



## **BONE GRAFTING: SOCKET GRAFT / RIDGE PRESERVATION**

When a tooth is removed from your mouth, a hole is now present where the roots were. This hole is called a “socket.” Without an implant placement, the ridge will melt away, called “atrophy.”



But sometimes an implant will not be placed right away, whether it be a decision of the patient or the doctor. In this case, the placement of bone into the socket may be a wise idea. This procedure is commonly referred to as a “socket graft” or a “ridge preservation procedure.” The graft has two main functions:

1. To help ensure the socket fills with bone, rather than with “granulation tissue,” which is a soft material unsuitable for implant placement, and
2. To help deter the shrinkage of the ridge, which results from the lack of a tooth being present.

The bone typically will come from one of four sources: 1) your own body (autograft), 2) human cadaver bone (allograft), 3) alloplasts (artificial bone) and 4) xenografts (from an animal other than human, typically cow).

With the cadaver bone, many patients are concerned about disease. The manufacturing companies go through a rigorous cleansing process when they process the graft material, so the chance of getting sick is very small.

You should note that the loss / shrinkage of a ridge is a normal process. It is referred to as “resorption.” The graft will slow the process, but not eliminate it. The only way to eliminate it is by the placement of an implant.

The largest amount of resorption of the ridge will occur within the first year following extraction. Typically, one must wait a minimum of 4 months before placing an implant into a grafted region, but failure to place the implant within the first year can result in the need for additional grafting, which can be much more extensive and expensive. Occasionally a person can get away with a time frame up to 1.5 to 2.0 years, but there is risk with waiting this long.

Insurance will often NOT cover this procedure. Therefore, fees will typically be collected from the patient. When the procedure is submitted to insurance, there are two components: the first is the bone material itself, and the second is a “membrane” that holds the bone in place. The membrane is made from collagen (a material found within your body). The source of the collagen is either human or bovine (cow).

The actual procedure typically goes something like this:

1. Removal of the tooth (extraction). You may be given an antibiotic before the procedure is started.
2. Placement of the bone (a powder is mixed with saline and placed into the socket)
3. Sealing of the bone with the membrane, and the placement of sutures to hold everything together.

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You will be seen approximately 2 weeks later to have the sutures removed. During this time you will need to be careful not to eat or place pressure onto the graft. You may be given pain prescriptions and / or antibiotic.

## FEE DETERMINATION FOR GRAFTS

Sometimes a simple grafting procedure as described above is all that is required, and other times the graft can be extensive and complex. Reasons for these more involved grafts include: a large infection that has caused excessive damage to the jawbone, or brittle areas of the bone that have broken away that require rebuilding. Grafting procedures with the same techniques as described above are possible, but can become more involved. This is why all grafts are not the same, and why fees may vary from graft to graft, or patient to patient. The major variables that affect fee determination are:

- Amount and type of bone required
- Amount and type of membrane required
- Additional supplies and materials (such as bone tacks or PRP)
- Amount of time required for the procedure

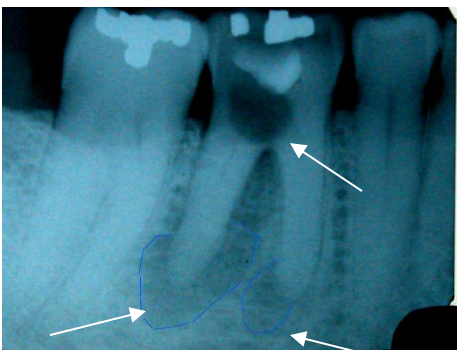
## AN EXAMPLE

This patient presented with a tooth that had 2 large infections and severe decay. The tooth was not restorable so it was extracted, and a graft was planned. We had anticipated a simple graft, but after the extraction we found the outside wall of bone was destroyed. A large membrane was placed with grafting material, and a bone tack was utilized to hold the membrane in place. After a 4 month healing period an implant was placed, and 4 months after that, the crown was inserted.

In total, the patient had 8 appointments as follows:

1. Consultation: 30 minutes
2. Extraction and Graft: 2 hours
3. Post-Operative follow-up (2 weeks after appointment #2): 10 minutes
4. Follow-up (4 months after appointment #3): 10 minutes
5. Implant placement: 1 hour
6. Post-Operative follow-up (2 weeks after appointment #5): 10 minutes
7. Impression (3 months after appointment #6): 30 minutes
8. Placement of crown (3 weeks after appointment #7): 30 minutes

You may find it interesting that the patient did not require any prescription-strength pain medications (although he was given the script should he choose to fill it), and Novocain was the only pain-management he required during the appointments. The Novocain was required for appointments #2 & #5 only.



Tooth with two infections and large cavity. Tooth is hopeless, and requires extraction.



Socket graft / ridge preservation procedure. Solid color indicating uniform bone packing, as well as a bone tack to hold membrane in place.



Final implant with crown in healed, condensed bone.