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## **A Long Future for Short Dental Implants**

Posted by South Florida Center for Periodontics and Implant Dentistry on September 5, 2024 at 3:25pm



You may be familiar with dental implants, which are used to support individual teeth or full-arch restorations, and how they offer today's best solution for replacing failing or missing teeth. While, traditionally, "longer" implants (8mm or more) were always utilized, we now often consider "short" implants as a more minimally invasive, safer, and even cost-saving alternative.

## **How Do Dental Implants Provide Support?**

First introduced in the latter half of the last century, dental implants rely on the biological principle called osseointegration. This refers to the process where the titanium implants naturally fuse with the patient's bone tissue. This principle now makes joint replacement for hips and knees routine and predictable.

In dentistry, we take advantage of osteointegration to recreate the kind of strength and stability we find with natural tooth roots embedded in the jawbone. The dental implant or implants will replace the tooth root, subsequently supporting a crown, bridge, or full arch of replacement teeth.

A key feature in predicting successful osseointegration is that the patient needs to have sufficient jawbone and gum tissue to support the dental implant. When it was believed that long implants were needed for success, we often needed to perform some sort of bone and/or tissue-grafting procedure to build up the area before proceeding. Areas of concern in the upper jaw include the sinuses, which are the airspaces between the upper back teeth and the nose. In the lower jaw, the area of greatest concern is the mandibular nerve, which runs through the jawbone below the back teeth. The possibility of injury to either the sinuses or nerve increases as the length of the implant increases.

In an individual who may have lost teeth several years ago, important jawbone volume may be lost. In these instances, typical "long" implants require a supplementary bone grafting or augmentation procedure to prepare the area and ensure sufficient bone volume to support the dental implant. This often-required extra healing time after the grafting or augmentation procedure before the implant surgery could take place.

## **Great Success With Short Implants**

With shorter dental implants, the additional rebuilding of tissue is often not required. We are often able to save the patient time and expense by strategically placing shorter dental implants (usually 6mm) that take up less space yet are still sturdy and reliable.

In the hands of an expert implant surgeon, short implants may offer a great alternative to longer implants. There may also be less overall risk and trauma when compared to longer implants since we avoid procedures like bone grafting of the short alveolar ridges (soft and hard tissue that the support teeth) or sinus lifting that would otherwise be needed for placement of longer implants. Healing time is often faster since surgical grafting or augmentation procedures can frequently be avoided. And the patient saves money, time, and heals faster as a result.

## **Risk Factors**

Contraindications for the use of short implants are not dissimilar to that of longer implants. For instance, one of the most detrimental risk factors for any implant is tobacco (smoked or vaped) usage. The benefits of avoiding smoking for your overall health are numerous, and it's also true if you're considering dental implants. Studies show that smokers have a higher risk of implant failure. Nicotine usage slows recovery and increases the risk of infection.

Medical conditions also need to be considered. Patients with uncontrolled diabetes, those who have received extensive radiation therapy, or those with uncontrolled chronic disorders are carefully assessed to see if they are short implant candidates. And, as mentioned, short implants should only be considered for use by experienced surgical specialists who are totally familiar with implant protocols.

#### Less Can Be More

With advances in today's implant design, chemistry, and texture technology, 4 and 6mm short implants are part of our toolkit. Our practice can offer many patients this non-grafting solution for all restorations, from single tooth to full reconstructions. Short implants can provide the stable, reliable, attractive, and functional smile patients seek. In the case of short implants, less is more—fewer complex surgeries, less time required and less overall risk also equal less cost!

From the periodontal surgeon's standpoint, our advanced software ensures we can virtually plan and proceed with assurance when considering long or short implants. As this technology continues to rapidly improve, we expect to see even greater implementation of short implants. Bottom line: If you were advised you don't have enough bone support to have implants placed or that you need augmentation prior to placement of dental implants, ask your implant specialist if short dental implants could be a solution.

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