What Are They Smiling About?

“The No Nonsense Truth About Dental Implants”

SMILE BY CRIS
CUSTOM REINFORCED IMPLANT SYSTEMS FOR DENTURE WEARERS

By Dr. Harold Bergman, DDS, Dipl. OS&A, MScD (Path)
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About the Author

Dr. Harold Bergman earned a DDS (Doctor of Dental Surgery), Dipl.OS&A (Specialty Diploma in Oral Surgery & Anaesthesia) and a MScD (Path) (Masters Degree in Oral Pathology) all at the University of Toronto. He has been involved in dentistry since 1954, been a certified Oral & Maxillofacial Surgeon since 1964 and has over 40 years’ experience in the placement and restoration of dental implants and bone grafting procedures. An internationally recognized lecturer, Dr. Bergman has been active in training dentists and denturists in the placement and restoration of implants for 35 years. He also developed hands on training programs with protocols using techniques already familiar to the general dentist as well as authoring the 26 module ADA and AGD CERP approved Distance Study Programs for dentists, denturists, lab technicians and veterinary dentists.

During that time, he has authored over 100 scientific and technical publications and articles to both the dental and veterinary profession and the public. Recently he also authored a book entitled “Dental Implants for Small Animals”. He introduced a number of simplified implant surgical procedures such as the “extraction site”, the “cookie cutter” and other “limited flap” procedures. These procedures were designed to make implant surgery easier, quicker and less traumatic for the patient.

Over the past thirty years, Dr. Bergman used his experience in designing and manufacturing dental implant products such as the ANCHOR™, the SIMPLER™, the MAXiMini™ the SIMPLI™ as well as numerous other implant solutions such as the PARALLELING GUIDE, DOWEL PIN ANALOGUES, EDENTULOUS MANDIBLE LOCATION GUIDE, and PREP™ software Program(Patient Risk Evaluation Program).

Currently Dr. Bergman is President of four implant related companies - manufacturing and selling dental implants and related accessories. He continues to develop creative new ideas and solutions for everyday problems found within the dental implant industry as well as training dentists and denturists worldwide. With all his knowledge, his experience, and one who is recognized world wide as a leading implant dentist now comes “CRIS” (Custom Reinforced Implant Systems), his fifth company, making available, state-of-the-art dental technology and expertise to the general public providing effective long-term solution for people who suffer from missing teeth, failing teeth or chronic dental problems.
Forward

If you are someone who is about to lose their teeth or has already lost some or all of your teeth, this small informative publication is a must read for you.

My name is Dr. Harold Bergman and, as you can see from my biography, I am in a position to tell you the true story of implant dentistry and answer any questions you may have about possible treatment using dental implants. I hope you find this interesting and informative, and know, that there are no other dental implant websites who offer implant services that will educate and empower you as much as I will today.

I have been in dentistry for over forty years, worked on thousands of patients, and I can tell you, as well as anyone who is wearing a denture(s) - you really don’t want to go there. Personally, I have installed implants in enough patients to know that implants, made from titanium, and properly installed, are the most successful and best option for anyone wearing, or having to wear, or about to wear, denture(s).

Back in 1972, I took training in and started placing a dental implant system called the “Ramus Frame System” developed by Drs. Harold and Ralph Roberts. The Ramus Frame System, as most implants in those days, including hip implants and bone plates, were made from stainless steel. The Ramus Frame implant was one piece and was designed to treat the entire jaw. Once healed, all stainless steel implants, including hips and bone plates, are surrounded by a very thin layer of scar tissue. If this layer remains thin, the implant will function well; if the scar tissue layer thickens, the implant would loosen and need to be removed. The life expectancy of hip implants at that time was under ten years. Back then the placement of dental implants was considered highly controversial and experimental.

Like most dentists, I wasn’t sure if they were in the best interests of my patients and was very cautious about getting involved in implants. As a trial, I placed the Ramus Frame system into four patients and waited one year in order to evaluate their success and to determine whether I would continue doing so. After one year had passed, I examined the patients clinically and intraorally and could find no signs of inflammation or negative signs around the implants. I took X-rays to see the affect the implants were having on the supporting bone and could see no damage occurring there. In every case my patients had no complaints about having them. When I asked them what they thought of their implants, in every case, they were enthusiastic and happy, and several of my patients even cried from the joy of having the implant(s) placed. Consequently, I decided to continue treating people who have lost teeth (either partially or completely) using this system, treating almost 200 patients over the next five years. During that period I only needed to remove five implants and felt I had a success rate in excess of 95%.
The placement of the Ramus Frame implants was performed using only a local anesthetic, and only required one Ramus Frame implant to treat an entire jaw. The process took about ¾ of an hour to place and the patient left the office wearing their denture securely attached and functioning. The patient was happy and so was I.

