What you need to know about your bone grafting material.

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The surgery center or hospital and your physician will provide postoperative instructions.

During your recovery, you should exercise the muscle groups that weren’t affected by the surgery to stay in shape, but be sure to consult your doctor or physical therapist before initiating any exercise.

You should also maintain a healthy diet, which will help speed up the recovery process.

If you smoke, quit now to improve your health immediately after surgery and beyond. Smoking slows bone healing, bone growth, and wound healing. Research has shown that bone grafts are more likely to fail in smokers. Some surgeons even refuse to perform elective bone grafting procedures on individuals who smoke.

**Risks**
All surgical procedures carry some risk of bleeding, infection, and reactions to anesthesia. Bone grafts carry these risks and others, including:

- **Pain**
- **Swelling**
- **Nerve injury**
- **Rejection of the bone graft or**
- **Inflammation.**

Ask your doctor about these risks and what you can do to minimize them.

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**What is a bone graft?**
Bone grafting is a surgical procedure designed to fix problems with bones or joints. Bone grafting, or transplanting of bone tissue, helps repair problem joints or bones damaged from trauma. It’s also useful for growing bone around an implanted device, as in a total knee replacement procedure. A bone graft serves as a type of scaffolding in an area where bone is missing. This scaffolding is composed of material that encourages the growth of new cells and bone where your existing bone is depleted or weakened.

**There are four main reasons bone grafts are used:**

- Bone grafts may be used in patients with multiple or complex fractures, or in patients whose fractures don’t heal well after initial treatment.

- Bone grafts can promote fusion of two bones across a diseased joint. This type of surgery is most often performed on the spine.

- Bone grafts can help regenerate bone lost to disease, infection, or injury. This can involve using small amounts of bone in bone cavities, or in large sections of bone.

- Bone grafts can be used to help bone heal around surgically implanted devices, such as plates or screws, or in joint replacement surgery.

Bone grafting is possible because bone tissue, unlike most other tissue types, can regenerate completely if it has space into which to grow. As the patient's bone grows, it will gradually replace the graft material completely, resulting in a fully integrated region of new bone over a few months' time.

**How does a bone graft work?**
During the body’s normal maintenance cycle, damaged cells are regularly replaced by new, healthy cells.
ReBOSSIS: A Synthetic Bone Void Filler Composition

Rebossis consists of beta tricalcium phosphate, calcium carbonate (containing 1% silicon by weight, a level similar to that present in normal growing bone) and a resorbable scaffold of Poly-L-lactide.

Why ReBossis?
Several characteristics make ReBossis a popular choice for many surgeons:

• ReBossis is the only bone graft material with a woven, fibrous, “cotton-like” composition. This material offers improved handling characteristics and a structurally resilient graft that stays in place during the osteointegration* process.

*The term “osteointegration” in this context refers to the direct structural and functional connection between the patient’s bone and the surface of the synthetic bone graft.

• ReBossis provides a highly absorbent and fluid-retentive graft. This is important because a surgeon may choose to “hydrate” ReBossis before implantation—that is, treat it with bone marrow aspirate, blood, or other cellular components that allow more complete delivery of the living cells that stimulate bone growth.*

*The principle of osteoinductive healing is based upon the presence of local growth factors at the site of bone injury.

• Due to the three-dimensional makeup of ReBossis, this product has a unique capacity for the patient’s bone to integrate into the graft. Successful incorporation of the graft is enhanced based on the surface area of the graft that comes in contact with the natural bone.

• The graft is resorbed at a rate similar to the growth rate of human bone. The benefit of having the graft resorbed by the body is that the body is able to heal itself completely without retaining the foreign body.

• Many surgeons feel that using a synthetic graft material such as ReBossis may reduce the risks of infection or disease transmission, which are complications often associated with the creation of a second operative site.

ReBOSSIS®
A New Option in Bone Grafting
In a grafting procedure, your doctor places a type of scaffolding in areas that are missing bone. This scaffolding is composed of material that encourages the growth of new cells. Over time, your cells will incorporate the graft material into your own functioning bone.

What is a bone graft made of?
Bone grafts may be an autograft, meaning that it comes from a bone inside your body, such as your rib, hip, pelvis, or wrist; an allograft, which comes from a deceased donor or cadaver that has been cleaned and stored in a tissue bank; or synthetic bone, which is made of naturally occurring and biocompatible substances that have mechanical properties similar to the properties of bone.

The type of graft used depends on the type of injury your surgeon needs to repair and the graft he or she thinks will work best for you.

Preparation for your surgery
Your doctor will perform a complete medical history and physical examination before your surgery. Be sure to tell your doctor about any medications, over-the-counter drugs, or supplements you’re taking.

You'll likely be required to fast before surgery. This helps avoid complications while you’re under anesthesia.

Your doctor will give you complete instructions about what to do in the days before and on the day of your surgery. It’s important to follow those instructions.

How the bone graft procedure is performed
Your doctor will select your bone graft before your surgery. You'll be given general anesthesia, which will put you into a deep, peaceful sleep. An anesthesiologist will administer the anesthesia and monitor your recovery.

Your surgeon will make an incision in the skin above where the graft is needed. He or she will then shape the graft to fit the area. The graft may be held in place using any of the following: pins, plates, screws, wires, cables, or your natural anatomy.

Once the graft is secured, your surgeon will close the incision or wound with stitches and bandage the wound. A cast or splint may be used to support the bone while it heals. Many times, no casting or splint is necessary.

Recovery
Recovery from bone graft surgery depends on the size of the graft and other variables. Recovery can take anywhere from two weeks to more than a year. You'll probably need to avoid vigorous physical activity for as long as your surgeon suggests.