



# DENTAL IMPLANT GUIDE

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Dental implants are devices that can fill in the gap where a tooth used to be, and they are recommended for individuals who do not wish to receive dental bridges or partial dentures. In a small surgical operation, an implant is screwed into the jawbone, and the titanium base of the implant gradually fuses with the bone, similar to how the roots of teeth naturally do so.

Dental implants may require more invasive treatment in order to be implemented, but they are the most durable substitute for real teeth. The solid bond that the titanium base of the implant forms with the jawbone is all but permanent, making dental implants ideal for individuals seeking a lifelong solution to edentulism (the loss of teeth).

A dental implant comprises a ceramic crown, a connective piece called an abutment, and a titanium screw. The ceramic crown resembles the upper portion of a real tooth and can be designed to blend in seamlessly with an individual's neighboring teeth. The screw stands in for the root of the tooth, and because titanium is biocompatible, this base easily forms a stable and strong bond with the jawbone in the months after implantation.

## WE INSTALL THE DENTAL IMPLANTS RIGHT IN OUR OFFICE

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In order to install a dental implant, a dentist must first examine the relevant area of the mouth to ascertain whether an implant would likely be viable. Through an X-ray or CT scan, the dentist can check for the condition of the gums, the thickness of the jawbone, and the location of the sinuses; each of these elements plays a role in whether a dental implant can last in its intended position. Recent advances in technology can now transform the results of these exams into a three-dimensional model for near-immediate viewing on a monitor, allowing a dentist and a patient alike to have access to a comprehensive view of the patient's teeth, gums, and bony tissue. The dentist can more easily visualize the space in which the implant will be placed, inspecting the area for any limiting factors.

During the actual operation, your dentist will anesthetize the area and then screw the dental implant through the gum into the jawbone. Three to six months after the operation, your dentist will use an impression of your teeth in order to determine the optimal shape of the crown. Once designed, the ceramic crown will be placed atop the implant's abutment and held in place using cement. As the titanium screw will have bonded with the jawbone by this point, the implant will look and feel like a natural tooth.

As an alternative to the ceramic crown, when multiple teeth are missing, implant-based dentures are a more functional and realistic option. This type of denture is fastened onto the dental implants that are screwed into the jawbone. The titanium base provides a far more stable base for the dentures than simple adhesives, and the use of implants in dentures preserves the integrity of the jawbone while facilitating chewing and speaking.



## FREQUENTLY ASKED DENTAL IMPLANT QUESTIONS

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### *What is a Dental Implant?*

Dental implants are heavily marketed in today's dental world, and a lot of patients don't necessarily understand what a dental implant is. An actual dental implant is a prosthetic device that's artificially made to replace the root of a natural tooth. A lot of times a patient will say, "Oh, I want an implant," and they think it's a tooth. Really, the implant is the part that replaces the root of the tooth.

After a certain amount of time – that goes from the surgical phase, so the body can heal around that implant. There will be another step taken where we begin the restorative phase to place a crown, which will eventually incorporate some sort of internal screw inside that implant, where either a post or some sort of fixation device will then be used to formulate a crown that we can place and be it would be supported by that implant.

## *What Are Dental Implants Made Of?*

The majority of dental implants nowadays are usually made of some sort of titanium. There are other options where they can be made from other substances, depending on the case at hand, but the majority of implants used at Teach Dental Group will be made of titanium, which is a very biocompatible substance. What biocompatible means is the body has a very slim or very low-risk chance of having any sort of anaphylactic or allergic response to the material.

## *Are Dental Implants Painful?*

I had a patient come in the other day inquiring about a dental implant, and she's had some prior dental history issues with extractions, infection, post-operative pain and issues that have kind of put her aside from doing any kind of surgical procedure. I tried to reiterate to her, with confidence, that unfortunately I wasn't there to handle her previous dental situation, and I felt sorry for her that she had issues with pain with prior procedures. I tried to reiterate and I tried to talk to her about how simple and how non-invasive an actual implant being placed into a patient can really be.

Again, a lot of times if you're interested in a dental implant or want to come to the office, we can discuss all the risks, the benefits, any questions that you might have, just so you have a solid foundation and idea of what actually is going to happen. A lot of medications that we use to deal with any kind of post-operative pain can be easily managed with over-the-counter medications that are used to take care of normal headaches. If a certain situation might require a stronger medication, those issues will be addressed for those specific circumstances.