In the 70’s and 80’s, a series of articles were published by Swedish researchers alleging that by using four to six titanium implant screws per jaw instead of stainless steel screws accomplished higher than usual success rate (98%); obviously a significant improvement in success rates over implants made from stainless steel. These titanium screws were manufactured in Sweden by a large multi-national company who also made guns and ammunition. At that time there were only around 900 general practitioner dentists in North America that were placing stainless steel dental implants and virtually no dental implant specialists.

As a marketing strategy, the company who manufactured the titanium implants, restricted training and the sale of their implant system to oral surgery specialists and denied its use to the general practitioner dentists. The company charged the oral surgeon(s) outrageous fees to take their training courses and to purchase the surgical instruments knowing that their proven success rate “claims” of the patented titanium implants and accessories was revolutionary and they knew the oral surgery specialists saw this as a great opportunity. I, too, started placing titanium implants, but soon learned that I was not experiencing 98% success rates but only 85%. Others like me were experiencing the same 15% failure rates, so I then formed a task force, and started asking some really tough questions.

During my research, I found that in 1986, Dr. Robert James, a professor of dental implants at Loma Linda University published an article entitled “A Critical Review of the Osseointegrated Literature” which exposed a number of misrepresentation in the Swedish articles which showed success rates much lower than they had published. His article also showed other misrepresentations as well. He concluded, in his article that the results “appear to be designed to provide artificially enhanced results, which are not consistent with other reports.”
Generally speaking, if a titanium implant is going to fail, it will do so within the first six months to a year. Thereafter, one should expect failure rates of 1 to 2% per year over the next five years.

The misrepresentation in the original claims arose because the authors failed to include the first year of the study, in which they had 15% failure rates. After the first year, the failure rates dropped to 2% over the next 5 years. So by starting the study after the first year and not including the first year, they gave artificially enhanced results.

Just so you know, titanium is the fourth most common metal in the world, and the raw metal itself is expensive. Titanium implants are made from these narrow titanium rods

The system placing titanium implants in dentistry caught on with not only the oral surgeon specialists, but with the experienced general practitioner dentists, eventually periodontists and now other specialties such as endodontics. Part of the reason why other dentists started placing implants is because other small dental companies and other dentists started designing their implant systems offering training and implants at lower costs as well as making them less exclusive. I felt at the time we needed to simplify the procedures, get implant dentistry back into the hands of experienced general practitioner dentists, reduce the costs to the dentists so that fees were reasonable to the public. That has been my goal and still is today.

In 1987, I designed, patented and introduced the Anchor Implant System, the first implant system made in Canada; in 1992 designed, patented and introduced the Simpler Implant System, which featured three new concepts, one of which I patented, and now are copied by most implant systems in the world; in 2013, the MAXiMini Implant System and in 2015, the SIMPLI Implant System. The SIMPLI Implant System is the only system designed specifically for totally edentulous patients.
Over the past 30 years, I have introduced and patented many devices and instruments to make implant dentistry easier and less costly. Early in 2016, I introduced SmilebyCRIS, a patented, copyrighted, franchise of dental implant professionals that markets to the increasing and aging baby boomer population. The rising incidences of dental caries and other periodontal diseases are the main factors driving the rapid growth of this market. SmilebyCRIS, is a team of experienced, qualified dentists, and denturists whose goal is to provide patients who have lost all their teeth with the most advanced clinical and technical protocols at an affordable price.

SmilebyCRIS is the culmination of over 50 years of hard work and dedication. My goal and dream right now is to change for the better, the lives of individuals who are desperate for change, wearing traditional, non-functional dentures. We achieve this through education empowering the patient with knowledge to choose the best treatment solutions; providing the best quality of care by experienced CRIS Dentists using the very latest dental implant technology, materials and protocols.

Thank you for listening to my story. What follows is information that will give you enough insight on what you can expect while moving forward, and of course you will be armed to the teeth (no pun intended) with enough information that will dazzle any dentist. Talking about your treatment intelligently with your dentist is a must. There are many Dentists out there who only care about their revenue, and not you.

How Do You Determine What You Should Do About Your Teeth.....

By the time you reach age 18, you will have 16 teeth in the upper jaw and 16 teeth in the lower jaw. Now your eating organ (your teeth, gum tissue and supporting alveolar bone) has evolved over three million years making it one of the best eating systems on planet earth. A basic fact about your body parts: you either use it or lose it, and when you take them for granted – watch out! The sole function of the alveolar bone surrounding the tooth roots is to support and maintain the teeth. This requires the teeth to stimulate the bone when eating. Once the tooth is lost, the alveolar bone no longer receives the stimulation and starts to shrink away, both in a vertical direction and in a lateral direction. If you are wearing a full denture you are losing your bone, right now, a little more day by day.

