

DENTAL IMPLANTS

A dental implant is a root replacement surgically placed into the boney part of the jaw. An abutment and crown are to be attached after the implant integrates into the bone several months later. Delicate and skilled techniques are used to minimize thermal and mechanical irritation to the bone. Dr. Taylor is a Diplomate of the American Board of Periodontology and has been placing dental implants over 30 years. He continuously completes the latest extensive training in placing dental implants and bone grafting. Scientific research over several decades had provided us with materials which are not only extremely compatible with human tissue but that can actually bond to living bone tissue (osseointegration). Materials commonly used today are **Zirconia** ceramics which are metal free (ceramic) for people who have metal allergies, who want a more cosmetic outcome (no gray metal shadow in the tissue), or do not want metal in their body or **Titanium metal**. The replacement teeth will function very similar to natural teeth, and many times look even better. Chewing, swallowing, speaking and other functions can therefore be greatly improved. The surgical placement is done in our office under local an anesthetic. Intravenous conscious sedation and acupuncture are available by our Registered Nurse, as well.

Recovery from the procedure is non-traumatic. Dr. Taylor has acquired additional skills that allow him to place the implant at the time of a tooth extraction which eliminates a second surgical procedure and many extra months of healing time. Implants require at least 3 months in the lower and upper jaw before the tooth restoration can be completed by your general dentist. Soft foods are recommended following your procedure and try not to chew on the implant site for at least two weeks. Several **post-operative appointments** will be scheduled, checking your healing process and implant osseointegration status. It is imperative to follow the post-op instructions for the best outcome. **We will release you from our practice to your general dentist for restoration when Dr. Taylor determines that the health, integrity, and stability of the bone and implant are as they should be for optimum results.** Once the restoration is completed it is advised to have an annual implant examination in our office. A consultation and 3-D Cone Beam scan helps to determine if you are a candidate for implant placement in our office. The cost of dental implants is very near that of conventional bridgework on natural teeth and can provide improved function and aesthetics.

Zirconia/Ceramic	Titanium/Metal
Bio-Compatibility	Mostly compatible
Extremely strong/stable (HIP processing)	Metal stability
No allergic response	May have metal sensitivity/allergies
Aesthetic result-no metal line	May develop grey line with recession
No EMF interferences	May have galvanization effect
Great tissue compatibility	May have exacerbation of underlying conditions
Good papilla regeneration	Delayed papilla tissue growth around metal

All Zirconia are not alike!

With the new technologies it is possible to fabricate dental implants and restorations out of high strength ceramics like ZIRCONIA. Now, with introduction of ZIRCONIA as a dental material, (made from Zirconium oxidized into a ceramic) clinicians are able to place all metal free Zirkolith Zirconia Implants and restorations in the anterior and posterior regions of the mouth.

This is due in part to the high flexural strength, high fracture toughness, and the laser modified surface technology of the Zirkolith Zirconia Implant System.

Several companies are offering zirconia materials in dentistry. These materials are chemically *similar*; consisting of 3% Yttrium oxide treated Tetragonal Zirconia Polycrystals. Even though a material may have the same chemistry and microstructure, the processing methodology use to produce an implant may improve or decrease the final properties and clinical success. Specifically, milling of zirconia has performed better than powder/liquid versions of the same material. Unlike other Zirconia products, the Zirkolith Zirconia Implant is made from Y-TZP-A Bio-HIP-Ceramic. It achieves its strength, which is much higher than other zirconia materials and titanium, by a number of key factors including the Hot Iso-Static Post Compaction Process. The fracture stability and load bearing capacity of Zirkolith Implants is much higher than other zirconia implant and titanium implants. The processing technique has a large impact on strength and thus clinical performance and should be one of the primary considerations in choosing a material.

