Belledental -

Implant Dentistry Disclosure

68 Dilkera Avenue (PO BOX 3163)
Valentine, NSW 2280
ph: 02 4946 9122
web: www.belledental.com.au

Introduction:

Thank you for your registration of interest in the use of dental implants. There is significant information available regarding dental implants so the objective of this document is to inform you of the processes, advantages, limitations and complications associated with the placement of dental implants as understood by Alex Huszti and the team at Belledental.

We hope that the information contained in this document is clear, informative and realistic. The surgical nature of implant dentistry demands a rigorous approach to all aspects of planning, implementation, restoration and ongoing care. I would therefore kindly request that you read the document carefully - feel free to highlight or mark ANY part of the information that you don't understand or have ANY DEGREE OF CONCERN. There is space on each page in the right hand side column to write down any questions you may have as they arise. Please also initial each page to indicate your understanding.

Each patient is different. Each section of each plan is different. This document speaks in general terms so as to provide a basic understanding that covers fundamentals so that we may, in certain circumstances, deal with more complex or specific details and exceptions that may arise from time to time.

Your Name:_____Date:_____

Why are you reading this?_____

_____

_____

Table of Contents

Dental Implants - Basic Information

Dental implants were developed over 50 years ago in Sweden. The implants are manufactured from commercially pure titanium or some alloy that is predominantly titanium. Over the years they have taken a number of forms but the most common form is the 'screw' type fixture which is used to replace the roots of lost teeth and can accept a number of different types of 'abutments'. The abutments are attached to the implant fixture usually by a screw and protrude through the gums into the mouth.

Modern dental implants have specially coated/roughened surfaces that encourage the bone to grow right onto the implant as if the bone was healing from a fracture. The necks of the implant may be treated in such a way to allow the gum to grow onto it and form a biologic seal (collar) similar to the one that can be found around the necks of teeth.

As much as we can be impressed with the advancement of implant technology - and how well it integrates with human tissues, they still fall short of you own healthy, well maintained teeth. **At Belledental, our primary focus is ALWAYS on the simplest and most effective treatment modalities - that will allow you to keep your own teeth - offering best value for money, conservatism, beauty and simplicity.** These goals are best achieved with quality tooth conserving dental care, regular maintenance and effective home care.

Sometimes, even through best efforts teeth can be damaged in a way that they may not be saved. It is in instances such as these that dental implants can be used to replace missing teeth. In this way, the missing tooth is replaced with an implant supported crown that will fill both the cosmetic space left by the missing tooth as well as a significant portion of the functional role of the missing tooth (-remember, dental implants are inferior to your natural, healthy, well maintained teeth). In this way, the implant crown will bear a significant part of the increased load borne by the natural teeth after the loss of a tooth. In this way, implant crowns help to spread load.

Options When a Tooth is Lost

1) No replacement - usually this is not ideal, but when a tooth has been lost from the position of last tooth in the quadrant and it doesn't have an opponent tooth (and there are sufficient other teeth to support the bite), it is not always a high priority to replace the function of such teeth. This situation is termed the 'shortened dental arch'.

2) Bridges - there are a number of forms of bridges - however, they typically are a false tooth or teeth, that are supported by the surrounding natural teeth. Usually, bridges are 'fixed' i.e. they cannot be removed and are either bonded to or cemented to the adjacent teeth. By getting support only from the adjacent teeth, bridges concentrate loads in the mouth i.e. the teeth that support the bridge need to support their loading as well as that loading placed on them by the bridge - this is a form of concentrating or increasing load.

3) Partial Dentures - these are removable 'teeth' that are usually supported by both the surrounding teeth and the gums. They also have the effect of increasing the load on both the adjacent teeth and the gums. Because of the increased load that they transmit to the surrounding teeth, the mouth should be rested from these partial dentures for at least 6 hours per day i.e. the partial dentures should be taken out. They often also cause the undesirable deflection of food - which can necessitate the removal of these prostheses after meals so that they may be cleaned and any impacted food removed from underneath them. Plaque builds up on these removable dentures as it does on natural teeth, so they must be cleaned at the same time as the natural teeth.