It’s clear why the dental industry has grown so fast. People are living much longer and their diets have become dentally destructive. There are varying factors contributing to tooth loss though many people assume once you become a senior, losing your teeth is inevitable. Tooth loss is common, but in the majority of the cases, just like most things in life, if you lose your teeth and end up with false teeth, you’re probably the cause. The next best thing to natural teeth is dental implants.

“It will be the best money you ever spent on yourself” - Jay St. John (a SmileByCRIS patient)
Facts and Figures on Dental Implants - AMERICAN ACADEMY OF IMPLANT DENTISTRY

- “78 Million Baby Boomer Begin Turning 65 at a Rate of One every 10 seconds (3-4 Million per Year)” - US Census Bureau, 2016
- “26% of all Seniors over the Age 65 will Lose all their Natural Teeth" - USA Center of Disease Control, 2016
- 3 million have implants and that number is growing by 500,000 a year.
- 10 percent of all US dentists place implants but that is increasing.
- The success rate of dental implants has been reported in scientific literature as 98 percent over 5 years.
- The dental implant and prosthetic market in the U.S is projected to reach $6.4 billion by 2018.

If only a few teeth are missing and the rest of your teeth are in good repair, you have several options available to you including a removable partial denture, fixed bridges, and possibly dental implants supporting either crowns, fixed or removable bridges. You also have the option to do nothing. Your choice is dependent upon the condition of your remaining teeth, the amount of bone available and the cost effectiveness and affordability of the treatment choice.

If all your teeth are missing, for years the only previous choice was to wear dentures. One of the problems with doing nothing that many people are unaware, is that your facial profile will collapse, and I mean fast. You will look many years older than you are, and your diet will then consist of soft and liquid foods, and then of course your dietary problems will increase.

The problem with dentures is that they rely on suction to hold them in place. To obtain suction in the upper jaw, the denture must cover not only the ridges where the teeth were but also the entire hard palate extending back as far as the soft palate. By covering the hard palate in the mouth, you will lose the sense of taste from the taste buds located there. The area of suction available for a lower denture is limited to only that "horse shoe shaped" area where the teeth were. This cuts down on the amount of surface available for suction about 50%. The result is that the lower denture frequently" floats" over the ridge. When eating, food gets sucked under the denture making the eating of seeds, nuts, meat, etc. impossible. Unlike the upper denture, the area inside the horse shoe is filled with your tongue, a very strong muscle. This tongue easily can move the lower denture where it wants.
One of the ways that patients cope with loose dentures is to use a dental adhesive under the denture which becomes slimy and mixes with their food when they eat. Many denture patients will wear their dentures in public but remove them when in the privacy of their home.

“OMG - the worst prosthetic man ever invented is a denture! You will have to learn to talk again, probably slur more, and that 1/8” plate thickness of your denture will always make itself known with every step you take, reminding you “it’s still there”. And don’t put too much denture glue (such as Poli-grip) on your denture because the slimy adhesive will ooze out the back of your denture down your throat, and oh boy just wait to you take it out having to clean the gooey mess out of your mouth, and after a few months get use to your denture rocking from side to side, oh boy, time for an adjustment” - Jay St. John (former denture wearer and proud patient of “SmileByCRIS”)

A recent study evaluated how denture patients rated their original teeth, their dentures and their implant supported bridges on a scale of 0 to 10, 10 being the highest.

Not un-surprisingly, teeth were rated as a 10; dentures rated as a 2 and surprisingly, implants rated as 9.

I have trained dentists and denturists for over 35 years and asked all them this question: "Have you ever made a lower denture that you would be prepared to wear yourself?" Not one person answered "Yes". That statement in itself should tell you how badly dentures perform.

Around 2001, a group of representatives from North America, Europe, Asia, and the Middle East came to McGill University in Montreal, Canada to discuss dentures and came to a consensus declaration called the Montreal Consensus that read:

“There is now overwhelming evidence that a 2-implant over-denture should become the first choice of treatment for the edentulous mandible.”

“It is absolutely imperative that you are empowered with the truth about dental implant in order to correctly determine what is best for you?”

What are Implants?

Rather than rely on questionable suction for retention, implant systems rely on a solid mechanical attachment to the bone giving a more secure foundation and a feeling of confidence to the patient. So what is an implant? A better question is “What is an implant system?” The total implant system consists of:
1. the **fixture** in the bone for **support**,  
2. the part that **connects** the fixture and the esthetics portion, and  
3. the esthetic or **tooth** portion.

The **Fixture** is usually a metal or zirconium screw or post which is imbedded into the jaw. It may be coated with synthetic bone (hydroxylapatite). It acts as support for the rest of the implant system and is only one part of the system. There will be only one fixture required if only one tooth is being replaced or there may be up to 8 if all the teeth are missing.

The **Connector** can be one or several screws, an abutment or abutments, a metal bar, removable pins, rubber O rings, plastic Locators or any one or several numerous other attachments.

