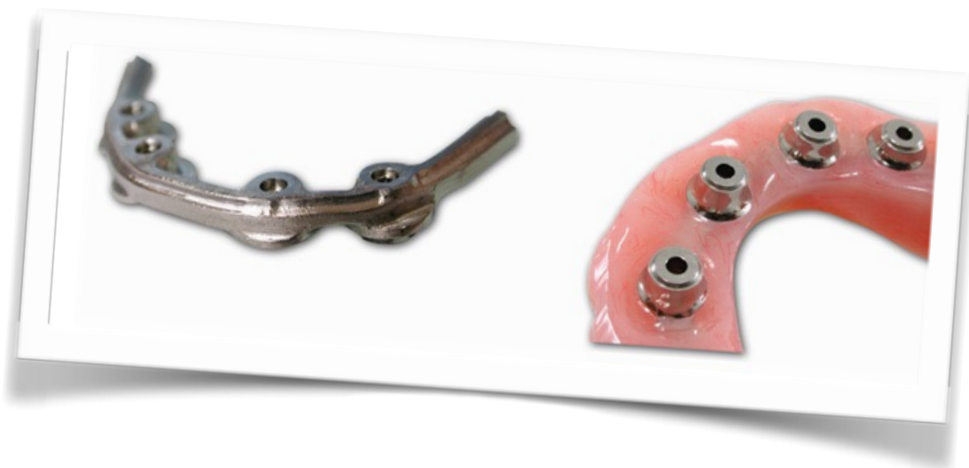
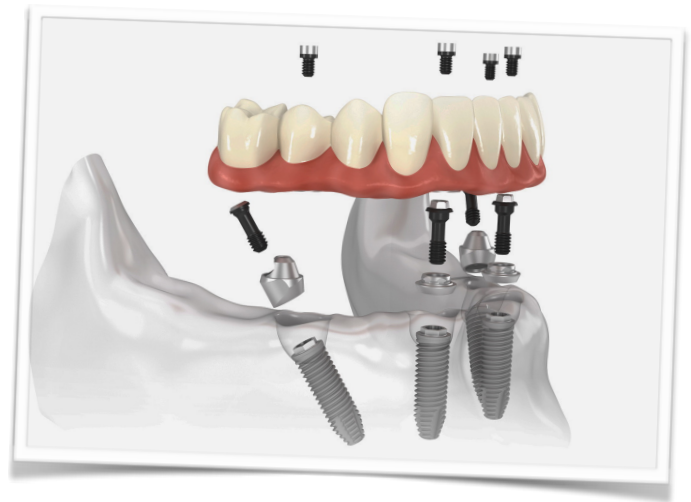


