



River City

Oral & Maxillofacial Surgery

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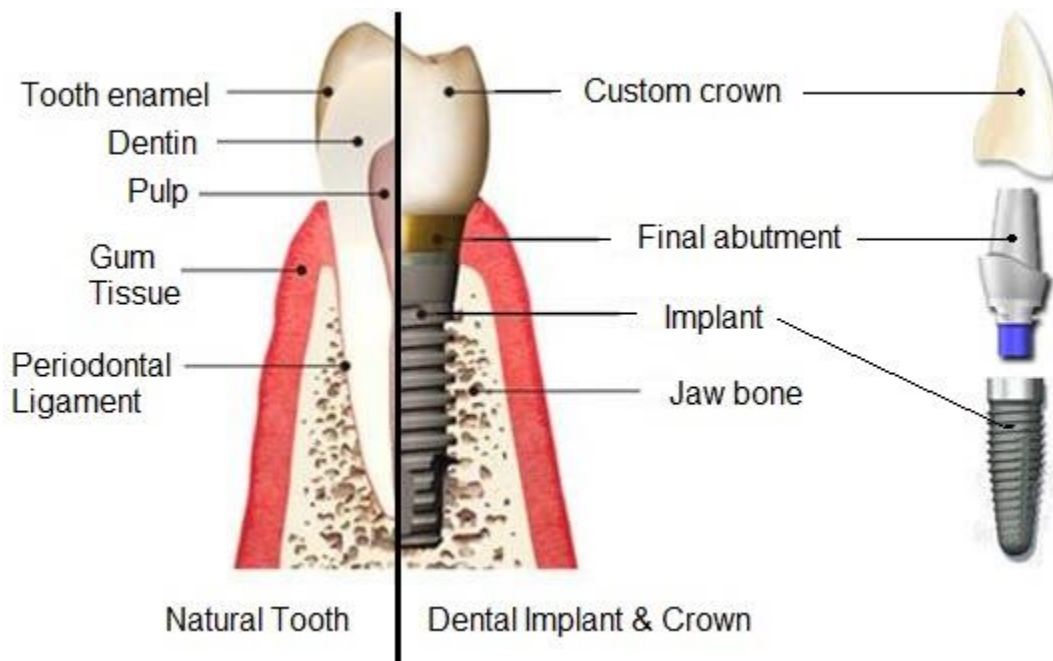
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Dental Implants Fact Sheet

Thank you for your interest! Dr. Haverkorn wrote this document to give you more information about implants. Implant surgery can be expensive and time consuming, so we want you to know what to expect. Please read this document before surgery and let us know if you have any questions.

Implant Parts & Pieces

A dental implant is technically only the screw that goes in the bone. An abutment goes on top of the implant and the tooth or teeth go on the abutment. When patients refer to a dental implant, patients are often talking about all three parts – the implant, abutment, and fake tooth/teeth.



If an implant is tight when we (River City OMS) place it and has good bone around it we may place an abutment at the same time. If the implant was not as tight, needed a bone graft, or had some other issue we may “bury” the implant under the gums, let it heal, then schedule a second surgery to place an abutment.

In most cases we place the implant and a healing abutment, and the restoring doctor places the final abutment and tooth/teeth. If you are replacing all your teeth with implants, we may place a special final abutment designed for those cases.



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A healing abutment is just a round cylinder designed to create a hole in the gums. After about 2 weeks the healing abutment can be removed and there will be a nice clean hole directly through the gums to the inside of the implant. The restoring doctor can remove the healing abutment, make a mold or scan of the implant and teeth, then place your new final abutment and prosthetic tooth/teeth. The process of making the teeth may take more than one visit.

A final abutment is shaped to hold the final tooth/teeth. If you're only having one tooth replaced the final abutment looks like a tooth cut for a crown or the final abutment & crown may be fused in one piece. If you're having multiple teeth replaced the final abutment may not even look like a tooth.

Implant Brands

There are many brands of implants on the market. Most implants are made of titanium because the human body accepts titanium better than other metals. Implant brands vary in shape, thread pitch, diameter, length, and the internal connection used to connect the abutment to the implant. Generally, you cannot swap parts from one brand to the other.