The **Esthetic** portion can be a crown replacing one tooth or a bridge replacing several teeth. If replacing all of your missing teeth, it may be a fixed or removable bridge or a soft tissue overdenture.
Today, implants have become the best alternative to any of your choices when:

1. When the treatment is planned properly
2. The implants are placed properly
3. The esthetic tooth portion is made properly
4. Proper maintenance
5. Maintaining a healthy diet and lifestyle

**Mini Implants**

“Skinny Mini” implants have a diameter of less than 3 mm; whereas, conventional implants generally have diameters from 3 to 6 mm. There is a new Mini implant system available named the “MAXiMini” which is a one piece mini implant but available in wider diameters and longer lengths.

Obviously the larger diameter implants have greater support than a Skinny Mini due to their increased surface area. Many dentists are initiated into implant dentistry by placing mini implants since they have been led to believe that mini implant placement is easy to place. However, the success rate with mini implants is much lower than with conventional implants. It has been documented that failure rates with mini implants in the upper jaw can be as high as 17%.

“If one has only been exposed to a hammer, then everything will look like a nail.”

**Treatment Planning**

The question asked by many potential patients is: “What do you charge for an implant?” That is a difficult question to answer since it depends on your planned treatment. What do I mean by proper planned treatment? Treatment Planning is the process of evaluating as many factors about you and your problem(s) and suggesting the best options to address your dental problem.
First of all, you need to be assessed medically to determine whether any of your medical problems or medications adversely affects the potential success of your implants. If you go to the website www.smilebychris/easytogetstarted you can do your own evaluation by clicking on the PREP program.

Next, your dentist must evaluate the amount of load or force which will be applied to the implants. A denture exerts about 25 PSI of force when eating. Natural teeth exert 250 to 900 PSI and sometimes up to 1,200 PSI. So the amount of support supplied by your implants will need to increase dependent upon what they are biting against. Obviously, the more load the greater the number and size of implants you will need to support this load.

Another question which needs to be answered is where the load is being applied. If you are biting against a denture or a full complement of teeth, the load will be distributed evenly. If you are biting against a dentition (jaw) with missing teeth, the load will obviously be distributed unevenly. If there are teeth present, are the teeth in good enough condition to use or will they need to be repaired, or need to be extracted.

Thirty years ago, when I started placing titanium implants, I thought the best treatment I could offer my denture patients was a complicated and expensive bridge fixed to 6 to 8 implants by screws. About a year later, the patients started asking if I could make it removable instead of fixed. I asked, “Why?” They replied, “So I can take it out to clean it.” That made sense to me. At the time the problem with making it removable was, removable did not feel “fixed” but “loose”. We have now developed a system that feels fixed but is patient removable.

Treatment Options

As I mentioned earlier, should all of your teeth be missing or you are about to lose them all, you only have three choices, do nothing, get a denture, or have implants placed.

If you are a good candidate for implants, there are a number of ways you can replace all of your missing teeth: upper maxillary denture, or with implants; soft tissue supported over denture, full denture bridge or semi-denture bridge using a custom-reinforced bar.

As mentioned earlier, it is not recommended to place a denture in the lower jaw due to its almost inevitable inability to function. However, I can recommend an upper denture if bone or financial limitations dictate.

Instead of a lower denture, the minimum standard of care is a snap-on, two-implant over-denture (3). Snap-on over dentures can be recommended for the lower jaw, using two to four implants. These are “free-standing” without a splinting bar. The top of the implant is usually a small ball with rubber O-rings placed inside the denture. The denture then snaps in over the balls. The entire load is taken by the soft tissue and not the implants in order to decrease the load on the implants.
Another popular form of attachment for soft tissue over dentures is the “Locator” attachment. The locator consists of “plastic snap-on cap” in the denture which snaps over a small undercut on the top of the implant. The problem with locators is the narrow clearance between the cap and the implant. This results in the denture “rocking” on the implants making the soft tissue over-denture implant bear the load rather than the intended loading being taken by the soft tissue only.

Soft tissue over-dentures are not recommended in the upper jaw since the bone is too soft for a free-standing implant. As a general rule, implants in the upper jaw must be splinted together for additional strength and support as illustrated with the SmileByCRIS metal bar support system.

A full FIXED bridge is one where the replacement teeth are fully supported by the implants only and generally fixed into place using screws. These screws can only be removed by the dentist and are not patient-removable. They are difficult to keep clean by the patient. A recent advancement by SmilebyCRIS is a full denture bridge which is fixed into place but easily removed by the patient for cleaning. It is in my experience that most patients who have experienced dentures appreciate the ability to clean them outside of the mouth. Since the implants are providing the total support, it is important that there be a minimum of four implants in the lower jaw and six implants in the upper.