# Full Arch Treatment Options





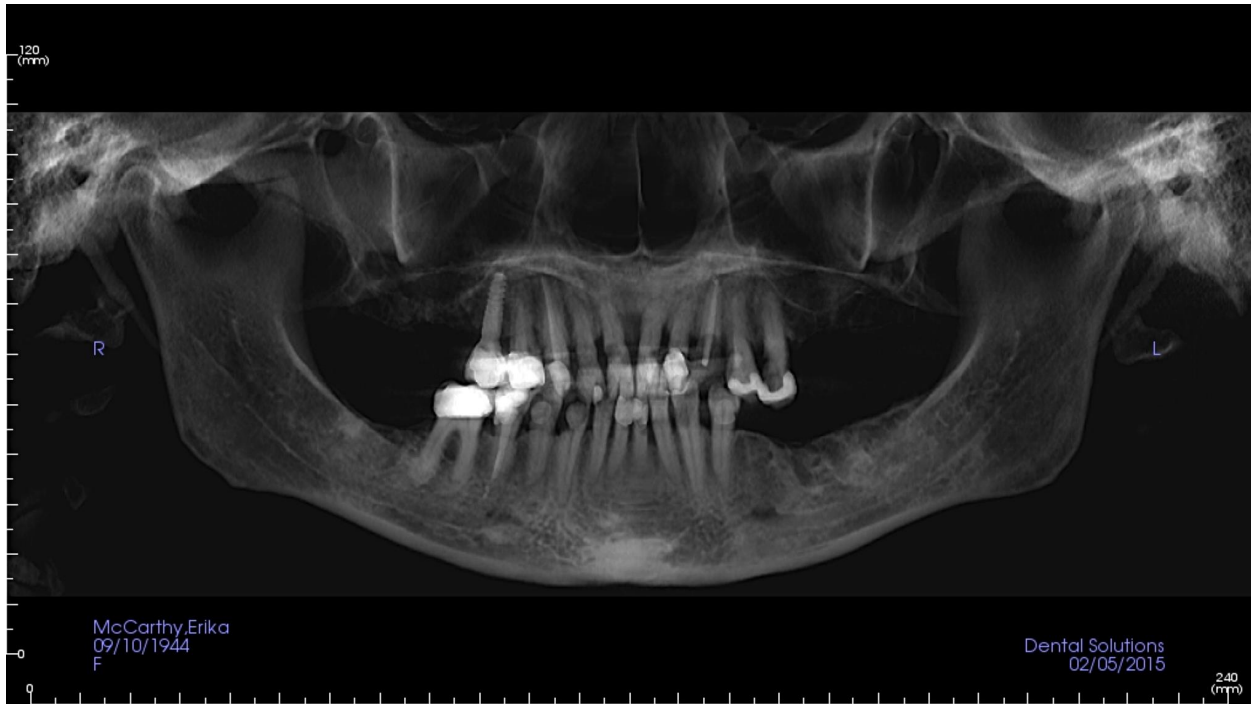
**BEFORE**



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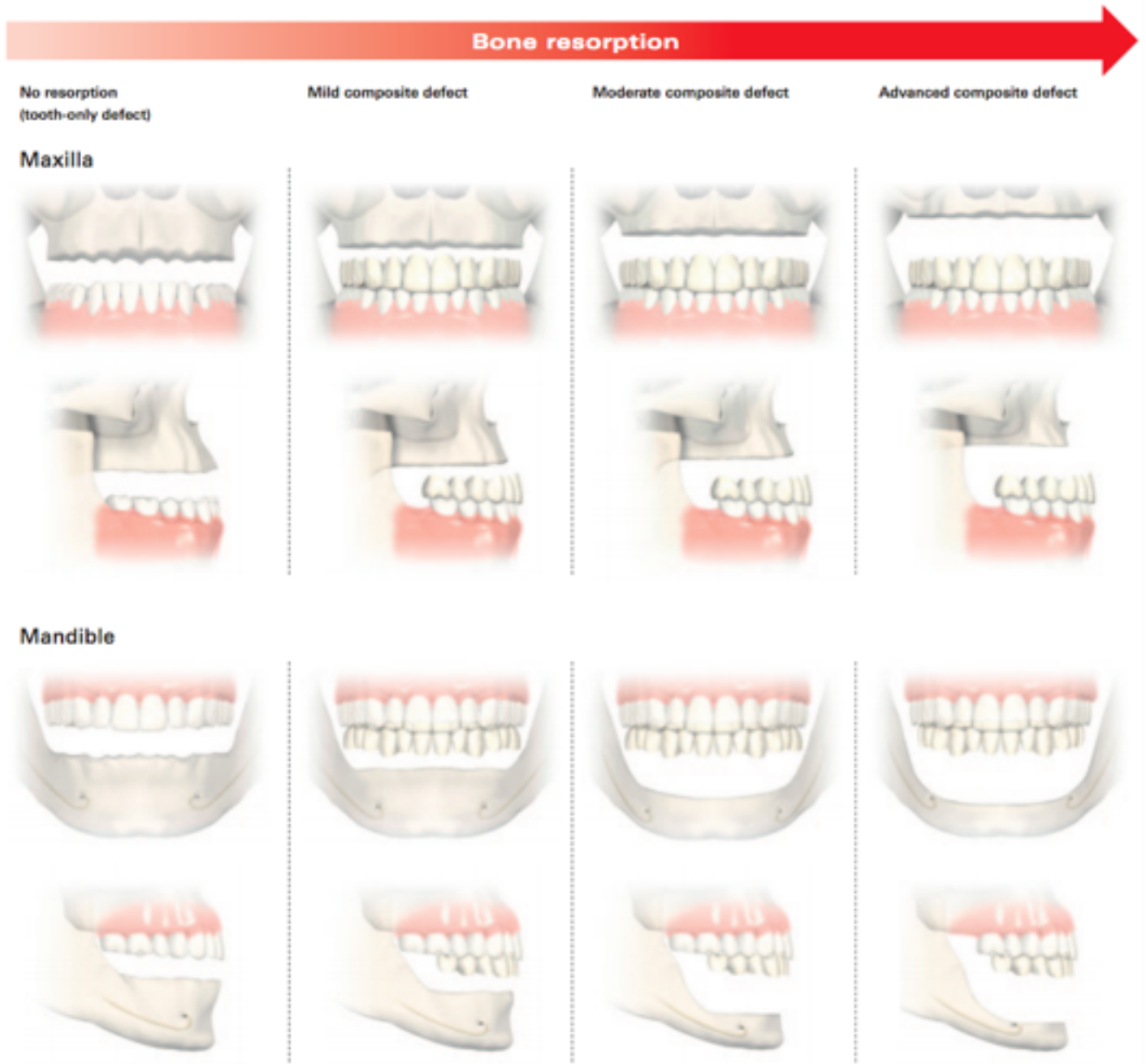
BEFORE



AFTER

**Treatment Considerations for Patients who have lost all of their teeth or will be losing all of their teeth.**

How much hard and soft tissue is missing? What is to be replaced? Is there a "Composite Defect"?\*



\* Bedrossian E et al. Fixed-prosthetic Implant Restoration of the Edentulous Maxilla: A Systematic Pretreatment Evaluation Method. J Oral Maxillofac Surg 2008;66:112-22

## Over-denture Solutions

Replacement options for teeth are more numerous today than ever. People who are edentulous, which means they have lost all of their teeth, at one time had only one option: removable dentures. Today, implants are available as a permanent tooth replacement option, but full implants are costly and cannot work for all people. New types of implants are continually being developed to give edentulous people more options for full mouth tooth replacement. One of the most exciting options available is full arch implant dentures. These are very natural-looking and comfortable fixed dentures that attach false teeth directly to your gums via implants.

To understand how full arch implant dentures work, it can be helpful to compare them to regular dentures or implant supported dentures. These types of dentures are called over-dentures, because they are teeth and artificial gums together and are placed over your real gums. Full arch implants eliminate this extra bulk. After implants are placed in the gums, the arch of teeth is affixed directly onto the implants. The number of implants required for a full arch denture depends on the anatomy of the mouth and will be different for different people.

The implant procedure can take several weeks to complete. After the implants are placed, healing time of about two weeks is necessary before the dentures are attached. Temporary dentures may be worn during that time.



In order for implant dentures to work, you must have enough bone in your jaws to support them. Bone begins to deteriorate as soon as your natural teeth are gone, so people who have been without natural teeth for many years may not be able to get implants. If you are thinking about getting implants, the sooner you act, the more likely it will be that you can get them.