## *Are Dental Implants Safe?*

I can reiterate, with 100% confidence, that it is a very safe procedure, much like many normal dental procedures that people come into the office and see me for. Whether it's fillings, crowns, bridges, even surgical extractions, implants kind of fall in the same category of these normal procedures that take place. They're not done in a hospital setting; they're done right here in the office and that is one of the other reasons to just try to reiterate to the patient that this is a safe procedure and all the risk, benefits and questions that patients have about

the safety of implants will be thoroughly discussed prior to beginning any treatment.

## *Are Implants FDA Approved?*

All implants that are going to be used at this practice are FDA approved, and have gone through rigorous amounts of scientific control study to be used in the human body. A lot of times, the only issue that can really happen with certain implants are failures, but these are things that can be discussed during the times of treatment planning, to know if you're a good candidate to receive a dental implant.



## *How Do I Fill in Missing Teeth?*

A lot of times, during implant treatment planning, we can figure out some sort of temporary situation if the patient is requiring a tooth in the space that they want to replace with an implant. But for a majority of the time for posterior or back teeth we will usually leave that open to heal and we won't necessarily replace that with a tooth.

A lot of times, patients are very interested, if they're going to go through with dental implants, to replace a lot of their front teeth in their smile zone. It's very aesthetic, and there are multiple options in terms of what we can do to temporarily place teeth there, whether it be some sort of temporary bridge fixated to other teeth or some sort of removal prosthetic appliance to get the result.

## *Am I a Candidate for Dental Implants?*

One of the main questions that is always asked of me is, "Am I a good candidate to receive dental implants?" Two of the main things I like to ask my patients are if they are in good general health and if they maintain good oral health. If so, I'd say about 100% of those patients are adequate candidates to receive dental implants.

One of the main risk factors, in terms of possibly not receiving a dental implant, is if someone has excessive habits, whether it's drinking and smoking or taking

certain types of drugs. That might inhibit the stabilization of a dental implant. Again, these will all be addressed in the first appointment. When a patient comes in to see me, we'll do a very in-depth review of their medical history so that we can figure out if they'll be a good candidate to receive a dental implant.

## *What is the Different Between Conventional vs Mini Dental Implants?*

A conventional dental implant usually has a diameter greater than three millimeters and a mini dental implant has a diameter less than three millimeters. A lot of times, to replace natural teeth, we like to use a conventional dental implant because the size of the implant. The part of the implant that's going to go into the jaw and replace that root form is more realistic to the size of the actual natural root that is lost. It is more of a robust prosthetic attachment that we can then fixate a tooth to get you back to normal function.

Certain circumstances in dentistry may require a mini dental implant, for instance a missing lower incisor. A very small amount of space might be needed there to only be able to fixate a mini dental implant in that area, but for the majority of the time, a mini dental implant – and for my practice purposes – will be used to either fixate a denture or place in the jaw for a source of anchorage to help an orthodontist with any type of tooth movement or future orthodontic treatment for a younger patient.

## *What Are Mini Dental Implants?*

One of the hot topics in dentistry nowadays is mini dental implants. To clarify, what a mini dental implant is has to do with diameter of the actual implant being placed. For a conventional implant, anything above the standard size of a three-millimeter diameter will be a conventional dental implant; anything below a diameter of three millimeters will be deemed a mini dental implant.

## *How Strong Are Dental Implants?*

Dental implants, specifically conventional dental implants, are very strong. If maintained and taken care of properly with six-month visits to the dentist to make sure everything's going okay, they can be a very predictable way to



replace a tooth that will function just as long and just as well as that person's natural tooth.

## *How Noticeable are Dental Implants?*

If the implant is done correctly, and is planned correctly, the implant and the restoring crown on top of that implant can be made to look just as natural as the tooth that was lost.

## *How Are Dental Implants Placed?*

During the phase of dental implant treatment, the most ideal situation when an implant is placed is to get that implant stabilization by the surrounding bone. During this process, a small surgical incision will be made into the gum tissue to expose the bone and drill a hole into the patient's jaw. Sequentially, we will widen that hole and eventually place some screw threads or pattern into the jawbone, which we will then fixate our implant.

The best-case scenario during an implant situation is to get stability of that implant in with the bone. During the healing phase, after the implant is placed, we will suture the tissue closed to allow the maturity of that implant, so your body can grow its natural bone around it and make it nice, secure and stable.

## *How Long Does an Implant Take to Heal?*

For most implant cases, especially the simple cases, a lot of times it's anywhere in between eight weeks to six months. The specifics for any case can be discussed at the beginning of treatment before anything takes place.