A semi-denture bridge is one where the replacement teeth are partially supported by the implants and partially supported by the soft tissue. The semi-denture bridge is similar to the full denture bridge in that it has a metal splinting/strengthening bar and is also similar to the snap-on over-dentures which are held in place by rubber O-rings. These are removable by the patient for ease of cleaning.

“It is absolutely imperative for the success of your implants and the fee you will pay that you choose a dentist knowledgeable and experienced in implant dentistry that is aware of the various treatment options and the advantages and disadvantages of each.”
Bone

The next problem which has to be answered is: Do you have enough bone to place the amount and size of implants needed? The only way this can be determined is by taking an x-ray of the jaw (Panorex x-ray) which will show the available bone height. In all likelihood, you will also need a CatScan of the jaw which will show bone width and also the location of any structures which have to be avoided, such as nerves, blood vessels, floor of the nose and sinuses.

Another factor which needs to be evaluated is the quality of your bone. As a general rule of thumb, the bone in the lower jaw is quite dense with bone in the front denser than that in the back; whereas, the bone in the upper jaw is more porous and weaker.

If you have ever placed a fence post, you realize that once the post is in place, you can still wiggle the post. Once you put the cross rails on, the whole fence becomes stronger. If that post is placed into sand, it is usually reasonably easy to wiggle. If placed into clay it is more difficult to wiggle and into concrete is almost impossible to wiggle. Therefore, if you are placing implants into the dense bone in the front of the lower jaw (cement), the implant is more solid than if you place the implants in the back of the lower jaw (clay). Implants placed in the upper jaw (sand) where the bone is less dense, you must really splint them together using a (cross rails) to make the implant system stronger, just like a fence.

Here is an example of this: a common occurrence is a patient who has lost all their upper teeth and is wearing a denture. They have also lost all their lower back teeth with only 6 or 7 teeth remaining in the front. When eating, those six teeth are pounding on the front of the upper denture with the result that after a few years, the bone in the front of the upper jaw is badly abused and is lost and replaced with a thick flabby front ridge. The patient ends up with a denture that tilts up at the front giving them a typical appearance of showing no teeth and the face collapsed. If you place implants in the upper jaw and not correct the problem of missing teeth in the lower back jaw, those implants are doomed to failure due to overloading of the implants.

Grafted bone

Many inexperienced dentists will recommend grafting of bone if they feel there is insufficient bone to place an implant. It has been my experience that using bone grafting as a means of implant support is not required as often as recommended. The other problem with grafted bone is that the failure rate of implants placed into grafted bone is much higher than implants placed into natural bone.
**Proper Implant Placement**

You may unknowingly run into a dentist who graduated last in dental school but he is still called, “Doctor.” Most recent graduates from dental school have little or no exposure to dental implants in their undergraduate programs, although they are legally entitled to place implants upon graduation.

There are a number of specialties in dentistry including oral surgery, peridontics, endontics. Implant dentistry is not recognized as a specialty, but should be recognized as a specialty, as the depth of knowledge required is much more extensive than most professionals realize.

Oral surgery is recognized as a specialty which performs surgery in the mouth such as routine extractions, wisdom tooth removed, jaw fractures and extensive facial reconstruction. They should be the specialty of choice for the placement of implants as surgery is their specialty. However, their level of knowledge regarding the proper fabrication of the overlying esthetic prosthesis of teeth is limited which frequently jeopardizes the treatment.

Periodontics is a specialty which deals with the gum tissue and the bone surrounding the teeth. Their knowledge of soft tissues should be better than an oral surgeon, but their knowledge of bone is probably not as extensive as an oral surgeon. Nor is there knowledge of fabrication of prosthesis over implants as extensive as denturists and general practitioner dentists.

Endodontics mainly deals with root canals within teeth and their treatment. Their knowledge and experience of implant surgery and the fabrication of prosthesis over implants is limited.

The range of experience of dentists placing implants is extremely varied and, quite frequently, limited. In my experience a general practitioner dentist experienced in all aspects of dentistry is the most capable, all-rounded person to be placing implants.

*“It is absolutely imperative for the success of your implants that you choose a dentist experienced in the placement of dental implants.”*

**Healing**

Similar to the healing of a fractured bone where the two ends of the bone need to be knit together, the goal of successful implant placement is for the implant to “knit” with and become one with the bone. When treating a broken bone, the surgeon attempts to bring the bone parts as close together as possible and then stabilizes the two parts by using a bone plate or a plaster cast or sling to prevent movement of the healing site. If movement should occur non-union results with an intervening scar tissue layer between the two parts. After this two to three month healing period, the bone is still relatively weak and will take a further two years to remodel back to normal bone.
When placing an implant into bone, the surgeon attempts to ensure that the implant is as tight and immobile as possible. Unlike a broken bone which can be immobilized and protected, during the normal three to four month healing period the surgeon cannot put a plaster cast or sling in the mouth but tries to reduce any loading on the implant by keeping it out of occlusion as best as possible. In doing so, he is attempting to have the implant knit with the bone, a process referred to as osseointegration. Similar to a bone fracture, if the implant does not integrate, an intervening scar tissue layer is formed between the implant and the bone and the implant must be removed.