A dental exam can determine if you are a good candidate for implant dentures. You should also tell the dentist as much information as you can about your personal health and family health history. Some medical conditions, like diabetes, can decrease the chances of implants being successful. It is possible for the body to reject the implants, though the success rate of implants is 95% or higher.



## **Is There a Fixed Solution and what is the All-on-4®?**

The All-on-4® is a dental implant technique that can be used to provide patients with a new set of fixed (non-removable), highly aesthetic and immediately functional teeth in as little as a single appointment. These patients are typically edentulous (have lost all of their original adult teeth), near-edentulous or are suffering from a failing dentition as a result of advanced periodontal (gum) disease. Many have existing loose or failing bridgework and others are denture or partial denture wearers.

All on Four dental implants aren't actually a type of dental implant. All on Four is actually a technique or protocol rather than a type of dental implant. The technique was developed in Europe by Dr. Paulo Malo, for the placement and restoration of full arches of upper and/or lower teeth. It can be an ideal tooth replacement solution when a patient has numerous teeth in either their upper and/or lower arches that are missing or un-restorable. Four or more dental implants are placed in the jaw bone. The full arch of replacement teeth is then secured to these dental implants. Doing so allows for the replacement of your complete arch of upper or lower teeth on the day of your procedure. The teeth are non-removable, look and feel like natural teeth, and can provide the added benefit of preserving the bone structure of your jaw. Many people refer to All on Four Dental Implants but they should really be referring to the All On Four or All-On-4 technique.

Using the All On Four technique, we can provide our patients with beautiful, functional non-removable teeth. There is no requirement of a lengthy wait of six months for implants to integrate. Moreover, this technique usually allows us to avoid bone grafting. Bone grafting can add an additional year to the timeline. Patients also report significant



discomfort from procedures such as hip grafts. On the day they receive their All on Four dental implants, patients typically leave with entire arches of non-removable teeth.

Full arch replacements are an excellent alternative to wearing conventional dentures. These protocols can alleviate so much of what people dislike about the more conventional appliance. Some of the benefits of all on four dental implants include:

- No slippage or sore spots
- The look and feel of natural teeth
- Regaining almost all of your natural chewing and biting ability
- The ability to eat the foods you want to eat instead of the foods your dentures will allow you to eat.
- The preservation of the bone in your jaw
- Not having your dentures removed if ever checking into a hospital

### **How does the All-on-4® dental implant technique differ from dentures?**

The All-on-4® dental implant technique provides patients with fixed (non-removable) teeth and because of this, they:

- Are cleaned and maintained similarly to natural teeth and do not need to be removed after meals or at night time.

- Enable you to bite down with close to a natural bite, thus allowing you to enjoy the foods you love, but couldn't manage with uncomfortable dentures.
- Do not shift around and cannot fall out, saving patients much discomfort and social embarrassment.
- Do not rest solely on the gums, as is the case with dentures, and therefore seldom cause irritation, inflammation and the development of sores in the mouth.
- Dental implants promote better jaw bone health by channeling the functional stimulation associated with eating into the supporting hard tissue.
- Can halt the progression of bone loss in the jaw and so do not require one's bridgework to be redone every few years or so (as a result of the changing shape of the jaw).
- Do not incur repeated expenses such as messy adhesives, soaking solutions, anesthetic gels and other hygienic and storage products typically needed for dentures.
- The All-on-4® temporary and final bridge is far slimmer than traditional bulky dentures and doesn't cover the hard palate. Consequently, it does not tend to trigger the gag reflex or impede your ability to taste and sense the temperature of your food properly.

### **What is the difference between the All-on-4® and conventional dental implant techniques?**

The All-on-4® technique is a breakthrough in the field of fixed oral rehabilitation as it enables our skilled team of dental implant

professionals to achieve unprecedented results and treatment times. The key differences between this incredible innovation and older dental implant methods for the replacement of an entire row of teeth are:

- The All-on-4® only requires four dental implants to provide patients with new teeth. Older techniques could require as many as six, eight or even ten dental implants to be placed per jaw! This means that for full mouth reconstruction, a patient could be looking at having as many as 20 dental implants placed, which frequently worked out to be prohibitively expensive. Additionally, the use of more implants means more surgery, incurring a longer recovery period with greater post-operative pain. If spaced too close together, the risks of complications and implant failure could be greater.
- The All-on-4® typically only requires a single surgery to give patients new teeth. With only four dental implants needed per jaw, full arch replacement can quite easily and safely be completed within the space of a single procedure. Older techniques could see a patient coming in for treatment for up to 18 months, as the greater number of implants and “necessary” bone grafting would have to be performed in sessions. This means lengthier treatment, greater discomfort, multiple recovery periods, more time off from work, inconvenience and, of course, expense!
- The All-on-4® typically avoids the need for bone grafting surgery. The oral diseases that cause tooth loss can also deteriorate jawbone health. This combined with atrophy (caused by the loss of functional stimulation of the jawbone via the tooth roots) used to necessitate the augmentation of the jawbone before the surgeon could even consider treatment using dental implants. However, owing to the strategic

arrangement of implants utilizing the All-on-4® technique, we can almost always find enough support from the existing bone volume for a new set of teeth to be placed. This saves patients significant discomfort, money and time AND it almost always enables patients to receive new and immediately functional teeth in as little as a single day.

### **What is the success rate of the All-on-4® procedure? What influences failure?**

The All-on-4® has an extremely high success rate over 10 years, which means that almost all patients who have received treatment will still be enjoying their new teeth after a period of 10 years. Our offices perform the All-on-4® the way it was researched and innovated - while making use of only the highest quality prosthetics and dental implant products. As such, like them, we enjoy an incredible success rate in treating patients who have lost most or all of their teeth.