4) Dental Implants - this involves the placement of suitably sized titanium fixtures into the bone - in a similar situation that the root of a tooth would sit in the bone - and allowing the bone and gums to heal around the fixture. Once the healing is complete, it is possible to attach 'abutments' onto the fixture that can support a crown or various other forms of prostheses. By increasing the number of tooth roots present in the mouth, load is distributed and therefore, dental implants have the effect of ***spreading*** load.

Dental implants can therefore be best thought of a supplementing your own natural teeth. Adding implant supported crowns/restorations allow the spreading of load from your natural teeth to the additional 'teeth' supported by implants.

Implants and Gum Disease

Just as gum disease can cause the loss of natural teeth by destruction of the supporting bone and gum - implants are also susceptible to gum disease. In fact, because there is less natural immunity associated with dental implants - they are even more prone to attack by gum disease.

It is critical that home care is not only carefully implemented around implants - it has to be even more effective around implants to prevent the onset of gum disease and maintain a healthy junction between the implant and jaw bone/gum. The process of gum disease is virtually identical around implants and natural teeth.

Because dental implants are placed into the jaw bone - they transmit biting loads directly to the bone in a similar way to teeth. We all know the saying ***'use it or lose it!'***. Because the dental implants are constantly stressing the bone (in the same way as an athlete endures training to remain fit and strong), the bone is stimulated by the loading of the implant to remain strong. Strong bone and better efficiency in the transmitting of load to the bone means increased chewing efficiency. This also prevents the bone from withering away - meaning that even though teeth may be lost - because a dental implant is placed, it loads the bone in a similar way to a tooth loading the bone- retaining the bone and retaining the strength of the jaw bone.

Although dental implants are made of titanium - a very strong and light metal - it is still possible to overload dental implants (and in fact break them!). In fact, after gum disease and lack of care, this is the greatest hurdle most dental implants face. It is critical that grinding of teeth is minimized, and that if you suffer from nocturnal grinding, that you wear a splint that has been relieved in such a way that minimal or no load is transmitted to the implant. If an occlusal splint or such device is issued to you to wear - it must be worn every night, in addition to any other times when grinding loads may be transmitted to the dental implant.

Other behaviours that may overload the dental implant include chewing ice, chewing hard objects, holding hard objects between your teeth and contact sports.

Will dental Implants last a lifetime?

How many things do you own, that you use 24hours a day that you've had since birth? The long term success of dental implants is related to how well you care for yourself, your dental home care and genetic factors. It's much the same as most other health related issues.

X-Rays

It will be necessary to undergo some types of scan(s) or x-rays in order to make the appropriate diagnosis regarding implant therapy. Often, impressions are taken and a 'stent' is made up, that is worn during the scanning process. This stent shows up on the scan and allows for a refinement in the planning process. In more complex cases, there may be a need for multiple rounds of scans in order to check on each stage of the treatment process and refine planning for the next stage.

Guarantee

It is not possible to guarantee dental implants. We take every precaution regarding the planning and placement of implants. We will provide you with home care information regarding the implants and request that you avail yourself for regular periodic follow-up and cleaning visits at our office. The success of the implant is dependent on your efforts at home and the efforts we make in planning for the placement of the implant and subsequent care in our office. Implants are a complex treatment modality and therefore, adherence to our recommendations is critical to the success of this form of treatment.

Informed Consent

Dental implant therapy is complex. It has taken over 50 years from the first dental implants to achieve the type of success and cosmetics that we enjoy today. There are a number of important aspects to implant therapy that need to be outlined.