After a three to four month healing period, the bone is still relatively weak and will take a further two years to remodel back to normal bone. Excessive overloading of the implant during this period can result in this implant to bone interface becoming scar tissue and the implant failing.

Generally speaking, if a titanium implant is going to fail, it will do so within the first six months to a year.

“It is absolutely imperative for the successful integration of your implants that implants be allowed to heal as undisturbed as possible during the first 6 months to a year.”

Healing Success & Immediate Splinting; A NEW Method for Success

Historically, when a titanium implant is placed, the surgeon will place the implant flush with or below the surface of the gums to allow the implant to heal undisturbed. In three to six months, the implant is exposed and a metal connector bar is attached to the implants bringing the implants into the mouth. At that time, an impression is taken and the tooth portion is made and attached. The more implants you are trying to tie together, the more difficult it is to ensure accuracy of fit of the metal bar.

*When attaching the connector bar to the fixtures, it is imperative that the bar fit exactly and passively on the integrated implants.*

Should the bar not fit passively, stresses are introduced to the bone, the fixture, the bar and the screws attaching the bar. If you are lucky, it’s only a screw that breaks and easily replaced. If unlucky, the bar breaks which means rebuilding the bar; if really unlucky the implant breaks or the integration fails and the implant must be removed. There is a new, tested over 15 years alternative called “Immediate Load”. I know I said earlier that loading during the first few months was a “NO-NO”, but this is different.

When the four to eight implants are placed, an impression of the implants is immediately taken at the same time. The reinforcing bar is made and inserted within 2 days. After 2 days, the implants are still slightly “loose” in the bone and the implant still “moveable”. If the bar is slightly “off”, which it probably is, the implants can move and adapt to the bar. The bar now
acts as a splint (remember the broken bone?) and strengthens the entire system. In one study over a 15 year period, the dentist lost only 1 implant out of over 1,500 placements (.07% loss) which is much higher than the older technique. The one loss was due to the fact that the bar was not attached to the implants within 2 days but a month later when healing was well underway.

**Longevity & Patient Responsibility**

In most instances, the patient’s awareness of the reality of dental implants is almost non-existent. Many patients believe that implants last forever, requiring little or no care, and with few problems. When problems do arise, they tend to blame the dentist as they believe in the myth of “lifetime longevity” of implants. There are many factors which go into the success and failure of implants and it is important that the patient be aware of them beforehand. As a general rule of thumb, implants fail during the first six months healing stage. This can be as high as 5 or 6% with conventional implants. Afterwards, the five-year survival rate is expected at 98 or 99%. One of the reasons why, in medicine and dentistry, we use the five-year survival rate is that after the five years, the occurrence of implant failure, although still possible, drops significantly. Obviously the older you are, the greater chance your implants will survive you.

One of the biggest causes of implant failure after the first year or two is the patient’s inability to provide proper cleaning of their implants and prostheses. Frequently, patients who have lost all their teeth did so as a result of their lack of proper home care and regular dental attention. It is critical to the long-term success of your implants that you do provide proper home care, healthy diet, and frequent recall appointments with your provider. Another aspect which will assist in your proper home care is to have a removable prosthesis as opposed to one that is fixed into place and not removable.

As mentioned previously, your implant success is a joint effort by you, the person who decides on the proper treatment plan, the person who places your implants, and the person who constructs your prosthesis.

*“It is absolutely imperative that realize that you probably lost your teeth in the first place because of poor diet, poor hygiene and neglect on your part. You have a major responsibility to ensure your implants are maintained properly.”*

**Costs**

Fees for each of these options will vary depending on the number of implants placed, additional surgery such as tooth extractions or bone grafting, the need for a splinting/strengthening bar, and for the cost of making the bridge or semi-bridge – the prosthetic(s).
“You will see advertised by one of the most popular implant providers that the choice is clear. Let me say if you’re going to put out big money you had better do your homework and make some serious comparisons. Like for example, a popular treatment plan is the “All-On-Four” which consists of four implants with a non-removable, very expensive “permanent” bridge attached to the implants by screws. Many have been sold this plan, including myself, and the cost is around $40,000.00 for a full-mouth makeover. The first question you should ask is “How long is permanent?”

“Consider another option which is a bridge that you can take out yourself and clean yourself and if a tooth breaks simply go to your nearest Dentist or Denturist and he can fix in no time. In my case I have had both, the fixed bridge and the removable, which I have now. They work and feel the same, and yes, they look the same. The big deference is I can clean them every day or whenever I want.