There are a handful of factors that may lead to implant failure, but luckily, most of these are in the hands of the patient. Smoking, heavy drinking and not following post-operative instructions or dietary restrictions can significantly affect the chances of success. There are also certain medical conditions, such as diabetes, that can affect the success and lifespan of your All-on-4® implants; however, all of these risk factors will be discussed in detail with you at the time of your consultation.

### **Who is a candidate for All-on-4® implants?**

Almost every patient is a candidate for the All-on-4® implant procedure. During your initial consultation, we will assess your current state of oral health (looking for signs of periodontal disease and jaw bone



deterioration), your medical history (making special note of diabetes, respiratory disease, heart disease and bleeding tendencies that may render surgery risky) and age-related diseases, such as osteoporosis. Age itself is never considered a problem. Patients in their nineties have undergone the procedure and received beautiful new teeth with the All-on-4®!

### **What does the All-on-4® procedure involve?**

Getting new teeth with the All-on-4® dental implant technique typically involves one or more initial consultations with one of our experienced and compassionate dental implant team members. You will then come back to TYMKIW PERIODONTICS for your actual surgery and the fitting of your new rigid prosthetic dental bridge by our prosthodontist. This is followed by a schedule of follow-up appointments during which we ensure that your implants are healing properly and your new teeth are functioning optimally.

For a more detailed, step-by-step explanation of the All-on-4® procedure and what you can expect from the various stages along your journey to oral rehabilitation, check out our websites:

[www.kelownadentalsolutions.ca](http://www.kelownadentalsolutions.ca) or [www.tymkiwperio.com](http://www.tymkiwperio.com) or see the appendix.

### **How much time should I take off from work?**

We typically recommend that you take a few days off to relax and see your recovery off to as good a start as possible. Having said this, many patients return to work the very day after the surgery! It all depends on your schedule, your constitution and how strong you feel.

### **Is the All-on-4® procedure painful?**

The use of sedative medications and local anesthetics ensure that you are kept entirely comfortable and pain and anxiety-free during the All-on-4® procedure. As with any surgery, you can expect some post-operative discomfort, but we will send you home with prescription analgesics (pain-killers) to help manage this. In any case, this discomfort is typically minimal and seldom persists for more than a few days.

### **What happens after the procedure?**

You will be scheduled for a complimentary postoperative examination between 7 and 14 days after your surgery so that we can make sure your implants are healing well and that there are no signs of infection or complications. We may also clean and reattach your temporary bridge. In a consequential appointment, after your implants have fully bonded to the bone, you will receive your customized final bridge. Thereafter, you need only come to your dentist for the standard scheduled professional cleanings and check-ups.

### **Can I get both my bottom and upper teeth replaced with All-on-4® implants? And on the same day?**

Yes! The All-on-4® dental implant technique can be used to replace your upper or lower set of teeth, or both. Should you require full mouth reconstruction, our experienced dental implants surgeons can replace both dental arches on the same day if recommended and desirable. This can sometimes achieve better results and, of course, enables you to leave the office with fully restored smile and bite.

### **Will the results look natural?**



Absolutely! The prosthetic dental bridge attached to the All-on-4® dental implants is expertly fabricated by highly trained MALO CLINIC lab technicians to be virtually indistinguishable from a set of natural, healthy teeth. Using molds or impressions that are taken of your teeth during your initial consultation with us, the bridge will be custom made to perfectly fit the natural contours of your jaw, thus making it look and feel very natural.



**NOTE:** 6-8 years will need to replace denture teeth and acrylic as both will eventually be worn down, especially if the All on 4 Bridge is opposite natural teeth. The cost can be anywhere between \$1000-1500. There are more durable longer lasting solutions available that will increase the costs but are important to know if you will be on a more fixed income 6-10 years from the final procedure.