Your Medical Condition

Because implant therapy is a surgical modality, your general health plays a critical role in the success of the treatments. Any form of uncontrolled medical disease could cause the loss of implants. These include diabetes, thyroid issues (hyperthyroidism and hypothyroidism), epilepsy, heart problems, heart disease, lung disease, sinus disease, kidney problems, bone disease, osteoporosis, anaemia, immunodeficiency, emotional disturbance, treatment for cancer, any substance abuse and smoking.

Success of Dental Implants

Not all implants are successful. No medical procedure has a 100% success rate. The success of dental implant therapy depends on a number of variables.

1) The healing ability of the patient

2) Proper diagnosis and treatment

3) The implants must be treated properly by the patient

4) Heavy smoking and substance abuse will compromise success

Loss of Nerve Sensation

There are some cases of altered / loss of nerve sensation associated with surgical procedures. This can happen with removal of wisdom teeth. It is usually temporary and involves sensation only (numbness) - not muscle function. It is possible that this could happen with the placement of dental implants. The loss of sensation is usually temporary and is a loss of sensation only.

Surgical Procedures

The surgeon reserves the right to abort or alter surgical procedures involved in implant placement and implant site preparation based on conditions encountered during the procedure. Examples include incomplete graft union, bleeding episodes, anatomical complications, inadequate bone, infection and poor bone formation after particulate grafting. Decisions are made on the basis of best outcomes for the patient (you) based on the reported dental and medical literature. Sometimes, additional surgical

interventions are necessary to provide for optimal outcomes. These additional interventions may incur additional fees.

Smoking and Dental Implants

Smoking reduces the success rate of dental implants. As a health professional, it is our role to advise you regarding your health. There is a significant link between smoking and gum disease. Implants are more susceptible to gum disease than natural teeth - therefore, smokers have a significantly higher implant failure rate. Smoking also impairs the body's ability to heal - delayed healing increases failure rates. Our advice is to cease smoking before implant therapy.

Gum Disease and Implant Therapy

Effective regular home care/cleaning is critical to preventing or minimizing the progression of gum disease. Because dental implants are more susceptible to gum disease than natural teeth, it is vitally important for the success of dental implants that you follow the home care instructions given to you. We also recommend regular assessments, examinations and cleaning appointments to maintain your implants and all of your other teeth in a healthy condition. Once problems arise, they can be difficult to fix. Therefore prevention is the key to success.

What if I don't have enough bone to place an implant...?

The most commonly placed implant is the 'root form' implant. This type of implant, as the name suggests, approximates the root of a natural tooth. Depending on the location of placement of the implant, the number of remaining teeth, and in order for the root form implant to do its job, it needs to be a certain size (length and diameter). This means that there needs to be a certain amount of bone present to place the implant into. If there is NOT enough bone...what do we do?

There are a number of possibilities, however, the most common is some form of grafting procedure. This allows for the addition of bone to the available bone - increasing the amount of available bone. This is called bone grafting. The surgery involves preparing the **host site** (area where bone will increase), harvesting some bone from a **donor site** (somewhere else in the patient's mouth), and placing the harvested bone into the host site and covering the area with a membrane to promote healing. Healing is allowed to occur, prior to re-scanning the area and final planning for the implant placement. Like any surgical procedure, bone grafting can have complications and it may, on some occasions, be necessary to re-enter sites a number of times to provide for optimal outcomes. There are 3 main ways that bone grafting is implemented:

1. Particulate grafts - where smaller amounts of bone are required
2. Sinus grafting - where the sinus reduces the amount of bone present for placement of implants - it is possible to enter the sinus and add bone to the floor

of the sinus - making the sinus shallower and therefore more bone is present for placement of implants.

3. Block grafting - where larger amounts of bone is required for the placement of implants - a block of bone is used to add to the bone of the host site.

The Best Time to Consider Implants

Bone is lost from the time that a tooth is extracted. It is therefore best and simplest to consider implant therapy either **PRIOR TO** or **IMMEDIATELY AFTER** extraction - when there is the **MOST AMOUNT OF BONE LEFT.** Implant therapy should be discussed with your dentist at the earliest sign that a tooth may be lost.

