



## Professional Resources

### How immediate-load implants fit into my practice

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Immediate-load dental implants - what are we really talking about? Are these implants that can be used immediately by our patients or are we really talking about satisfying a demand by our patients for a faster, more efficient implant service? This is not meant to be a comprehensive paper about the subject of implants, but more a point-of-view discussion on how to best fit this "faster" approach to implant dentistry into our practices, making it profitable and a wonderful service for our patients.



All implant situations have to be considered when thinking about immediate-load implants as a viable option. The implant world has expanded, allowing for greater patient service. Our dental practices must be based upon patient service to be successful. Immediate-load implants, given the right clinical situation, will allow us to provide better "customer service." The clinical situations will be varied from the simple to the complex. Each requires proper planning to be executed efficiently and correctly.

Implant dentistry has become an important part of everyday treatment-planning. Immediate-load implants are the more popular approach.

In 2006, dental implants have become the standard of care for replacing missing teeth and providing new options for reconstruction of our patients' dentitions. Implants have become so accepted, so mainstream, and so talked about that our patients are now requesting this predictable treatment modality. Our restorative options have certainly changed since 1978 (the year I graduated from dental school) when a two-stage, threaded-titanium, root-form implant was presented in Toronto by Dr. Per-Ingvar Branemark. The term osseointegration was introduced and the breakthrough has changed dental treatment-planning. This meeting launched the acceptance and use of dental implants in the United States.

The evolution in the development of implants is due to research, clinical experience, and the ever-pressing demands from our patients. It is a natural progression for our profession to go from functional dentistry to functional and lifelike dentistry. We as health-care providers strive to provide a better service for our patients and restore them back as close as we can to "normal." The cosmetic revolution in dentistry has not bypassed the implant aspects of our practices. No longer will patients accept just functional restorations.

The success of dental implants has become so predictable that, given the ideal situation, osseointegration is taken for granted. The following guidelines for placing implants in the anterior mandible (Type 1 bone), burying the implant, waiting for integration before uncovering, and restoring them using correct occlusal concepts have become a "no-brainer." We know that this will work and has worked for many years. So what is the problem? The problem is very simple: our patients have become even more demanding! The demand is quite simple. "Why does it take so long to have this dental service done? Why do I have to have a screw hole through the top of my cap?"

I can really see the patient's point of view and now, with proper planning, we do a cemented crown on top of a torqued abutment that looks just like a tooth. That is what patients want - functional and lifelike restorations. Patients demanded these lifelike restorations and, subsequently, the implant companies provided dentists with the "parts and pieces" to make them.

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Esthetics is one very important aspect of implant dentistry. But what about the timing from implant placement to restoration? We know from implant scientific literature that there is a "healing" that must take place, along with the osseointegration for the implant to be used. It is really wound-healing and, as we know, there is an inflammatory phase, a proliferative phase, and a maturation phase.

Traditional placement of implants was a two-stage procedure. The implant was placed and allowed to integrate, and then a second-stage surgery was done to "uncover" the implant with a transmucosal abutment. Implants are now being done as a single-stage surgery, eliminating the osseointegration needed for a second surgery. This has made it easier for the patient and saves time for the treating doctor.

The concept of osseointegration is certainly not forgotten and, more importantly, it is depended upon for the ultimate success of the implant. From the research, we understand that micromovement is the enemy of implants. The concept underlying the two-stage implant was to prevent early loading and implant micromovements and to ensure that the bone can be regenerated. If the implant was not "solid" to the bone at the time of placement, micromovement would occur, creating a fibrous interface that would not be a direct bond to the bone. ITI implants (Straumann, [www.straumann.com](http://www.straumann.com)) first reported the use of a single-piece implant in both the maxilla and mandible that did not require a two-stage surgery. Once the box was opened, researchers began reporting great success, compiling five-year data published in 2000 that did not show any difference between stage one and stage two procedures. Early functional loading with dentures which had been relined after a couple of days also showed great success. The key certainly appeared to be the quality of bone into which the implants were placed. The other key factor was the amount of load placed upon the implants. Parafunctional habits seemed to be the destructive force that "killed" the implants. Now dental practitioners had another option to offer their patients when it came to implantology.

Predictability of dental procedures from the simple to the most complex filling is an important consideration. Companies that have given us quantifiable and evidence-based procedures versus qualified information should be strongly considered when providing the service of immediate-load implants.

Nobel Biocare ([www.nobelbiocare.com](http://www.nobelbiocare.com)) and Camlog ([www.camlog.com](http://www.camlog.com)) have torque wrenches that allow for measuring the amount of torque put on the implants at the time of placement. Protocols are very specific about when an implant can be immediately loaded. Those protocols must be followed to be comfortable with the success of the implant. Frustration can be great for the implant-placing dentist, restorative dentist, and the patient if an implant fails because the protocols that are demanded by the manufacturers have not been followed. I am not suggesting that other companies do not have implants that can be loaded immediately, but the quantification of the torquing forces during placement of the implant is helpful in making decisions about immediate-loading implants.

All cases should be treatment-planned from beginning to end. How the patient is going to function during the healing phase is always a concern. In the posterior region of the mouth where teeth have always been missing, patients are very accepting of not having a tooth right away. However, when anterior teeth are involved, the patient may already have a prosthesis to wear. In the past, the implant patient was not allowed to wear a prosthesis because the implants might be disturbed.

It is very important to have informed consent when discussing implant dentistry or any other dental treatment. The more difficult and involved the procedure, the more in-depth the discussion should be with the patient. Implant dentistry is an involved procedure and immediate loading of implants takes the importance of informed consent to a higher level.