Many will claim the removable is a “snap on denture”. It’s not, a “snap on denture” is denture with “snaps” in the base. The removable, SmileByCRIS denture/bridge and semi-denture/bridge are reinforced with a metal reinforcing bar, is fixed to the implants, BUT removable by the patient for cleaning. Furthermore, you will love the SmileByCRIS metal reinforcing bar which greatly increases the strength of the system and the success rates of the implants.

Here’s another tip that most implant providers won’t tell you. It doesn’t matter what prosthetic you choose, the average lifetime is five years, and the cost difference between a fixed bridge and a removable bridge is huge.” - Jay St. John (patient of “SmileByCRIS”)

“It is absolutely imperative that realize that the cost of an individual implant has little bearing on the overall success and cost of your treatment with or without implants.”

Summary

Hopefully at this stage you have a better understanding of the realities of implant dentistry and are in a position to evaluate the treatment being offered you and whether the person who will treat you is knowledgeable and experienced to ensure that best success possibility for you. Attached at the end of this booklet is a list of seven questions which you should ask your care provider to help determine their experience, knowledge, and credibility.

I hope this booklet has helped you make a better decision. Thank you for your time and attention. Please call us at 844 377-8899 if you have any further questions, or if you would like a free long-distance consult with an experienced implant dentist.
Questions You Should Ask Your Dentist

1. How many cases and how many years have you been placing implants, more than 5 years?
2. How many patients have you treated with implants, more than 300 patients?
3. How many patients who wear dentures have you treated with implants, more than 100?
4. Do you offer a Guarantee or Warranty?
5. How long will it take for me to get all my dental work done and my new teeth?
6. What advanced study does the dentist have in implant surgeries?
7. What follow-up can I expect after my surgery is complete.
Bibliography


(5) DENTURIST MAGAZINE ARTICLE APRIL 2011, “The McGill Consensus and what it represents.”

Glossary of Terms

**Abutment**: That part of the implant system that joins the implant body with the tooth portion (prosthesis).

**Alveolar**: Pertaining to the bone associated with the teeth.

**Asepsis**: The absence of pathological microorganisms.

**Aseptic technique**: Although sepsis cannot be eliminated when operating in the mouth, every attempt should be made to eliminate anything foreign. It appears that implants placed in the mouth are capable of healing if aseptic procedures are followed.

**Available Bone**: The amount of adequate bone in the edentulous area available for implant placement. If adequate bone is not present, bone grafting procedures or possibly no treatment involving dental implants should be considered to ensure proper use of the available bone.

**Bar Supported Over Dentures**: Bar Supported Over Dentures are dentures attached to implants which are splinted together with a milled or castable metal bar. All the vertical loads are supported by the metal bar alone or jointly with the soft tissue. The implants and bar prevent lateral movement and vertical displacement.

**Bone**: Bone is a highly organized composite of organic matrix and inorganic material. Bone functions throughout life as a physiological reservoir of calcium and phosphorous, to provide protection for vital organs, support for muscle attachment and as a rigid support of the locomotion system.

**Cancellous**: The inner, marrow part of the bone. The marrow can range from very dense in the symphysis area to very open in the posterior part of the maxilla.

**Connector, Attachment**: That part of the implant system that joins the removable prosthesis to the fixed portion of the implant system, usually a metal bar.

**Cortical Bone**: The outside layer, usually much denser than the inner or marrow space.

**Endochondral Bone**: is bone fromed by mesenchymal cells congregating in the appropriate area, differentiating into chondroblasts by a process called chondrogenesis, which in turn produce cartilage which turns into bone.

**Endosseous**: An implant that fits into the bone.
**Immediate Load**: When an implant has the abutment and prosthesis attached and the implant system is brought into immediate function.

**Implant Body (Fixture)**: A metal device that is compatible with the bone and soft tissue, which is surgically imbedded into the bone and provides support for an artificial tooth or teeth.

**Implant System**: Consists of the implant body, abutment, attachments and the teeth or prosthetics portion. **Informed consent** is supplying the patient with sufficient information that they can make a **reasonable decision as to the benefits and risks** of the service. These include many of the problems normally encountered during practice but also others specific to implants.

**“Hybrid” Fixed Detachable**: A fixed detachable prosthesis is totally implant supported with a metal substructure supporting the teeth. It can have PFM or composite similar to a “roundhouse” bridge or can be a “hybrid” with denture teeth attached to a metal base similar to a removable partial denture.

**Inferior Dental Nerve**: A nerve running in a tunnel in the bone in the posterior or back part of the mandible. It supplies sensation to the teeth and gums of the lower jaw as well as the lower lip. Damage to this nerve will result in a unilateral numb feeling, (lack of sensation) in the lower lip, lateral surface of the mucosa from first bicuspid forward and all lower teeth to the midline.