Grafting Materials Used at Belledental

There are a number of grafting materials used at Belledental that are not on the approval list of Australia's Food and Drug Administration.

Food and Drug Administration (FDA) approval is a different process in each country. It is also an expensive process. The manufacturers of products tend to get approval in economic zones with the greatest populations to offset FDA approval against profits from the development of the materials. Australia is a small economic zone - therefore, it is relatively un-economical, at least initially, to have the products pass through the FDA approval process. These materials do have FDA approval in USA, Europe (EU) and parts of South America.

They are legal and available to be used in surgical protocols under the Australian Special Access Scheme.

The materials in relation to this statement are:

Mineross:
(a human sourced granulated, treated freeze dried bone product)

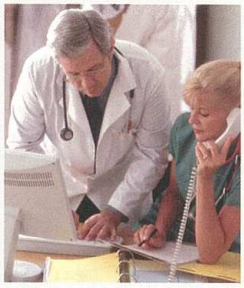
Alloderm:
(human sourced skin tissue - has had cells and blood vessels removed without alteration to the 'dermal scaffold')

Grafton:
(demineralized bone matrix)

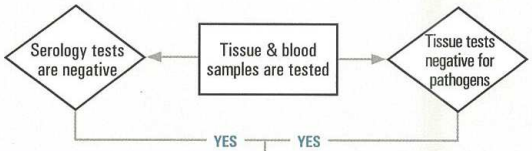
BIOHORIZONS® LifeCell Safety LifeCELL

Tissue Recovery and Processing

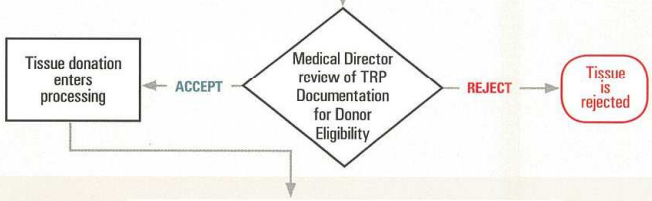
Tissue Recovery



- Independent, FDA Registered 3rd Party Tissue Recovery Partners (TRP) obtain consent for procurement of the tissue.
- Comprehensive medical and social history screening meets FDA and AATB criteria.
- Donor tissue and blood samples are tested for infectious diseases including HIV and Hepatitis (B & C). Tissue must test negative for pathogens; serology tests must be negative.



LifeCell Medical Director must review and approve TRP documentation for donor eligibility before the donated tissue enters processing.



LifeCell's Proprietary Tissue Processing

See rear for more details on LifeCell's unique processing

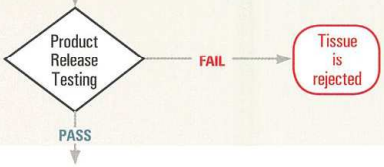
LifeCell's Patented Acellular Process

Non-damaging steps designed to:

Remove cells on surface of skin
Remove cells deep in the dermal tissue
Reduce potential viral contaminants

Non-damaging freeze drying:

Non-destructive drying and packaging for storage



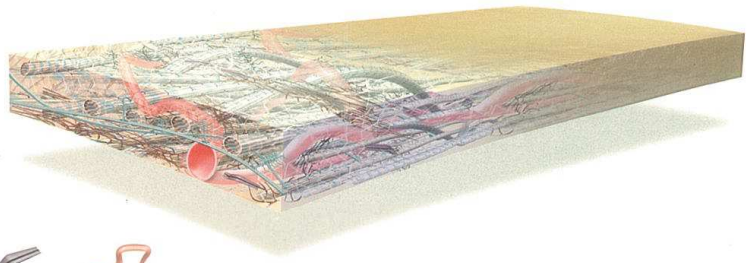
Before use, physicians should review all risk information, which can be found in the "Instructions for Use" attached to the packaging of each AlloDerm graft.