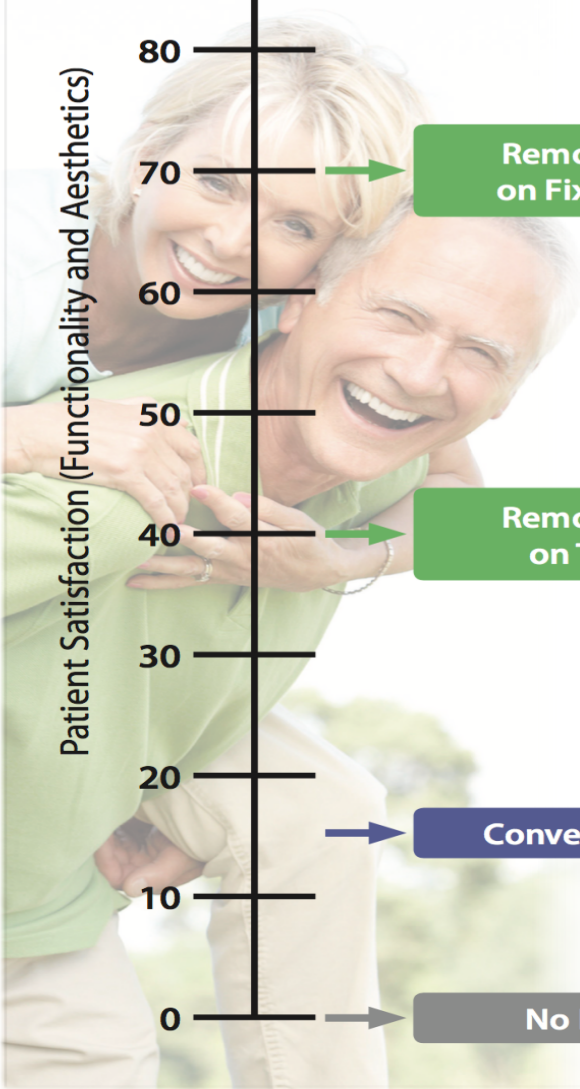
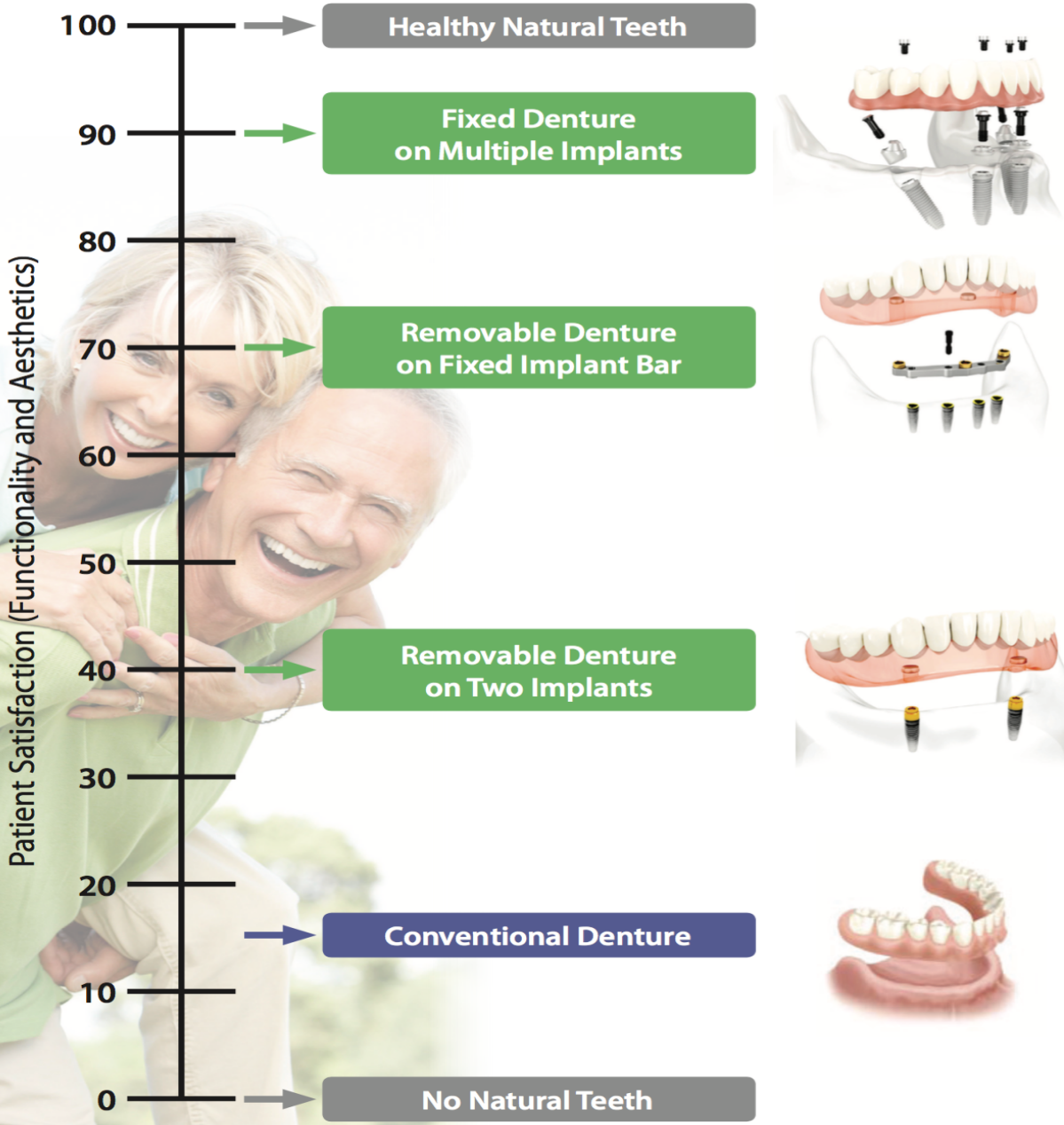
### **What is the Cost of Dental Implants?**

One of the most common questions that we receive is what do dental implants cost? Of course, with your smile being such an important part of your identity, it's essential to remember that choosing to proceed with a dental implant procedure is an investment. You're investing in your health and your well-being, and when it comes down to it, waking up each morning with a smile on your face is absolutely priceless.

As with any sound investment, it's essential that you understand the complete cost of your procedure. It is vitally important that potential patients know how to ask the right questions. With that in mind, we have prepared a list of questions for you to ask so that you can ensure you are well informed when making this important investment in your health. Please see Appendix 2 for a list of questions.



## Denture Options & Patient Satisfaction



### **Is it worth it? What are Patients Saying?**

We think this solution is a fantastic solution for our patients and you can also check out <https://www.realself.com/all-on-4> which has a 94% rating from patients who have gone through the procedure. Please ask us if you would like additional patient testimonials.

