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ACL Repair: Your Tissue or Someone Else's?

If you have torn your anterior cruciate ligament (ACL), the main ligament that stabilizes the knee, and are scheduled for reconstructive surgery to repair it, your surgeon could use either an autograft or an allograft. What is the difference between the two?

An **autograft** is a piece of tissue removed from your body and used to replace the torn ACL. Advantages of autografts include

- **no chance of getting a disease from the graft** because it is your own tissue
- **no problems of supply and demand** because your own tissue is always available
- **no problems incorporating the tissue into the knee in the long term**

However, because two operations are involved—obtaining the graft tissue and then using it to replace the torn ACL—the chance of surgical complications increases. In addition, a limited amount of tissue can be removed for grafting without causing collateral damage. People who receive autografts experience more pain the first two weeks after the operation and take longer to return to their daily activities.

An **allograft** is cleaned and sterilized tissue taken from a cadaver. Advantages of allografts include

- **a shorter operation**
- **less initial pain and a quicker return to daily activities**
- **a larger amount of tendon is available for the surgeon to work with**

Allografts are cleaned and sterilized using special processes, making the risk of disease transmission extremely low—one out of two million donated tissues. However, allografts may be less sturdy than autografts because they usually come from older donors, and the sterilization process can weaken the tissue. This makes using allografts less desirable in some groups of patients. Also, the demand for allografts usually exceeds supply.

Discuss with your surgeon whether an autograft or allograft best meets your particular lifestyle needs. And remember: A program of postoperative physical therapy exercises designed by us will increase your range of motion and get you back to daily activities more quickly and completely following this procedure.

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Exercising While Taking Blood Thinners

If you have been prescribed blood thinners, you may wonder if it is safe to exercise while taking them. The answer is a little tricky, because it depends on what type of exercise you are referring to. Plus, the reasons why you need to use caution may not be what you expect.

The first thing to consider is why you were put on the medication in the first place. Blood thinners, or **anticoagulants**, are used to treat a variety of conditions, including deep vein thrombosis (a blood clot that forms in the large veins of the legs or arms), pulmonary embolus (a clot that travels to or forms in the lungs), atrial fibrillation (an irregular heartbeat) or after receiving a mechanical heart valve. Depending on your condition, your doctor may recommend engaging in specific types of physical activity and refraining from others.

Regardless, **taking a blood thinner puts you at high risk for bleeding**. This means any type of accident that creates bleeding—no matter how minimal—may be hazardous. Those individuals taking anticoagulants should avoid high-impact or injury-prone activities, such as hockey, soccer, skiing or football.

On the other hand, **it is important to stay active to keep your heart and vascular system as healthy as possible**. This is where we can be your best ally.

- **We can determine which of your current physical activities are safe and which need modification.**
- **We can recommend safer alternatives to the riskier activities you love.** For example, while a road bike puts you at too much risk for scrapes, bruises and more serious injuries that are complicated by blood thinners, a stationary bike is a great substitute.
- **We can give you pointers to reduce your risk of blood clots by staying hydrated and stretching regularly during exercise.**

There are plenty of activities that are safe to perform even when you are taking anticoagulant medication, so there is no need to sit life out on the sidelines. Contact us today to find which activities may interest you and help you to stay safe and active.

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TENS Ways to Alleviate Pain

One approach used in a rehabilitation program, transcutaneous electrical nerve stimulation (**TENS**) uses an electric current to stimulate muscles to contract. Electrical impulses are thought to interrupt messages sent by pain receptors from the nerves to the brain. If the brain does not receive these messages, it does not recognize pain, and you do not feel any. Or, the electrical impulses released during TENS may encourage the body to produce more of its own endorphins, which are natural pain relievers. Thus, pain-free exercise may be possible.

The noninvasive TENS treatment involves placing small electrodes, held in place with adhesive, over the painful body part. These are attached to a machine that sends tiny electrical impulses to the painful joint or area of the body. The current impulses emitted by TENS are very low; you may feel a warm or tingling sensation at the site of placement. A 15-minute TENS session may be repeated frequently to help alleviate pain.