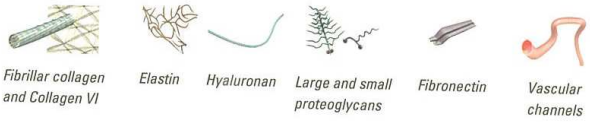
Final AlloDerm® Product

- No cells detected.
- Although donor tissues are screened for infectious diseases, LifeCell processing adds an additional level of safety, having been verified to reduce viral contaminants >99.9% for HIV-I and surrogates for Hepatitis C.
- No microbial pathogens detected.
- Intact matrix and critical biochemical components.

LifeCell's Processing Expertise

A commitment to continuous product enhancements-
All improvements to the product and process thoroughly evaluated to ensure a fully intact, non-damaged and efficacious regenerative tissue matrix.





Fibrillar collagen and Collagen VI | *Elastin* | *Hyaluronan* | *Large and small proteoglycans* | *Fibronectin* | *Vascular channels*

Nothing is "just like AlloDerm."

Except AlloDerm.

LifeCell's revolutionary science and processing mastered by world renowned scientists has resulted in 12 years of clinical efficacy, with more than 950,000 successful tissue grafts and implants to date.

Proprietary, non-damaging processing allows AlloDerm to support rapid revascularization, minimizing the risk of infection and rejection.

- *Biochemical components critical to tissue regeneration remain intact after processing.*
- *AlloDerm is non-crosslinked because it is not exposed to any denaturing or damaging chemicals or processes.*

Histological evidence supporting:

- *Transition of AlloDerm from dermal tissue into healthy metabolic tissue; not scar.*
- *Exceptional persistence; transitions to the appropriate tissue without resorption.*

LifeCELL

BIOHORIZONS®

One Perimeter Park South
Birmingham, AL 35243
Customer Care: 888-246-8338
www.biohorizons.com

Remodeling and transition similar to connective tissue

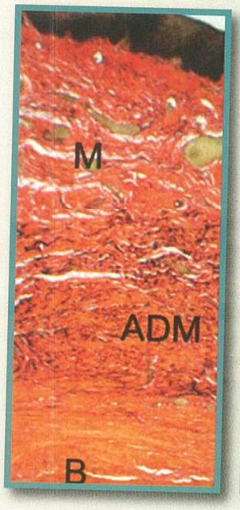


Figure 1
acellular dermal matrix
40x Verhoeff's stain for elastin

Figure 2
connective tissue
40x Hematoxylin and eosin (H&E) staining

- *Histology in Figure 1 exhibits mucosal tissue (M) overlying the area of AlloDerm placement (ADM) and osseous crest (B)*
- *Histology in Figure 2 exhibits mucosal tissue (M) overlying connective tissue (C) and osseous crest (B).*
- *Histologically at 6 months, AlloDerm was well integrated into the host tissue.*

Cummings et al. Histologic Evaluation of Autogenous Connective Tissue and Acellular Dermal Matrix Grafts in Humans. J Periodontol 2005; 76: 178-186.

Your Cosmetic Expectations

Depending on the location of placement, the implant restoration will have differing cosmetic requirements. If it is visible when you smile, you will most likely have higher expectations regarding the cosmetics of the restoration than if it is in the back of your mouth.

When teeth are lost, some of the bone of the jaw that supported the tooth is lost. This in itself causes a cosmetic problem because the shape of the gum is determined by the shape of the underlying bone. The shape of the gum is therefore altered after the loss of teeth - and a significant part of cosmetics is the interplay between the gums and the teeth.

The most effective way to handle this problem is to be as careful as possible during the extraction of teeth and *at the time of extraction*, graft a particulate bone material into the socket to minimize loss of bone due to the loss of the tooth. This procedure will often (not always) allow for a more straightforward transition from a failing tooth to an implant supported crown.

If the tooth was lost some time ago, the bony contour (and therefore gum contour) may have already changed - bone resorbtion has already occurred. In this instance, it may be necessary to engage in a more traditional bone grafting procedure (as when there is insufficient bone present to place an implant). The longer the tooth has been lost, the more likely a grafting procedure will be required to prepare the site for an implant.