River City OMS prefers **Straumann & NeoDent** implants, but we work with others. Each company has advantages for certain cases and different restoring doctors are comfortable with different brands of implant. We will work with your restorative doctor to choose the appropriate brand for your case. Of course, you can also request a particular brand.

Implant Healing

Implant dentistry is very competitive. You see ads everywhere. Everyone brags about how fast they can get your implants done. Sometimes going as fast as possible is not the best idea.

The day your implant goes in it is held in place by the screw threads on the outside, exactly the same way a wood screw stays in a piece of wood. Over time the bone fuses with the implant and the implant becomes "integrated", locked into the bone. Once the implant is integrated and fused with the bone, the implant cannot be unscrewed unless we use a lot of force – which usually breaks something before the implant loosens. A healthy integrated implant usually needs to be cut out rather than unscrewed.

An implant needs a minimum of 6 weeks to integrate before the final abutment and/or teeth can be placed. We usually wait 10-12 weeks. If your implant was not as tight, required a bone graft at the time of placement, or had other minor compromises we may wait even longer before we use it.

Delayed vs Immediate Implants

When we take out your tooth/teeth, we may allow weeks or months of healing before we place the implant. This is called a delayed implant. Delayed implants may be the best choice for a highly esthetic case or in a place where the bone has been damaged by gum disease or infection.



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An implant placed into a tooth socket the day the tooth is removed is called an immediate implant. Immediate implants can be used whether we're replacing one tooth, multiple teeth, or all the teeth. It is not always possible or wise to place an immediate implant. Sometimes we plan your case for an immediate implant and have to cancel during the surgery. For example, if the socket bone breaks during extraction or the socket bone is not thick enough, we may decide not to place an immediate implant. Sometimes the restorative plan affects whether or not we can place an immediate implant – the site requirements are different for a single tooth implant in the front of your mouth versus implants that will be used to hold dentures in place. Sometimes we decide to place a bone graft in the socket if an immediate implant is not possible.

Immediate Temporary Teeth

It is possible to place temporary teeth on an implant the day the implant goes in. This is called an immediate temporary. If you are only having one single tooth replaced with an implant the immediate temporary tooth is there for esthetics. **It is not for eating and it is not strong enough to chew on.** We usually only do this for implants in the front of your mouth. The immediate temporary tooth would be a little bit shorter than normal so that you don't bite on it. Once the implant has time to heal a final prosthetic tooth will be made.

If we are replacing all the teeth in one of your jaws with screwed-in teeth, we can place immediate temporary teeth the day we place the implants. This is commonly called "All-on-4™" or "teeth in a day". You can eat a pureed and very soft diet with these temporary teeth during the implant healing phase.

Replacing All Your Teeth with Screwed in Implant Teeth (aka hybrid, "All-on-4™", or "teeth in a day")

It is possible to remove all the teeth in a jaw and replace them with implants and prosthetic teeth and gums in one day. This is called a hybrid, "All-on-4™", or teeth in a day. It works because the fresh implants are all connected by the new teeth and share the chewing load.

Patients receive screwed-in temporary teeth on the day of surgery and wear them for a few months until the implants heal. After healing, a new final prosthesis is made. You can change the appearance of the teeth in the final prosthesis if there is something you did not like in the temporary prosthesis. The temporary and final teeth will have prosthetic (fake) gums as well as prosthetic (fake) teeth.

You need at least 4 implants per jaw. At River City OMS we will place 4 implants for a hybrid restoration. We may choose to place additional if the case warrants. Patients may request and pay extra to have one or two additional implants placed for a hybrid. The extra implant(s) give you a back-up if one of the implants were to fail in the future and extra implant(s) may allow you to have more teeth on the final prosthesis. However, extra implants are more expensive, and can require bone grafts and additional healing & treatment time.



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If you are having a hybrid made, your restorative doctor will make a denture for each jaw we are replacing. After the implants are in place the denture that was already made will be converted to the temporary screwed-in teeth. This is done the same day in almost all cases.

If for some reason we cannot place 4 solid, strong, adequately spaced apart implants on the day of surgery then you may have to wear a denture for months while the implants heal. **You need to understand that if there is difficulty in your surgery the fallback plan is for you to wear a regular, traditional denture until we can get 4 good implants in place. No matter who performs your surgery there is ALWAYS at least a small chance that you will have to wear a denture during healing.** Be suspicious of any surgeon who tells you otherwise.