**Maxillary Antrum (Sinus)**: A hollow space lying on each side of the posterior part of the maxilla. It opens into the nose and the other sinuses. **One Stage Surgery**: When the top of the implant and healing collar/tissue former is brought into the mouth lying flush with the mucosa.

**Osseointegration**: refers to a direct structural and functional connection between ordered, living bone and the surface of a load-carrying implant.

**Osteoconductivity**: The feature of a material inducing bone to form on its surface. i.e. bone, hydroxylapatite. **Mucosa**: The soft tissue in the mouth lying over the bone.

**Osteotomy**: The preparation of a hole into the bone to accept an implant.

**Panograph, Panorex**: A large radiograph which shows both upper and lower jaws, the teeth, the sinuses, the joints and the floor of the nose.

**Ridge Augmentation**: A surgical operation where bone is added to the surface of the jaw for esthetic reasons or to produce additional bone for implant placement.

**Soft Tissue Supported Over Dentures**: Soft Tissue Supported Over Dentures are dentures attached to implants on which all the vertical loads are supported by the soft tissue and the implants prevent lateral movement and vertical displacement.
**Sterile:** The absolute absence of microorganisms.

**Study Model:** A plaster replica of the jaw.

**Subperiosteal Implant:** An implant that fits under the periosteal layer on top of the bone rather than into the bone. It is usually coated with HA.

**Substructure:** The metal portion of a prosthesis which supplies support to the esthetic teeth portion and attached directly to the implants or abutments.

**Suprastructure:** The metal portion of a prosthesis which supplies support to the esthetic teeth portion but attaches to the substructure to ensure ease of removal of the prosthesis by the clinician.
Frequently Asked Questions

Is age a deterrent to the placement of implants?  No, the oldest human patient the author has treated was 92 years of age, the youngest 16. As a general rule however, the author believe it prudent to wait until the maxillary bones have matured before placing implants. Bone matures around the age of 21.

Do implants fail?  All implants can succeed and all implants can fail. The main factor in the success or failure of an implant is proper patient selection, careful treatment planning, atraumatic surgical technique and accurate prosthetic replacement. Failure of an implant generally equates with loss of osseointegration of the bone/implant interface which results in the implant’s removal. Although disappointing for both the clinician and the patient, the implant can be replaced after a few months of healing.

A competent dentist should expect osseointegration rates of in excess of 98%. Although implants can osseointegrate within 2 weeks, the bone/implant interface is very weak at that time and minimal in extent.

After 3-4 months, a healing callus of weak, immature bone is formed which is capable of withstanding minimal loads. Over the next 8 to 12 months, the weak, immature bone undergoes a remodeling phase. During this phase, the immature bone is replaced by stronger, lamellar bone which is capable of withstanding most normal loads encountered in the mouth. Overloading of the implants during the remodeling period can seriously interfere with the remodeling process resulting in extensive crestal bone loss and subsequent implant failure.

If possible, allow a minimum of 4 months healing prior to loading of the implant. In young, healthy patients, implants can be loaded immediately but the risk of loss of integration increases. In elderly patients with suspected bone impairment, wait 4 to 6 months before loading.

Use caution in loading implants during the remodeling phase. Some form of transitional loading will reduce loads on the bone/implant interface.

How long do implants last?  Failure of an implant to osseointegrate during the initial healing period can generally be equated to improper implant placement, poor patient selection or overloading. Success rates of 95% or more should be expected 5 years after implant placement. Many human patients recorded as having implants placed for over 40 years and still have them to this day. How long an implant can last varies from patient to patient and from clinician to clinician.

Do implants reject?  There are no recorded cases of rejection of a titanium or HA coated implant. Implants can become infected however with their resulting failure.
**Does a patient need to be hospitalized?** Very few implant placement procedures require hospitalization for the surgery. With proper surgical technique, the procedure should be no more traumatic that a tooth extraction. Implant placement is generally an in office procedure under local anaesthetic.

At one time, surgical protocol dictated implant placement be done in the hospital for sterility reasons. Most contemporary clinicians realize that all intraoral surgeries are aseptic procedures and that sterility is unattainable. Protocol now dictates that an implant be placed in the office where the risk of a potent infection is much less.

**Is the implant placement procedure painful?** Post operative discomfort should be no worse than having a tooth removed. Trauma to the bone during the osteotomy procedure does not appear to be the major cause of post-operative patient symptoms. Most of the post operative swelling and subsequent pain to the patient is caused by soft tissue trauma. Although the tenet of wide flap exposure is true in dentistry, the surgeon can dramatically help lessen the post operative pain by learning a few atraumatic techniques such as the Extraction Site, Cookie Cutter, Limited Flap and Slit techniques that result in minimal soft tissue manipulation.

**Can the implants be loaded immediately?** Yes, healing implants should not be placed under heavy loads during the osseointegration stage. Splinting with bars and relining the existing denture with a soft liner at the time of surgery must be used for success.