

## CONSENT FOR RIDGE (BONE) AUGMENTATION

**PURPOSE OF BONE AUGMENTATION:** The purpose of bone augmentation is to correct any deficiency in bone quantity, quality or contour prior or in conjunction with dental implant therapy. Additional reason is for maintenance of contour of the jaw to prevent loss of jaw contour. Dental implants are used to allow my dentist to install anchors into the jaw onto which functional artificial teeth can be connected.

The key to a successful and long-lasting dental implant therapy is the quality and quantity of jawbone to which the implant is attached. If inadequate bone volume or contour is available for stable anchorage of dental implants, bone augmentation can assist in creating adequate bone with proper contour to support the implants.

**DIAGNOSIS:** After a careful oral examination, radiographic (X-ray) examination of my oral conditions, my periodontist has advised me that the quantity or contour of bone in my jaw is not adequate to support an implant.

**RECOMMENDED TREATMENT:** In order to treat this condition, my periodontist has recommended bone augmentation for support of dental implants. I understand that bone augmentation involves a surgical procedure.

**DESCRIPTION OF THE PROCEDURE:** Intravenous (IV) medications may be utilized for sedation as a form of anesthesia. Oral sedation may be an alternative. Local anesthetics will be administered to achieve comfort as the sole form of anesthesia or in conjunction with either IV or oral sedation. Ridge (bone) augmentation is a surgical procedure that involves gaining access to my jaw bone for the placement of bone graft. This surgical access may be obtained either through: A) flap surgery (to surgically open the gum to gain direct access to the bone region or B) tunneling surgery, which involves making a smaller incision in an area remote from the area to be grafted and creating a tunnel under the gum tissue. The decision as to whether to open the flap or tunneling is usually made based on specific conditions of each case.

A variety of bone graft material and other biomaterial may be used, including allograft (human donor derived bone), xenograft (processed bone minerals derived from animals such as bovine or cow bone, etc). Collagen may be used in the form of a barrier or sponge. This material is usually derived from porcine (pigs) or bovine (cow) sources.

Blood concentrates are sometimes used, where my blood will be drawn and centrifuged to separate fractions which are useful to the healing process, such as the platelets, fibrin and white blood cells. Biologics such as recombinant platelet derived growth factor or recombinant bone morphogenetic protein may be used during surgery.

Fixation screws may be installed in order to stabilize the bone graft or membrane.

Dental implants may or may not be placed simultaneous on the same day as bone augmentation.

During the course of surgery, my periodontist may discover unfavorable conditions or diseases, such as inflammation, infection, presence of foreign bodies or objects, poor bone quality or contour, cysts or polyps. These conditions may require my periodontists to make decisions that are based on clinical judgement. The plan may have to change based on the findings observed during surgery.

Based on the conditions present at the time of surgery, my dentist may choose to abort the original plan and not proceed with bone augmentation and or implant placement.

To allow the area to heal, the gum and soft tissue will be stitched closed over or around the implant or a healing cap or abutment will be placed to keep the area accessible.

My doctor may recommend either a removable temporary, fixed temporary and in some cases no temporary teeth to allow for healing.

I understand that healing will be allowed to proceed for a period of several weeks or months.

Patient initials \_\_\_\_\_

I am responsible to carefully follow the after-care recommendations provided, including taking the prescribed medications, such as antibiotics, steroids, pain relievers or any other supplements to keep my check-up appointments in between. I am required to maintain good oral hygiene, including tooth brush instructions provided, oral rinses prescribed or recommended.

I also understand that I am responsible to come for follow-up appointments to monitor the healing and provide any after care treatment or recommendations. Failure to follow the instructions, recommendations or come for follow-up visits may lead to adverse outcomes, such as infection, graft failure, implant failure, as well as many other unintended consequences.

**PRINCIPAL RISKS AND COMPLICATIONS:**

I have been informed of and understand the potential risks related to this surgical procedure include but are not limited to:

- Pain, swelling, bleeding, infection, bruising, delayed healing, scarring, damage to other teeth and/or roots that may result in the need for tooth repair or loss, loose tooth/teeth, damage to dental appliances or crowns, cracking and/or stretching of the corners of the mouth, cuts inside the mouth or on the lips, jaw fracture, stress or damage to the jaw joints (TMJ), difficulty in opening the mouth or chewing, allergic and/or adverse reaction to medications and/or materials;
- Nerve injury, which may occur from the surgical procedure and/or the delivery of local anesthesia, resulting in altered or loss of sensation, numbness, pain, or altered feeling in the face, cheek(s), lips, chin, teeth, gums, and/or tongue (including loss of taste). Loss of some senses, including the sense of smell or vision. Such conditions may resolve over time, but in some cases may be permanent;
- Dry socket (slow healing) resulting in jaw pain that increases a few days after surgery;
- Sharp ridges or bone splinters may form where the tooth was removed possibly requiring additional surgery;
- Loss of bone graft material
- Fracture of bone fixation screws
- Accidental swallowing of foreign matter
- Part of the tooth and/or roots may be left to prevent damage to nerves or other structures;
- An opening may occur from the mouth into the nasal or sinus cavities;
- Injury to nearby blood vessels, salivary glands or ducts;
- Loss of function and/or weakness of facial expression muscles possibly affecting my appearance. Such conditions may resolve over time, but in some cases may be permanent;
- Permanent loss of feeling or pain if removal of part or all of a nerve is necessary;
- Severe bleeding, both during and after surgery, that may require a blood transfusion;
- Abnormal, enlarged, or cosmetically unpleasing scars may occur within the gums, skin and deeper tissue, sometimes requiring additional surgery. Some scarring may be permanent and always be visible.

The exact duration of any complications cannot be determined and they may be irreversible.

