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Restorative, Cosmetic, & Implant Dentistry

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Dental Implant Procedure - All-on-4

The new innovative **dental implant procedure, All-on-4**, was developed as a way to more efficiently use implants in both jaws. It is especially effective treatment for upper arch restoration because longer, stronger implants can be used in the back part of the jaw.

In the early 2000s, implant manufacturer Nobel Biocare collaborated with noted European implant dentist Paulo Malo and began to use computer simulation, bio-mechanics, and clinical research to determine the optimal use of implants for restoring a full upper or lower arch of teeth. The result was a procedure that uses the fewest implants possible, avoids bone graft surgery, and provides high-quality restorative results in the shortest time possible.

The new **All-on-4 Dental Implant Procedure** uses four implants, with the back implants angulated to take maximum advantage of existing bone. Special implants also were developed that could support the immediate fitting of replacement teeth. This treatment is attractive to those with dentures or in need of full upper and/or lower restorations. With the All-on-4 Procedure, qualified patients receive just four implants and a full set of new replacement teeth in just one appointment—without bone grafts! The real appeal is how quickly permanent implants can be placed so that patients can leave the same day with fixed, non-removable replacement teeth.

Traditional approaches to restoring a full arch of teeth usually involved bone grafts, six or more implants, and as many as 18 months of treatment. That meant that a patient often would be without any teeth or with ill-fitting temporary dentures for more than a year. **Now, our patients always leave the same day as surgery with fixed and secure teeth!**

With the All-on-4 Dental Implant Procedure, the patient has one or two visits to allow Dr. Williams to gather information for a treatment plan (e.g., CAT Scan, X-rays, impressions, photos). Following this consultation, the patient is scheduled for surgery implantation and the new teeth are fitted and adjusted, all in one appointment (even when extractions are necessary). The patient comes to the office in the morning with unhealthy (or no) teeth, and leaves in the afternoon with a beautiful set of fixed, functional teeth.

The patient will return for occasional check-ups over the next several weeks and months. After almost six months, when the gums have fully healed and the implants are fused to the natural bone, Dr. Williams will take new impressions of the patient's mouth and prepare a final, stronger, permanent set of teeth adjusted to a perfect fit—at no additional cost. This helps ensure that the teeth will last for many years, and provide maximum support, beauty, and function to the patient.



All four titanium implants are placed so that the bone will grow around and secure them in place. With only four implants, there is much less invasive and lengthy surgery.



Once the implants are in place, Dr. Williams attaches abutments to which the new replacement teeth can be secured.

Then the replacement teeth are fitted on the abutments and the bite adjusted for comfort and a beautiful smile.

How is the All-on-4 different from a denture?

The All-on-4 Procedure provides patients with new teeth that are firmly fixed in place, and look and function as close to natural teeth as possible.

A denture or partial denture is a removable appliance, and should be taken out every night for cleaning. Additionally, since a denture is not fixed in place, it will often slip or sometimes fall out, under even normal use. For this reason, a multi-billion dollar market for denture adhesives has developed, to try to hold dentures in place. Even with adhesives, many people find that eating, laughing, being active, and sometimes just talking can be a challenge with dentures.

All-on-4 provides the patient with a set of teeth that are connected to the implants, and are solidly fixed in place (what we call an implant-supported fixed bridge). They may only be removed by the dentist, are brushed and cleaned like normal teeth (though flossing is different), and are the closest thing possible to natural teeth in terms of look, feel and function.

The All-on-4 bridge also allows the patient to bite with much more force than dentures, since the stresses are transferred directly to the bone rather than to gum tissue as with dentures. This means that patients can eat almost any of their favorite foods without worrying about their teeth.

Will my implant supported teeth be uncomfortable and push on my gum tissue like a partial or a full denture does?

Absolutely not! And this is the beauty of dental implant treatment vs. dentures. Not only will your implant supported teeth be fixed in place, without slipping or needing to be removed for cleaning, but since your teeth are supported by the implants, they do not press on the gum tissue and therefore do not create any of the discomfort common with dentures.

What about the line between the fixed bridge and the jaw bone? Can people see it?

This line will be hidden behind your lips so that when you smile it is not visible. During your initial examination we evaluate your smile to determine where the junction of the fixed bridge and the jaw bone will be. During the procedure, we adjust your "smile line" to ensure that your new smile is not too "gummy" and that the top (or bottom) of your prosthesis is completely hidden.

What is the success rate of the All-on-4 Procedure?

Published studies indicate a 98.2% implant success rate when using the All-on-4 technique in the lower jaw. Similar studies show a 97 to 98% success in the upper jaw for the same procedure.

Occasionally, an implant will fail. If this happens, we simply place a new implant in a slightly different position to take advantage of existing bone, and our lab refits the fixed bridge to align with the new implant.

What type of follow-up visits are necessary?

For the all-on-four procedure, the implants are placed the day of surgery and follow-up checks are done at one week, two weeks, two months and four months. At the end of the four month period, fabrication of the permanent teeth begins, and requires one or two additional visits over the next few months until the final teeth are delivered.

How much does the All-on-4 procedure cost?

The fees for the all-on-four implant surgery and the final prosthesis in most cases ranges from \$18,000 to \$24,000 . (As compared to the older procedures which required sinus bone grafting, placing 6 to 8 implants, temporary ill-fitting dentures, and finally after 1 year of healing, expensive porcelain bridgework which can cost from \$40,000 to \$50,000 .) The cost of the new all-on-four implant procedure is very reasonable considering the advantages of having fixed natural looking teeth that you can function with immediately. At your complimentary consultation visit, Dr. Williams will be able to give you a more detailed estimate and financial arrangements can be made at that time.