Having “teeth in a day” with dental implant hybrid restorations is great. It eliminates the wait time for new teeth, improves your smile, improves the shape of your mouth and face, gives you confidence, stops tooth pain, and improves your ability to eat. You won’t have to be embarrassed by your teeth or worry when the next toothache will hit.

The downside to a dental implant hybrid prosthesis is that the new teeth are different – different shape, different feel, different to clean, and different when you talk. You will get used to the new shape & feel of the teeth quickly. You will have to clean the new teeth differently. You brush them like natural teeth but you also have to clean under the new teeth, between the prosthesis and the gums. Food may get stuck between the new teeth and the gums until you clean it out. The food is not visible to other people but it may annoy you. Some people notice they talk differently until they get used to the new teeth.

Implant Success and Failure

Implant success rates are very high. About 90% of implants that make it through the initial healing are still in use 20 years later. If an implant is going to fail it will most likely completely fail or show signs of failure in the first 6-8 weeks.

The most common type of implant failure is a biologic failure, meaning the implant fails to integrate or loses its integration to the bone over time. A less common failure is a mechanical failure in which one of the mechanical parts physically breaks. Please understand implants are not “permanent”. They are very successful, but any dental work can fail. Implants that have done well for years can still fail later.

Causes of Biologic Implant Failure

Implants do not get cavities. Instead, biologic implant failures are due to wound healing, bone, and gum problems. Most failures happen early and somewhat rapidly but in some cases the failures are slow and the implant may not completely fail for years.



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Things that are or may be related to implant failure include:

1. Infection – an infection around the time the implant is placed can cause a rapid failure.
2. Peri-implantitis – this is gum disease around an implant. It's like gingivitis and periodontitis around natural teeth and is almost always due to poor cleaning & maintenance of the implants.
3. Smoking
4. Diabetes
5. Vascular disease – blood is required for healing. Patients who have blood flow problems in other parts of their body may have blood flow problems to their jaws.
6. Immunosuppression – your body's immune system helps surgical sites heal. Immunosuppressed patients include transplant patients, patients with autoimmune conditions, liver or kidney failure patients, cancer patients, or HIV/AIDS patients.
7. Chronic steroid use – corticosteroids, such as prednisone, depress the immune system and alter bone physiology.
8. Penicillin/amoxicillin allergy – there are articles in the scientific literature that have studied thousands of implants and found a three times higher implant failure rate in penicillin allergic patients. No one understands why this happens but it is a known and developing concern.
9. Certain drugs - long term use of bisphosphonate drugs and other drugs that affect bone metabolism will increase implant failure rates. In some cases River City OMS may refuse to place dental implants in patients who have taken these drugs. Please let us know if you have taken any of the following drugs of concern:

- Boniva
- Fosamax
- Actonel
- Aredia
- Zometa
- Reclast
- Alendronate
- Denosumab
- Prolia
- Xgeva
- Bevacizumab
- Avastin

The more of these risk factors you have and/or the more severe they are the more likely you are to have a failure.

Finally, **radiation therapy to the jaws increases implant failure**. Please let us know if you have ever had radiation to your head, neck, or face. It does not matter how long ago you had radiation. Even if the radiation was aimed at your brain, sinuses, or throat, if it hit your jaws you will have an increased chance of implant failure. If your jaws or mouth were the target of radiation, River City OMS will not place implants in your mouth.



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When an Implant Fails

When an implant fails it will be removed. Sometimes another implant can be placed immediately in the same spot and do great. More commonly we will have to allow the bone to heal then come back and replace the implant. We may also have to add bone or gum grafts to the site in order to place another implant.

If you undergo a “teeth in a day” procedure and one of the implants begins to fail during healing we may leave the failing implant in place until the other implants have gone through their full healing time. During this healing time you may have to take antibiotics to keep the failing implant from being infected. After the other implants have healed we can safely remove the screwed-in temporary teeth and treat or remove the failing implant.

Success rates decrease each time we replace an implant in the same area. In general, River City OMS is willing to replace an implant as many times as you want to but you have to understand the chance of it working goes down each time.

We do offer a 5-year warranty on the implants for eligible patients. If an implant placed under warranty fails, there will be a fee for additional replacement implants. See the River City OMS Implant Warranty for more information.

End of Fact Sheet