties associated with removing wisdom teeth, more and more dentists refer wisdom teeth removal to specialists, who in turn gave up their broader practice to specialize in wisdom teeth extraction.

Today, while simple and routine extractions can be performed safely by general dentists, impacted wisdom teeth are best treated by oral and maxillofacial surgeons, who remove impacted teeth routinely. Additionally, general dentists are usually equipped to utilize only local anesthesia or nitrous oxide, while oral surgeons are prepared to use twilight sleep, deep sedation or general anesthesia. These specialists have the extensive training and experience necessary to perform this procedure safely and with minimal trauma.

How long will it take to recover after my wisdom teeth are removed?

Some patients can have wisdom teeth extracted early in the morning and then perform a full day's work with little discomfort. However, most patients will need one to three days of rest before going back to school or work. Every procedure is different, and so is every patient, so it's best to allot up to seven days of rest following surgery. Swelling and pain will usually guide your recovery, but rest is always recommended immediately after the procedure.

What kind of anesthesia do most people choose?

Most patients choose to have their wisdom teeth extracted under twilight sleep (intravenous sedation with local anesthesia). Under this form of anesthesia, patients are relaxed, comfortable and stress-free, and have minimal memory of the procedure.

At what age should I have my wisdom teeth removed?

We recommend that wisdom teeth be extracted before the formation of the roots. This results in very predictable and successful outcomes, with hardly any gum pockets, dry sockets, nerve injury, or infections developing post-operatively. While the formation of roots will vary between patients, we recommend that patients have an initial screening x-ray performed by an oral surgeon by the age of fifteen to evaluate teeth eruption, position, and development.

My medical insurance doesn't cover routine dental work, but will it pay for dental surgery?

Possibly. Every plan is different, and state laws regulating what medical insurance plans cover vary from state to state. Before you have the procedure done, check with your insurance agent or company benefits official. Some plans will cover surgery that is deemed a medical necessity or that is performed under general anesthesia.

Most dental insurance policies cover the removal of wisdom teeth. Again, it's best to check prior to the surgery so you can make financial plans accordingly.

My parents never had their wisdom teeth extracted, so do I need to get mine removed?

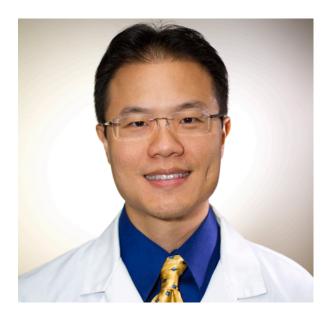
Whether or not either parent needed to have wisdom teeth removed has no bearing on their children's situation. Every person's dental makeup is unique. Therefore, every teenager or young adult should obtain a comprehensive exam to determine if wisdom teeth are present and if they need to be removed.

#### **About the Authors**

#### Ronald M. Achong, M.D., D.M.D.

Ronald M. Achong is an oral and maxillofacial surgeon specializing in the removal of teeth and sedation dentistry. Dr. Achong is a Board Certified Oral and Maxillofacial Surgeon. After graduating from college at the University of Toronto in Canada, he attended Harvard Dental School where he received his Doctorate in Dentistry. His Medical Degree was obtained at Louisiana State University Medical School, New Orleans, where he also completed his residency in Oral and Maxillofacial Surgery.

Dr. Achong has an active medical and dental license in the State of Florida; he also maintains a dental license in Canada.



Ronald M. Achong, D.M.D. Oral Facial Surgical Arts, P.A. 3180 Citrus Tower Boulevard Clermont, Florida 34711 (352) 243-5599

10437 Moss Park Road, Suite B, Orlando, Florida 32832

www. OralSurgicalArts.com www. NoMoreWisdomTooth.com

#### Ruben Cohen, D.D.S.

Born in France, Ruben Cohen grew up in Paris and Los Angeles. Dr. Cohen obtained his Bachelor's of Arts at Brandeis University, Waltham, Massachusetts. He then obtained his Doctorate of Dental Surgery at New York University College of Dentistry. He subsequently completed a research fellowship at Louisiana State University Health Sciences Center in New Orleans. He completed his residency in Oral and Maxillofacial Surgery at Allegheny General Hospital in Pittsburgh, Pennsylvania.

Dr. Cohen's practice focuses on the removal of teeth and the delivery of ambulatory anesthesia and sedation in adult and pediatric patients. He has appeared on television news programs discussing wisdom teeth extraction and has written articles on the safe extraction of wisdom teeth. He is the founder of Park Avenue Oral & Facial Surgery, P.C., Manhattan's premier oral and maxillofacial surgery practice, which opened in 2010. The office is newly renovated with state of the art equipment and is among the first oral surgery practices in Manhattan to be accredited as an ambulatory surgery facility by the American Association for Accreditation of Ambulatory Surgery Facilities, Inc.