## *What Should I Expect for Recovery?*

People heal at different phases, people will respond differently to different treatments, but for the majority of time, most of my patients, when they come to me for implants or the surgical phase of the implant treatment, they'll say, "How's this going to feel afterwards?" or "What can I expect?" I would say probably 80 to 90% of the time, patients will go home the next day and call me back

and say, “What did you do? Did you do anything? Because I’m in no pain whatsoever.” Other times, there can be some complications, which we will then address, but for the majority of the time, everything can be easily maintained with over-the-counter non-prescription drugs that you would normally take to deal with a headache or mild fever.

## *Is There Any Special Care?*

A lot of times when an implant’s placed and an actual tooth has been fixated to the implant, a lot of the normal care required will be the same thing for your natural tooth. Implants can be exposed to the same harms as natural teeth, whether it’s bone loss or any kind of periodontal disease and issues of infection. If a patient is maintaining adequate oral hygiene, whether it’s brushing and flossing normally day-to-day and coming to their dentist or hygienist for their annual maintenance checkups and cleanings, implants will function just as well as normal teeth and require the same maintenance as normal teeth.

## *What Can I Eat After Surgery?*

After any surgical procedure a patient will ask me, “What can I do after this?” Every time I sit down with a patient, I will take some time to answer any questions that they might have pertaining to what they need to do when they go home. I have a detailed post-operative sheet that I will hand them when they leave the office, just in case. I know a lot of times when I talk with people sometimes I forget things and I need to be reminded, so I will have that conversation with the patient, just so I can answer any specific questions, but I also give them some sort of feedback or personal handout that they can take home with them to remind them of what they need to do after surgery. For most of the time, after implant surgery, you can go about your normal function and act common good sense, and nothing specific or nothing needs to be done.

## *What is the Dental Implant Success Rate?*

If patients are in general good health overall and come in for normal dental routine cleanings, most of the time, implants will probably hold about a 95% success rate when placed. This is if they make sure there aren’t any underlying issues currently with their mouth, whether it’s periodontal disease, broken down teeth, or issues with grinding at their dentist visits. I like to be able to tell



patients, with confidence, if they take care of their body, they take care of their mouth and they get an implant, it's 95% successful.

## *Does It Matter How Old I Am?*

If I had to guess one of the barriers to trying to convince a patient that a dental implant will be the best way to restore a tooth or replace a missing tooth it would be age. Many older patients will tell me, "I'm not going to be around for that much longer," or "Why am I going to invest this kind of money into saving my mouth?" After sitting down and talking with them about all the benefits about keeping their teeth or replacing missing teeth, I try to reiterate to them that there's really no age limit to receiving a dental implant. If a patient is in general good health and is taking care of their mouth, I recommend treatment to any age.



## *Does the Body Reject Dental Implants?*

There's a lot of factors for certain people, or issues with implants, for people that I feel should not have them or should not be placed. The major risk factor for implants working or being successful is the fact if a patient smoke or not. A lot of times, I will still place implants on patients that smoke, but I try to do some smoking cessation, try and get these patients to want to quit smoking because it is the number one risk factor for implant failure. There're other things that can complicate success of implants, and they can be discussed at future appointments with your dentist.

## *Can I Get an Implant If I Smoke?*

Sometimes a situation arises and a patient will come to me. They've been a smoker for a long period of time, they don't have any intention of quitting. I've done my best to try and motivate them to quit, prescribed certain drugs to help them quit, and gave them many different avenues to try, but it didn't work. The patient now lost a tooth, wants to replace a tooth, and is interested in a dental

implant. They'll ask me if they can get one and I have to say, "Well, what are we going to do about your smoking? Are you going to try and quit?" When they ask if it's going to be dependent upon them quitting smoking, I tell them yes. What I try to do is get a patient on board to at least try to reduce their smoking habit and then try to come up with another smoking cessation situation that might even eventually get them to quit, so I can get them motivated about their treatment, about receiving a dental implant, and hopefully then I'll nail two birds with one stone – get them to quit smoking, then get them a dental implant, and then replace their missing tooth.

## *How Long Do Dental Implants Last?*

Many patients want to know how they can replace their teeth and make their smile good again. The main concern most have is about the cost and outcome of the procedure. They want to know they are getting their money's worth.

I like to talk to patients from a basic, overall, general oral health standpoint. We need to assess your mouth, first and foremost. We need to know if there are any underlying issues – whether it has to do with gum disease, periodontal disease, other issues such as grinding – any things that might have created previous destruction to your mouth. Once we can handle those situations and get them under control, then we can discuss moving forward with dental implants or dental implant treatment.