## **Additional Information About Dr. Mark Provencher**

### **AFFILIATIONS**

- **CDSBC (College of Dental Surgeons of British Columbia)**
- **BCDA (British Columbia Dental Association)**
- **CDA (Canadian Dental Association)**
- **KDDS (Kelowna and District Dental Society)**
- **LVIF (Fellow of the world renowned Las Vegas Institute for Advanced Dental Studies)**
- **IACA (International Association of Comprehensive Aesthetics)**
- **D.O.C.'s Conscious Sedation**

### **AREAS OF ADVANCED TRAINING**

- **Neuromuscular Dentistry/TMJ/TMD/Orofacial Pain**
- **Cosmetic Dentistry**
- **Sleep Breathing disorders/Sleep Apnea (OSA)**
- **Conscious Sedation**
- **Smile Makeovers**
- **Full Mouth Reconstruction**
- **Communication**

### **Additional Information About Dr. Keelen Tymkiw**

**Dr. Tymkiw practiced general dentistry for two years before receiving his Specialty Certificate in Periodontics and a Master's of Science degree from the University of Iowa in 2008. He is committed to academic study, is an active member of numerous dental organizations and societies, has published several articles on periodontics, and has lectured at numerous venues. He has advanced training and experience in all facets of periodontics and implant surgery and is dedicated to offering the latest surgical techniques.**

**And while Dr. Tymkiw has all of the requisite letters behind his name and has earned them all, what his patients appreciate most is the expert and compassionate patient care he provides each and every one of them. Keelen is first and foremost a talented surgeon and his results consistently exceed expectations. He is also warm, caring and gentle; never too busy to answer your questions, explain a procedure and talk to you about your periodontal condition, and outline exactly what you can expect with your treatment.**



# Appendixes

- A. Appendix 1 - All on Four Procedure (Specifics Procedures and Time Line)**
- B. Appendix 2 - Essential Cost-Related Questions You Need to Ask To Determine The Best Treatment Plan For You**
- C. Appendix 3 - Treatment Considerations for Edentulous Maxilla**
- D. Appendix 4 Treatment Options for the Edentulous Maxilla**
- E. Appendix 5 - Treatment Options for Edentulous Mandible**
- F. Appendix 6 - Features and Benefits of Edentulous Treatment Options**

## **Appendix 1 - All on Four Procedure (Specifics)**

Traditionally, implant surgery to replace a whole arch of teeth requires a multi-stage process, often requiring initial bone grafting, waiting for the bone graft to heal, placement of the implants, waiting for the implants to become incorporated into the bone, and then insertion of the prosthetic bridge retained with screws. This process averages 18-24 months of treatment time, multiple surgeries, high treatment costs and significant down time for patients. If bone graft is required, this often requires surgery at distant sites, e.g.. the hip bone, to collect enough bone to be used to bulk up the atrophic jaw bone. Pain and discomfort associated with the donor site (hip bone) is enough to discourage patients. Furthermore, the success of the graft is highly variable and at high risk of failure in smokers.

The All on 4 technique makes use of the patient's remaining bone, by placing implants in a manner in which bone grafting is avoided and insertion of the prosthetic bridge can be achieved in 1-2 days. All surgery including removal of broken down and decayed or loose teeth and placement of the implants is completed in one stage, on the same day. This allows the patient to walk away with a custom made smile in only 2-3 days. Overall financial costs are also reduced as the traditional implant technique required 6-8 implants in the upper jaw and approximately 5 in the lower jaw. All on 4 surgery is literally that - only 4 implants in each jaw.

The arrangement of the implants avoids damaging important structures such as the sinus cavity (air spaces in the middle of the face that drain mucous and discharge from the surrounding structures) and nerves that supply feeling to the lip and chin (relevant in the lower jaw only). The

placement of 4 implants evenly spaced along the whole of the jaw arch which are then splinted by the rigid metal internal structure of the prosthetic bridge, prevents early function and flexion on the newly placed implants. This allows the bone around the implants to heal without disruption whilst still allowing immediate insertion of the aesthetic, fixed implant retained bridge and achievement of an immediate custom made smile.

After 3 months, the splinted implants have had a chance to become strongly incorporated into the surrounding bone and can undergo the forces of normal chewing function.

## Typical Day of Procedure and Follow-up

### Pre Surgery - Clinical Cconsultation

1. Optimization of any medical conditions and preoperative medical work up including baseline bloods and ECG (all patients over 50 years of age)
2. Laboratory work-up which includes “before” photos and molds of the teeth and jaws to make study models.
3. The patient is involved in an interactive treatment plan that allows them to be involved in designing their ideal smile and selection of the tooth shape and color.

### Day 0 (day of surgery):

1. Surgery can be either under a local anesthetic (jaws are numbed and patient is awake during the procedure) or under a general anesthetic (asleep during the procedure)
2. Surgery involves removing any remaining teeth and diseased tissue and bone
3. Enough bone is removed to allow sufficient space for a creation of strong prosthetic bridge and to ensure the junction between the bridge and the patient’s gum line is hidden on even the biggest smile



4. Implants are placed
5. Tissues are closed with dissolving sutures and implants are covered with temporary, protective white caps
6. The surgery takes approximately 2-4 hours for a single jaw (upper OR lower) and 5-7 hours for 2 jaws (upper AND lower)
7. The patient recovers after surgery and is provided with ice packs to the face and pain relief as needed
8. Once alert, they can commence drinking and eating (soft diet only)
9. If surgery goes as planned and the implants have a high initial stability, we work together with Schell Dental Lab and/or your General Dentist or Prosthodontist an immediate denture will be converted into a fixed arch of teeth. This allows the patient to leave with a fixed arch or arches of teeth.
10. The bridge/prosthesis is inserted and retained using 4 small screws that screw directly into the implant unit. The screw access holes are covered over with protective tape and tooth coloured filling material which sets hard. Instructions on how to clean around the bridge and care for the healing tissues are provided. *The importance of a soft diet, i.e no chewing, for 3 months is reinforced.*
11. The patient is provided with written and verbal post operative treatment instructions. Patients are advised that they must ensure excellent maintenance of oral hygiene during the healing period and ensure they continue a soft diet intake for 3 months following the surgery (i.e.. avoid foods that require chewing). Simple pain relief

including panadeine forte and anti-inflammatories, e.g.. nurofen is usually sufficient to control any post surgery discomfort.

