

Preserving Bone

When the decision has been made to extract or pull a tooth, one should also consider preserving the bone. The bone around our teeth exists to support our teeth. Once the teeth or tooth is removed the bone which surrounded those teeth or tooth begins to resorb or erode away. When a tooth is extracted one should always consider a bone graft to preserve the ridge or bone to allow for future treatment options such as implant placement.

Once a tooth is extracted or pulled a 25% decrease in the width of the alveolar bone occurs during the first year, and there is an average decrease in height of 4mm during the first year following multiple extractions. Recession in height and atrophy of width continue, with the bone in the area of an extraction eventually losing nearly 40% to 60% of its original height and width within two to three years. After the first two to three years there is an average rate of bone loss of 0.5-1.0% per year for life. This loss of bone creates difficulties in placing implant and also affects the cosmetic appearance of the teeth which can be difficult and in some cases impossible to resolve. With the loss of teeth and supporting bone adjacent teeth can shift to fill the void, it can be difficult to chew food, the collapse of the muscles and facial tissues can cause facial wrinkles, the placement of future implants can be jeopardized and the cosmetic appearance of the teeth and gums can change and be difficult to fix. These conditions occur regardless of the patient's age, sex or health.

The optimum way to preserve the bone and supporting tissues are to place an implant immediately following extraction. However there are instances where immediate implant placement is not indicated and sometimes financial issues do not allow for immediate implant placement. In these cases, using bone grafting material is necessary to minimize bone resorption, prevent the ridge from collapsing and preserve the socket for future implants.

A bone graft or ridge preservation involves placing a regenerative bone grafting material into the space left after the tooth has been removed. This is done to help replace or regrow bone where the extraction has left an empty weakened area. There are many different materials which can be used in the reconstruction of the area where the tooth has been removed.

There are autogenous bone grafts where the tissue used is from the patient's own body. This option has the disadvantage of requiring an additional surgical site to obtain the bone. There are also allografts where the material used is from another human donor. This is a cost effective option which does not require a second surgical site to obtain bone to use in the extraction site. Another option is to use an alloplast or a bone graft made of a synthetic material. While this is an effective option for those who object to using donor bone it is very expensive.

After the extraction site has been filled with the bone grafting material a collagen membrane is often placed over the site and tucked in under the gingival or gum tissue. The purpose of the collagen membrane is to keep the bone components growing underneath and to prevent the gum cell from growing down into the socket and displacing the bone. Sutures are placed to stabilize the grafting materials. After a bone graft or ridge preservation procedure is completed it must heal for a period of 4 to 6 months before the site can accept an implant.

A bone graft or ridge preservation procedure after an extraction serves many purposes. It preserves the natural appearance of the supporting tissues of the mouth, preserves bone support for dentures, and helps with the esthetic appearances of bridges and is essential for preserving sufficient bone height to support dental implants. If you need to have a tooth extracted or pulled be sure to ask your dentist about a bone graft or ridge preservation.

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