I have been using a system I call the BRAN method since my implant training with Dr. Paul Schitman in Boston. This is a subject that has been given a great deal of press in the dental literature. In my training, informed consent was discussed at great length. My contribution to this discussion was a mnemonic method to help me remember the steps in the discussion. This simplified approach, which I have presented in lectures over the years, is designed to make sure that informed consent is always covered. My BRAN theory says, "If you eat BRAN, then everything will come out OK."

To fully discuss informed consent, you need to cover the following areas:

1. *The **B**enefits of receiving the dentist's recommended treatment.*
2. *The **R**isks involved in having procedures done that will give the desired outcome.*
3. *The different **A**lternatives of treatment available to the patient.*
4. *A "**N**o Treatment" option as long as the patient understands the consequences of no treatment with pathology present. Remember, not every patient wants or can have the recommended treatment.*

Because of the demands of our patients and the desire of our profession to fill those demands, immediate-load implants have come to the forefront of implantology.

This is certainly not the place to discuss the fine point of immediate-load implants, but what I want to do is make sure you understand how this modality is "another arrow to place in your quiver to fight dental disease" and an option for immediate function for your patients who are interested in implant dentistry. It will satisfy the demands of a need for decreased treatment time for your patient. I must emphasize that it will not decrease your planning time or your involvement in the case. In fact, it may increase the planning time for you and the surgical team.

The team concept for implant-planning is critical when deciding to become involved with immediate-load implants. If you are trained and doing implant placement yourself, then your team is, of course, your office staff and the dental laboratory you are working with. If you are working with another dentist on placement of the implant and you are going to be doing the restorative phase, then the team members include the dentist placing the implant, the restorative dentist, and the laboratory.

Nobel Biocare's NobelGuide™ ([www.nobelbiocare.com](http://www.nobelbiocare.com)) and Implant Logic Systems ([www.implantlogic.com](http://www.implantlogic.com)) are providing advanced systems for the placement of implants based on CAT Scan information. Both of these systems utilize preplanning stents, models, and CAT Scan imaging to provide templates to guide implant placement. The placement is so good that the final prosthesis can be finished and ready for insertion at the time of implant placement. Implant Logic Systems also is providing treatment-planning services for the dental team, as well as the surgical stents and drilling systems for implant placement. These stent systems allow for great precision when placing implants and offer the wonderful option of immediate function. This is the ultimate in patient service! I want to emphasize that this requires training and proper planning to be successful. Planning is the key for success, and it cannot be overstated.

The denture patient has always provided a challenge for the restorative dentist. The patient with no teeth has lost so much and has had numerous dental experiences, most of them not good. To provide a stable lower denture and an upper denture which allow for "less plastic" is a wonderful service. The mini-implant systems have really given us an option that is less expensive than conventional implant dentistry and has the wonderful feature of immediately loading the implant.

As a revolutionary departure from routine dental-implant methods, mini-dental implants are so narrow that they can be inserted directly through the overlying gum tissue and into the bone underneath. Experience is required to know when the "flapless" surgical approach can be taken. Frequently, the need to surgically cut and "flap" open the gum tissue is avoided. Because the procedure is less invasive, postinsertion soreness is significantly reduced for the patient. The most important factor in the success of these systems is that the dentures are made completely passive and totally tissue-supported. The systems are not designed to "hold up" the dentures, but rather to prevent their movement upon opening. The patient expectations need to be understood and a complete discussion initiated to prevent misunderstanding about the limitations of the mini systems.

IMTEC ([www.imtec.com](http://www.imtec.com)) and Dentatus® ([www.dentatus.com](http://www.dentatus.com)) have provided us with mini-implant systems that will stabilize dentures for increased patient and doctor satisfaction. The most important feature is that the mini-implant can be immediately loaded. Other companies are also providing this type of implant. BASIC Dental Implants ([www.basicdentalimplants.com](http://www.basicdentalimplants.com)) and MDL Corporation ([www.orimplants.com](http://www.orimplants.com)) are among them, and I am sure more are coming.

There are many sources of implant training, and certainly the Web provides huge amounts of implant information. One such source for implant information is Osseonews ([www.osseonews.com](http://www.osseonews.com)). Type in "implant training and seminars" in one of the Web search engines, and you will find numerous course listings. There are company-based programs that emphasize a single-implant system as well as university-based programs. All are important educational resources for the dentist who wants to become informed about implant placement and restoration, as well as understand the clinical situations that allow for immediate loading of implants.

Some dentists also have started their own implant seminars to expand the knowledge base. Some of these seminar leaders include myself at [www.dentalexplorations.com](http://www.dentalexplorations.com), Dr. Carl Misch ([www.misch.com](http://www.misch.com)), Dr. Joel Rosenlicht ([www.rosenlicht.com](http://www.rosenlicht.com)), and Dr. Michael Sonick ([www.sonickdmd.com](http://www.sonickdmd.com)). To become knowledgeable is to understand the possibilities of providing greater patient services, increasing personal satisfaction, and adding to the bottom line of your practice.

It really is a "balancing act" of understanding the art, (doing beautiful dentistry), science, (using good

information that is evidence-based), and business (adding to your profitability to provide good staff salaries and earn the money you need to support your family) of implant dentistry.

Patients have pushed us to provide better service in a more timely manner. The question is: "Can we decrease the time it takes to do implant dentistry while still adhering to the 'good' science of implantology?" The answer is: "Yes, we can," while balancing the art, science, and business of dentistry.

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