### **Day Seven and Fourteen (1 and 2 weeks following insertion of the bridge/prosthesis)**

Clinical review of the healing process and adjustment of the bite if required. It is common for patients to take a while to become accustomed to the way the teeth come together and this is continually assessed and monitored over the remaining 3 month healing period.

### **Day 30, 60 (1, 2 months following insertion)**

1. Clinical review of progress
2. Adjustment of bite as needed
3. Oral hygiene instructions reinforced
4. Patient is advised to see the hygienists at 1 month to learn how to care for and clean around the bridge and implants (X-floss is introduced)

### **Day 90 (3 months following insertion)**

1. Bridge/prosthesis is removed and the health and healing of the tissues is assessed. The implants are checked to ensure they are solid and have become integrated into the bone.

2. An OPG x-ray is taken to check the health of the bone around the implants
3. Any structural changes to the bridge or teeth can be performed at 3 months. Removal of the bridge prior to this can loosen the implants that are undergoing the process of becoming integrated into the surrounding bone.

### **Day 180 (6 month following insertion)**

1. Clinical review
2. Hygienist appointment as required (usually 6-12 monthly)
3. Annual clinical review continues with repeat OPG X-rays or cone beam CT x-rays as required (usually annually).

## **Appendix 2 - Essential Cost-Related Questions You Need to Ask To Determine The Best Treatment Plan For You**

Of course, the best way to get an accurate estimate for what dental implants cost (for your procedure) is to schedule a consultation with one of our team members. If you are shopping for a procedure, here is a list of questions to ask in order to ensure you receive complete pricing information:

QUESTION 1: What, if anything, is the fee for the initial consultation/examination? Does it include a panoramic x-ray? Does it include a CT scan?

QUESTION 2: Will I receive a fully documented letter explaining the procedure, all of the related costs and the timing of the different steps?

QUESTION 3: If I have teeth that need to be removed, can they be removed on the same day the implants are placed?

QUESTION 4: What type of sedation will be used? Is the price included?

QUESTION 5: Are all of the teeth (crowns, bridges, temporary and final, etc.) included in the price?

QUESTION 6: If I require additional dental implants, will my fee increase?

QUESTION 7: Are there any secondary phases that are required? Are they included in the price?

QUESTION 8: Will transportation and/or hotel accommodations be included in the price?

QUESTION 9: What, if anything, is NOT covered in the price I have received?

QUESTION 10: Is there an additional fee for the removal of existing teeth (extractions)?

QUESTION 11: Is a deposit required? If so, how much and when does it need to be paid? When do I need to pay the balance?

QUESTION 12: Can I pay by credit card?

QUESTION 13: Is financing available? If so, at what rate? What is the maximum term? Is the financing fully open so that I can pay it off at any time without penalty?

QUESTION 14: If anything whatsoever goes wrong, who pays for fixing it?

QUESTION 15: Will you supply a written warranty?

QUESTION 16: What is the likelihood that I will require bone grafting?

QUESTION 17: Do most of your patients find that bone grafting is painful?

QUESTION 18: If bone grafting is required, where will the bone grafting material come from? My body (where)? Another human? An animal? Synthetic?

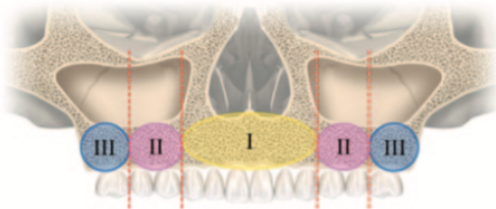
QUESTION 19: What is the full anticipated schedule from start until finish of my treatment?



QUESTION 20: How frequently will I need to return for hygiene treatments? What is the cost?