The higher your cosmetic expectations, the more likely bone grafting is required, and the more bone that is required to achieve your desired cosmetic outcomes. It may even be necessary to engage in multiple preparation procedures to achieve your optimal cosmetics.

Treatment Protocols

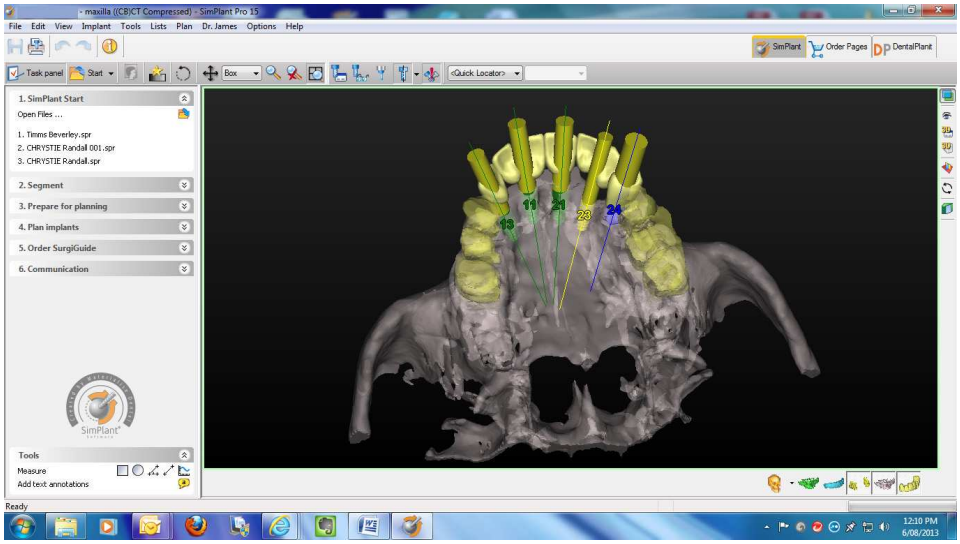
Implant therapy is conducted in the following order (assuming the :

1. Consultation and discussion of desires and outcomes
2. x-ray scans
3. Development of treatment plan and consultation
4. preparatory surgery / bone grafting / extraction of teeth if necessary
5. healing phase
6. re-scanning with x-rays to check on outcomes of preparatory surgery and finalize implant positioning
7. Implant placement
8. Healing phase
9. Restoration of implants
10. Maintenance

Planning is Critical

Because implant therapy is of a surgical nature, each step of the process must be carefully planned to ensure optimal outcomes and long term success.
It is possible to take short cuts with implant therapy - as long as you are willing to endure lower success rates and the associated costs (both monetary and physical). At Belledental - we strive simultaneously for the most conservative outcomes AND the highest success rates.

Our planning includes 'virtual planning software' studies using the scans that you provide



This type of planning helps remove some of the practical complications of surgery, however, it does not change patient response factors to surgery, such as healing.

This document is not an alternative to careful assessment and planning. It is designed as a simple guide that provides general information only. Implant therapy is complex and each patient's treatment requirements is unique.

Belledental Valentine
unit 4 / 68 Dilkera Ave
Valentine NSW 2280
ph: 02 4946 9122
web: www.belledental.com.au
Dr Alex Huszti B.D.S

Directions:
You are looking for a set of lights at Valentine BP service station. If you are approaching from the North (Warners Bay), you turn RIGHT into Tallawalla Rd.
If you are approaching from the South (Belmont), you turn LEFT into Tallawalla Rd.
Once on Tallawalla Rd, turn RIGHT at the first street which is Dilkera Avenue.
Follow the sweeping curves of Dilkera Ave until you reach a blue and white building on your left and a view of Lake Macquarie to your right.
There is untimed parking on Dilkera Avenue.