A lot of times, once the mouth is taken care of and put back into a healthy state, and an implant is placed and restored with a natural tooth, those implants will last just as long or just as well as a natural tooth. Again, I always try to stress and reiterate to anyone, we must take care of a certain situation. Just because you're going to come in and necessarily get a dental implant, doesn't mean you can neglect it. When anything that is done, normal hygiene, normal routine maintenance care will be very important. I think implants will last several years if not a lifetime.

## *What is the Treatment for a Failed Dental Implant?*

Not everything always works perfectly in life, and sometimes even with the best intentions, things can fail. There are options if dental implants do fail. If

I have a patient coming in for a dental implant and we go through the surgical phase, everything goes okay but for some reason that dental implant fails, I like to readdress the situation. I try to ascertain why the dental implant failed, whether it was part of a situation that happened during surgery or a situation that a patient might have possibly neglected, we go back and try again. That's my number one go-to, to just try again and see if we can get it to take a second time. If the situation occurs where it fails for a second time, then other options can be discussed to at least try to attain the same result with some sort of other treatment other than implant dentistry.

## *What is Digitally Guided Implant Surgery?*

The great part about dentistry today is technology. Technology is allowing so many things in dentistry to move leaps and bounds over what it used to be even 10 years ago. One of the best things about dental implants is that technology is allowing things to be done at a faster, more efficient and safer circumstance for the patient. A lot of times, patients will come to me and ask, "What is a digitally guided implant surgery?" A lot of times we need to gather some information first including x-rays of the space that we want to replace with the dental implant of the surrounding bone. Most of the time, I will have that patient get a 3-D scan, a CBCT or a cone beam computed tomography scan, so we can ascertain all the dimensions of the bone where we want that implant placed.

What we'll do then, in conjunction with the lab, is digitally plan a tooth or a restoration to replace that missing space and idealize the placement of that implant into the jawbone based on where that tooth is going to be for that patient's future prosthetic needs. The best part about doing something digitally guided is it's going to be much safer for the patient so we can avoid anatomical structures or situations in the patient's body that we want to avoid, place things with much more accuracy and confidence, and do it faster for the patient, which makes the entire dental implant experience that much more enjoyable for the patient.

## *Do Implants Make Dentures Comfortable?*

A lot of times, dental implants can be used not just to replace missing teeth but many times, patients will come to me with dentures, whether they're loose or

ill-fitting, and they'll ask me, "Can I receive dental implants to make my dentures fit better?" The standard of care for any sort of lower denture would be to receive two dental implants to help retain that denture. There are multiple different prosthetic devices that can be discussed to get you familiarized with what type of dentures or fitments can be made to your denture with dental implants. Without a doubt, implants can be used to make your dentures fit better, feel better and get a lot better sense of stability when going out into public, wanting to eat, wanting to socialize with people and just function normally through life.



## *How Many Implants Do I Need to Stabilize Dentures?*

For the upper jaw, you're going to need a minimum of four to six implants to help those dentures be stabilized. What a lot of people don't know once a denture is stabilized by implants, we can remove that palatal aspect of the denture and make it a much more comfortable prosthetic for the patient.

It all depends on many contributing factors from each individual patient, but minimum, two implants to retain a lower denture. At best, probably about four implants for the lower jaw to stabilize a denture, depending on the needs of the patient and the requirements based on muscular jaw function, and a lot of other things that will be discussed prior to moving forward with any treatment, at the beginning, during the consultation phase.

## *How Do I Get My Dentures to Fit Better?*

Sometimes we might decide to fixate the denture with screws that will not be able to be removed by the patient, and they'll have to come in for two to three-month cleanings to have those dentures unscrewed, removed, cleaned thoroughly and then replaced by the dentist with new screw attachments. A lot of times patients are always very happy with how retained a denture can be, even if it's a situation where it's an in-and-out attachment with a nylon O-ring or an overdenture.



## ABOUT THE AUTHOR

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Dr. Zachary Teach is a proud Buffalo native and alumnus of Canisius High School and Loyola University Maryland. Zachary graduated Magna Cum Laude from the University of Buffalo School of Dental Medicine where he was inducted into the OKU Dental Honor Society. After obtaining his dental degree, he completed additional training at UB's Advanced Education in General Dentistry residency program. Currently, Dr. Teach remains affiliated with the dental school as part-time faculty in the university's Department of Restorative Dentistry. Zachary actively participates in community outreach programs such as Give Kids a Smile Day, Dentistry Smiles on Veterans program and Remote Area Medical missions around the country. In his free time, Dr. Teach loves to travel, golf, and pursue his interests in photography and drawing.

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