## Appendix 3 - Treatment Considerations for Edentulous Maxilla

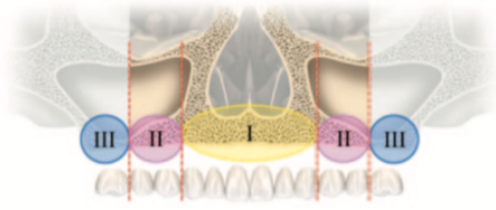
### Group 1



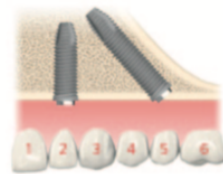
Presence of bone in zones I, II and III



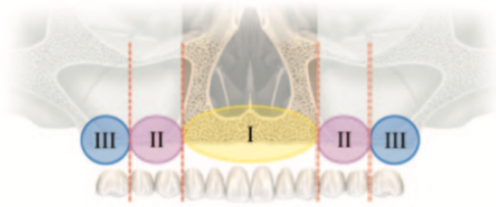
### Group 2



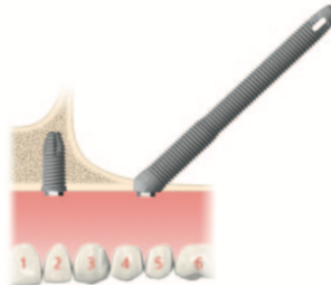
Presence of bone in zones I and II



### Group 3



Presence of bone in zone I only



Bone resorption



## 4 Treatment Options for the Edentulous Maxilla

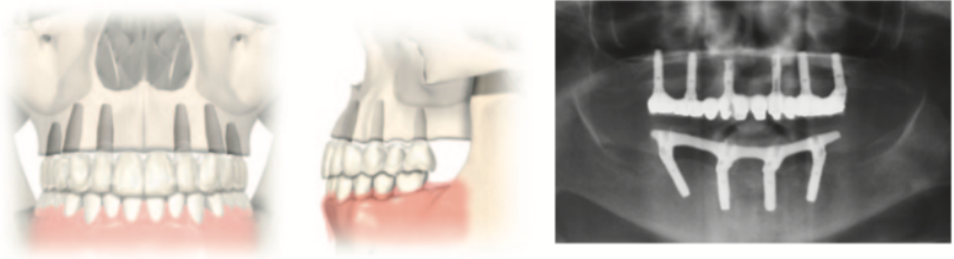
### Treatment example Group 1

**Surgical solution**

Axial (straight) implants

**Restorative solution**

Screw-retained implant bridge



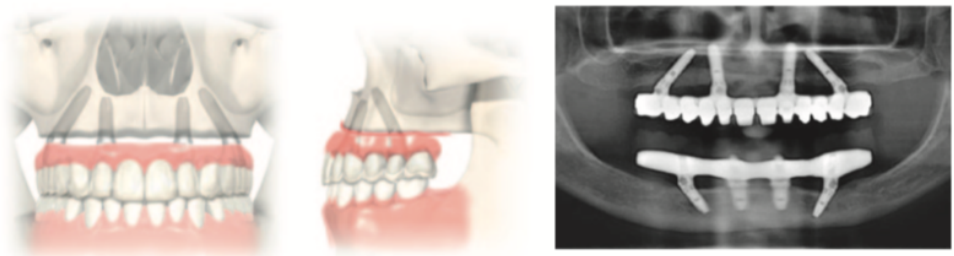
### Treatment example Group 2

**Surgical solution**

All-on-4® treatment concept with tilted implants, bone graft or axial implants with cantilever

**Restorative solution**

Fixed or fixed-removable solution



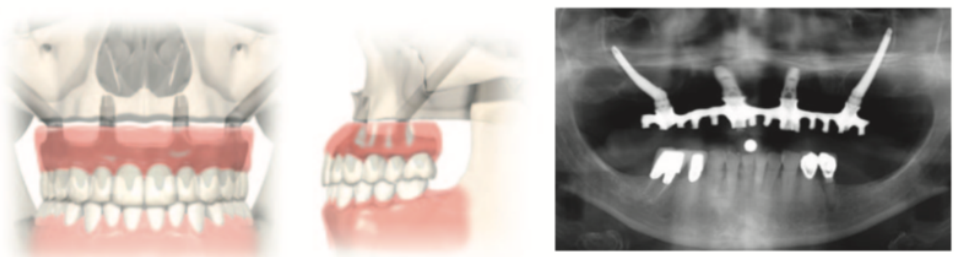
### Treatment example Group 3

**Surgical solution**

Tilted implant concept  
Brånemark System Zygoma or bone graft

**Restorative solution**

Fixed or fixed-removable prosthesis



The following publications have been used as support to pre-evaluate important factors as part of the decision making process for the edentulous treatment:

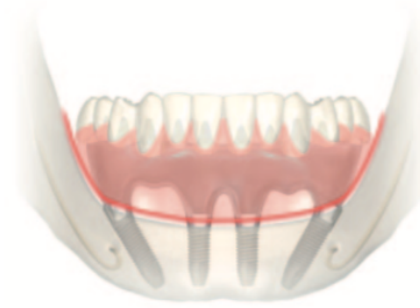
- Bedrossian E et al. Fixed-prosthetic Implant Restoration of the Edentulous Maxilla: A Systematic Pretreatment Evaluation Method. J Oral Maxillofac Surg 2008;66:112-22
- Maló P et al. The rehabilitation of completely edentulous maxillae with different degrees of resorption with four or more immediately loaded implants: a 5-year retrospective study and a new classification. Eur J Oral Implantol 2011;4(3):227-43

## Appendix 5 Treatment Options for the Edentulous Mandible

### Treatment examples



Axial implants with a fixed NobelProcera Implant Bridge



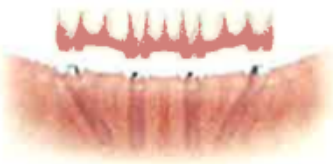



Axial and tilted implants with Multi-unit Abutments and a fixed NobelProcera Implant Bridge



Axial implants with a fixed-removable NobelProcera Implant Bar Overdenture



Two axial implants with Locator® Abutments and a removable prosthesis

Treatment	Description	Notes	Price
<p><b>Permanent Teeth-in-a-Day All-on-4™</b></p> 	<ul style="list-style-type: none"> <li>• Fixed-detachable</li> <li>• Implant retained and supported</li> <li>• No transition phase (implants &amp; teeth inserted on same day)</li> <li>• Small prosthetic size</li> <li>• Maximum stability and retention</li> <li>• Maximum confidence</li> </ul>		
<p><b>Bar Overdenture</b></p> 	<ul style="list-style-type: none"> <li>• Removable</li> <li>• Implant retained and supported</li> <li>• Not immediate; transition phase, time of treatment</li> <li>• Large denture size</li> <li>• Improved retention and confidence vs. locators</li> </ul>		
<p><b>Locators</b></p> 	<ul style="list-style-type: none"> <li>• Removable</li> <li>• Implant retained</li> <li>• Tissue supported - sore spots (potential relines)</li> <li>• Not immediate; transition phase, time of treatment</li> <li>• Large denture size</li> <li>• Improved retention and confidence vs. conventional dentures</li> </ul>		
<p><b>Conventional Denture</b></p> 	<ul style="list-style-type: none"> <li>• Removable</li> <li>• Tissue supported - sore spots (potential relines)</li> <li>• Large denture size</li> <li>• Difficulty eating (chewing and digestion) can cause GI problems</li> <li>• Social limitations, due to lack of confidence</li> <li>• Can lead to bone loss</li> </ul>		