My friend had a full-arch procedure done at another dentist using 8 implants. Why does the All-on-4 Procedure use only 4 implants?

Research done by Nobel Biocare, and clinical experience shows that in most cases, 4 implants, specially placed with some angulated, are just as effective in supporting a full arch fixed bridge in either jaw as 5,6, or 8 implant restorations. On rare occasions where bone is soft or worn down, additional implants may be needed, but these situations are the exception and usually only in the upper jaw.

Most dental practitioners do not have the experience that Dr. Thomas Williams has with implant surgery protocol, and they continue to use older techniques involving as many implants as they feel the bone will support. In most cases, more than 4 implants is just not necessary, and can subject the patient to unnecessary surgery, treatment time and costs.

My friend's procedure involved bone grafting to "build up" the bone before the implants were placed. Does the All-on-4 Procedure involve bone grafting?

In most cases, even the most difficult ones, Dr. Williams is able to place 4 implants and restore a full arch of teeth without bone grafting. This is accomplished by the special placement and angulation of the implants, taking maximum advantage of the available bone, without grafting.

Dr. Ole Jensen, author of the textbook *The Sinus Bone Graft* used in dental schools and by dentists around the world, has discovered that use of the All-on-4 technique can eliminate the need for bone grafting in more than 95% of the full arch cases he treats.

My friend's full arch case took over one year to complete, and she had to wear a denture for most of that time. How long does an All-on-4 Procedure take?

The past approach to restoring a full arch of teeth usually involved 6 or more implants, bone grafting, and as many as 18 months of treatment. That meant that a patient would often be without any teeth or with a temporary denture for more than a year.

With the All-on-4 Procedure, the patient has one or two visits to the office to allow the dentist to prepare the case (CT Scan, X-rays, impressions, photos, etc.). Following this initial work-up, the patient is scheduled to have the implants and the new teeth placed, all in one appointment (even when extractions are necessary). The patient comes to the office in the morning with bad (or no) teeth, and leaves in the afternoon with a beautiful set of fixed, functional teeth.

The patient will return for occasional check-ups over the next several weeks and months. After six months, with the gums now fully healed and the implants now fully fused to the natural bone, Dr. Williams will take new impressions of the patient's mouth and prepare a final, permanent set of teeth with additional titanium support in the bridge. This helps ensure that the teeth will last for decades, and provide maximum support, beauty, and function to the patient.

What will my diet be like after the All-on-4 Procedure? When can I eat solid food again?

Solid foods can be eaten by a patient that has undergone the All-on-4 Procedure that same day. However we must define what we mean by solid foods. We are talking about a modified food diet, defined as foods that are soft enough to be cut with a fork. Examples of the modified food diet are scrambled eggs, meatloaf, mash potatoes, hamburger, fish & pasta. Please do not eat foods that require any tearing or biting with your front teeth i.e.: Pizza, sandwiches, and bagels. Also, avoid hard foods such as carrots, chips, apples, nuts and **absolutely no gum chewing!**

This modified diet is to be maintained until you receive your permanent prosthesis, usually about six months. Once your final bridges are made with the titanium frame as reinforcement you can resume a normal diet.

Why do I have to wear a provisional set of teeth and not my permanent new teeth right away?

On the day of your procedure we place the implants and a new set of teeth called a “long-term provisional” prosthesis. This provisional set of teeth is fixed in place, is fully functional, and provides you with a beautiful smile. You will laugh, talk, play sports, and be normally active, without having to worry about your teeth.

This provisional set of teeth is made entirely of acrylic resin, which places less stress on your new implants during their first few months of use. We will ask you to be selective in the foods you eat the first few weeks following your procedure, but you will soon be back to a normal diet (without hard, tough, or brittle foods for a while longer).

Once your gum tissues have healed and the implants have become completely stable (usually about six months) we fabricate a permanent bridge with acrylic or porcelain teeth, but this time with a titanium framework inside for strength. Think of the titanium as a reinforcement bar to give your teeth extra support and long-term strength. This permanent set of teeth is carefully adapted to your healed gum tissues and is adjusted to be sure we achieve an ideal fit in your mouth and that your bite and smile are perfect

If I need both upper and lower full-arch replacements, do they both have to be done at the same time?

In many cases, where the patient has several broken or missing teeth or has an uneven bite, it is best to do both arches at the same time to avoid compromising the final result. This allows us to control the patient’s biting plane and bite.

Doing both arches at the same time is a complex procedure, and is beyond the skill level of most dentists. However, Dr. Thomas Williams will use his experience, protocols, and judgment in determining if two-jaw cases can be done in one day. In other instances, treatment can be sequenced to meet the financial, health, or other individual needs of the patient.

Are some people not candidates for the All-on-4 Procedure?

Very few people who need a full arch of replacement teeth are not candidates for the All-on-4 Procedure. However, each candidate is fully evaluated to determine the most appropriate plan of treatment to address their individual dental needs.

Importantly, Dr Williams requires all candidates to be stable medically before entering treatment. That may entail contacting your physician about any existing medical conditions, and getting your doctor to provide medical clearance.

In some cases, the All-on-4 Procedure is not the indicated treatment approach. Based upon dental condition, some people are better off being treated with conventional dental procedures done by other dental practitioners. We initially determine the appropriate treatment approach at the consultation appointment, and confirm that treatment plan at the Prosthetic Evaluation.

For a complimentary evaluation, please contact our office at 334-277-9570

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