Ruben Cohen, D.D.S. Park Avenue Oral & Facial Surgery, P.C. 970 Park Avenue New York, New York 10028 (212) 988-6725

www.ParkAvenueFaces.com

#### References

- 1. Blakey, G.H., R. D. Marciani, R.H. Haug et al.: Periodontal pathology associated with asymptomatic third molars. *Journal of Oral Maxillofacial Surgery* 60:1227, 2002.
- 2. White Jr., R.P., S. Offenbacher, G.H. Blakey et al.: Chronic oral inflammation and the progression of periodontal pathology in the third molar region. *Journal of Oral Maxillofacial Surgery* 64:880, 2006.
- 3. White Jr., R.P., P.N. Madianos, S. Offenbacher et al.: Microbial complexes detected in the second/third molar region in patients with asymptomatic third molars. *Journal of Oral Maxillofacial Surgery* 60:1234, 2002.
- 4. Blakey, G.H., M.T. Jacks, S. Offenbacher et al.: Progression of periodontal disease in the second/third molar region in subjects with asymptomatic third molars. *Journal of Oral Maxillofacial Surgery* 64:189, 2006.
- 5. Dodson, T.: Management of mandibular third molar extraction sites to prevent periodontal defects. *Journal of Oral Maxillofacial Surgery* 62:1213, 2004; Dodson, T.: Is there a role for reconstructive techniques to prevent periodontal defects after third molar surgery? *Journal of Oral Maxillofacial Surgery* 63:891, 2005.
- 6. Moss, K.L., S. Mauriello, A.T. Ruvo et al.: Reliability of third molar probing measures and the systemic impact of third molar periodontal pathology. *Journal of Oral Maxillofacial Surgery* 64:652, 2006.
- 7. Stanley, H.R., M. Alattar, W.K. Collett et al.: Pathological sequelae of "neglected" impacted third molars. *Journal of Oral Pathology & Medicine* 17:113, 1988; Nemcovsky, C., H. Libfeld, Y. Zubery: Effect of non-erupted third molars on distal roots and supporting structures of approximal teeth: a radiographic survey of 202 cases. *Journal of Clinical Periodontology* 23:810, 1996; Knutsson, K., B. Brehmer, L. Lysell, M. Rohlin: Pathoses associated with mandibular third molars subjected to removal. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology & Endodontology* 82:10, 1996.
- 8. Elter, J.R., S. Offenbacher, R.P. White Jr., J. D. Beck: Third molars associated with periodontal pathology in older Americans. *Journal of Oral Maxillofacial Surgery* 63:179, 2005; Moss, K.L., J. D. Beck, S.M. Mauriello et al.: Third molar periodontal pathology and caries in senior adults. *Journal of Oral Maxillofacial Surgery* 65:103, 2007.
- 9. Moss, K.L., J.D. Beck, S.M. Mauriello et al.: Third molar periodontal pathology and caries in senior adults. *Journal of Oral Maxillofacial Surgery* 65:103, 2007; Shugars, D.A., M.T. Jacks, R.P. White, Jr. et al.: Occlusal caries experience in patients with asymptomatic third molars. *Journal of Oral Maxillofacial Surgery* 62:973, 2004;

- Shugars, D.A., J.R. Elter, M.T. Jacks et al.: Incidence of occlusal dental caries in asymptomatic third molars. *Journal of Oral Maxillofacial Surgery* 63:341, 2005.
- 10. Mercier, P., D. Precious: Risks and benefits of removal of impacted third molars: a critical review of the literature. *International Journal of Oral Maxillofacial Surgery* 21:17, 1992; Bruce, R.A., G.C. Frederickson, G.S. Small: Age of patients and morbidity associated with mandibular third molar surgery. *Journal of the American Dental Association* 101:240, 1980; Phillips, C., R.P. White, Jr., D.A. Shugars, X. Zhou: Risk factors associated with prolonged recovery and delayed healing after third molar surgery. *Journal of Oral Maxillofacial Surgery* 61:1436, 2003; Bui, C.H., F.B. Seldin, T.B. Dodson: Types, frequencies, and risk factors for complications after third molar extraction. *Journal of Oral Maxillofacial Surgery* 61:1379, 2003
- 11. Chiapasco, M., M. Crescentini, G. Romanoni: Germectomy or delayed removal of mandibular impacted third molars: the relationship between age and incidence of complications. *Journal of Oral Maxillofacial Surgery* 53:418, 1995; Chossegros, C., L. Guyot, F. Cheynet et al.: Is lingual nerve protection necessary for lower third molar germectomy? A prospective study of 300 procedures. *International Journal of Oral Maxillofacial Surgery* 31:620, 2002.
- 12. Chiapasco, M., M. Crescentini, G. Romanoni: The extraction of the lower third molars: germectomy or late avulsion? [article in Italian] *Minerva Stomatol* 43:191, 1994; Bruce, R.A., G.C. Frederickson, G.S. Small: Age of patients and morbidity associated with mandibular third molar surgery. *Journal of the American Dental Association* 101:240, 1980.
- 13. Gulicher D., K.L. Gerlach: Sensory impairment of the lingual and inferior alveolar nerves following removal of impacted mandibular third molars. *International Journal of Oral Maxillofacial Surgery* 30:306, 2001; Schultze-Mosgau, S., R.H. Reich: Assessment of inferior alveolar and lingual nerve disturbances after dentoalveolar surgery, and of recovery of sensitivity. *International Journal of Oral Maxillofacial Surgery* 22:214, 1993.
- 14. Queral-Godoy, E., E. Valmaseda-Castellon, L. Berini-Aytes, C. Gay-Escoda: Incidence and evolution of inferior alveolar nerve lesions following lower third molar extraction. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology & Endodontology* 99:259, 2005; Valmaseda-Castellon, E., L. Berini-Aytes, C. Gay-Escoda: Interior alveolar nerve damage after lower third molar surgical extraction: a prospective study of 1117 surgical extractions. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology & Endodontology* 92:377, 2001.
- 15. Imaging Sciences International letter from Henrik Roos, dated November 23, 2010.