There is also potential for complications that may occur around implants that may manifest after a period of time. These may be inflammatory diseases called peri-implant diseases. These may occur as a result of poor oral hygiene, inappropriate restoration design that collect bacteria

I understand that some patients do not respond successfully to dental implants and in such cases the implants may fail. Implant surgery may not be successful in providing artificial teeth because each patients condition is unique, long term success may not occur. In most instances, where an implant fails, it may be possible to place another implant as replacement in the same area or nearby area. In

Patient initials \_\_\_\_\_

other circumstances, it may be deemed that implants will not be successful so that other alternatives to implant therapy may be recommended.

Smoking is a substantial factor in increasing complications such as post-operative infections, graft failure and peri-implant diseases. I have been informed by my dentist that it is best to completely refrain from smoking. However, smoking cessation does not always reverse some of the adverse changes to the local tissues or immune system and the risk factors from past history of smoking may continue to compromise outcomes.

My medical health such as diabetes, as well as medications that are prescribed for various conditions such as osteoporosis, autoimmune diseases, cancer, hypertension, etc may have substantial effects on healing after surgery or after implant therapy. These conditions, in particular medications used for osteoporosis may cause poor healing and in some cases, necrosis (death) of jaw bone. This may cause long-term impairment of the jawbone. When multiple risk factors are combined such as medications with adverse healing, diabetes, and or smoking, the risks may exponentially increase. I understand that the design and structure of the prosthetic appliance also known as the tooth restoration can be a substantial factor in the success or failure rate of the implant. If the restoration is made by another dentist, my periodontist may not be responsible for complications that may arise from restorations that may not be optimal.

I further understand that alterations made on the artificial appliance also known as the tooth restoration or implant can lead to the loss of one either the artificial appliance also known as the tooth restoration or implant or both. This loss would be the responsibility of the of the person making such alterations. I am advised that the connection between the implant and the tissue may fail and it may be necessary to remove the implant and can happen at any phase.

I understand that the event there are adverse consequences of surgery, there may be additional procedures that may be necessary to correct or improve the conditions. There may be additional surgeries or procedures performed by my periodontist or other health care professionals such as other dentists or physicians such as ear-nose-throat (ENT) specialists. The cost for such additional therapy may have to be the responsibility of the patient.

**ALTERNATIVES TO SUGGESTED TREATMENT:**

I understand and it has been explained to me that there are alternative treatment options. Alternative treatments for replacement of missing teeth include no treatment, new removable appliances (partial denture), and other procedures depending on the circumstances. However continued wearing of ill fitting and loose removable appliances can result in further damage to the bone and soft tissue of my mouth.

**NECESSARY FOLLOW UP CARE AND SELF CARE:**

I understand that it is important for me to continue to see my regular dentist or prosthodontist but I also understand that it is necessary for me to see my periodontist at Brighton Periodontal and Implant Group on an interval recommended to me for maintenance care and follow up. The follow up and the implant maintenance is not a part of the treatment plan and I am responsible for the cost. If I have not been seen for over a year in Brighton Periodontal and Implant Group, I understand that they are not liable for any damages to the implant or surrounding bone.

Implants like natural teeth and appliances have to be maintained daily in a clean and hygienic manner. Implants and appliances must be examined periodically and may need to be adjusted. I understand that it is important for me to abide by the specific prescriptions and instructions given by my periodontist.

**HEALTH HISTORY:**

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I have been informed that smoking, non moderate alcohol use , as well as other underlying health problems (e.g. diabetes) that have not been adequately controlled by my physician may adversely affect the healing of gum tissues, the bone and survival of implants.

I submit that I have provided an accurate account of my health history and have listed all my medications . To the best of my understanding, I have not withheld any information regarding my medical, dental or mental health.

I will inform my dentist and periodontist about any changes in my health and medications.

**FINANCIAL RESPONSIBILITY:**

The fees quoted by my periodontist include the surgical procedures and work up to be perform and does not include the fees for any restorative work unless specified in the contract. I understand that restorative components and construction of the crowns, temporary teeth, bridges and dentures will be carried out and is payable separately.

I understand that I have been advised to get a quote from any other dentist (general dentist or prosthodontist) who may be restoring the implants prior to getting any work started so that I can get a general ideas of the overall fees for both the surgical and restorative treatment.

**NO WARRANTY OR GUARANTEE:**

I hereby acknowledge that no guarantee, warranty, assurance has been given to me that the proposed treatment will be successful. Due to the individual patient differences however, a periodontist cannot predict the absolute certainty of success. There exists the risk of failure, relapse, additional treatment, or worsening of my present condition, including the possible loss of certain teeth despite the best of care.

If the implant fails, we may offer to replace the implant at no charge to the patient but we don't reimburse the patient.

**PUBLICATION OF RECORDS:**

I authorize photos, images, videos, audios, slides, x-rays or any others viewing of my care and treatment during or after its completion to be used for educational activities and may be presented by my dentist to others. These images and videos may be used in promotional material. My identity will not be revealed to the general public, without my permission.

**PATIENT CONSENT**

I have been fully informed of the nature of the procedure to be utilized, the risks and benefits of surgery, the alternative treatments available, and the necessity for follow-up and self-care. I have had an opportunity to ask any questions I may have in connection with the treatment and to discuss my concerns with my periodontist. After thorough deliberation, I hereby consent to the performance of surgery as presented to me during consultation and in the treatment plan presentation as described in this document. I also consent to the performance of such additional or alternative procedures as may be deemed necessary in the best judgment of my periodontist.

I CERTIFY THAT I HAVE READ AND FULLY UNDERSTAND THIS DOCUMENT.

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**Date**

**Printed Name and Signature of Patient or Guardian**

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**Date**

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**Printed Name and Signature of Witness**

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