TENS may be used for a number of conditions to ease pain. These include

- **migraines and tension headaches** (A TENS device called Cefaly has recently been approved by the U.S. Food and Drug Administration for these patients.)
- **cancer pain**
- **arthritis**
- **bursitis**
- **tendonitis**
- **injuries that result in chronic pain**
- **postsurgical pain**
- **pain during childbirth**

While TENS does not cure the source of the pain or treat the underlying problem, many people consider it to be worthwhile, even if the pain returns. Thus, it is worth talking to your physician and us about trying TENS to manage your pain. With pain-free exercise as part of a rehabilitation program, you can have a stronger, healthier body.

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The Broken Bone You Never Knew You Had

Considering that most patients with **osteochondritis dissecans** are adolescent boys, the explanation of the condition is sure to win points for sheer gross-out potential. Characterized by pain, limited range of motion, and a popping or locking sound in the joint, osteochondritis dissecans occurs when **a small piece of cartilage breaks off from the end of a bone**, **along with a sliver of the bone itself**. Sometimes, this stray piece of bone does not cause any real symptoms, and the fracture may heal itself before it is even noticed. However, when symptoms do arise, they wipe out any coolness factor osteochondritis dissecans may have.

Since osteochondritis dissecans typically affects the knee (although it can occur in any joint), joint stiffness and discomfort can lead to decreased activity and may necessitate the use of crutches. If the broken-off cartilage becomes trapped between a joint, or if the fracture begins to cause persistent pain or decreased motion, surgery may be necessary.

No one really knows what causes this condition, but it is thought to be provoked by **reduced blood flow** to the end of a bone. This can be caused by **repetitive trauma** from improper form in certain sports, or it may be the fault of a **genetic predisposition**.

Your physician will usually diagnose osteochondritis dissecans by performing a physical examination, along with imaging studies such as an MRI (magnetic resonance imaging). Depending on the size of the fracture and its location, your physician will determine whether you need surgery or if nonsurgical treatment will be enough. Such treatment usually includes

- **mandatory resting of the knee joint**
- **a therapy program incorporating gentle range-of-motion, joint mobilization, balancing and strengthening exercises**
- **the use of ice, electrical stimulation and other modalities to reduce pain and inflammation**

If surgery is needed, a longer, more intensive version of these therapeutic techniques will help get you on your feet as soon as possible. And the sooner you are back in action, the sooner you can brag about the broken bone that was floating around in your body.

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When Your Shoulder Blade Is "SICK"

Do you have a "SICK" scapula? No, not sick with a fever or a cold, but **SICK**—an abnormal condition of the shoulder blade. This condition is characterized by

- **Scapular malposition**: The scapula has moved to an abnormal position on the rib cage.
- **Inferior medial border prominence**: The scapula protrudes abnormally along the back.
- **Coracoid pain and malposition**: Pain at the top of the shoulder is caused by movement of the coracoid process (a bony projection from the neck of the scapula) to an abnormal position.
- **dysKinesis abnormalities**: The scapula moves abnormally as the arm moves (also called scapular dyskinesis).

The scapula (shoulder blade) is attached to the rest of your skeleton only at the clavicle (collarbone). It is held in place by multiple muscles that must be strong enough to keep it stable but flexible enough to allow arm movement in multiple planes. SICK scapula develops most often in athletes, such as pitchers, volleyball players and tennis players, who make repetitive, forceful overhead movements.

Repeated overhead motion creates abnormal stresses on the muscles that hold the scapula in place. As a result, some muscles weaken while others tighten, and the scapula is pulled out of position. Eventually **the affected shoulder will appear lower** than the normal shoulder, and **the scapula may visibly push out or protrude** from the back. Other symptoms include **severe pain at the top**, **front or back of the scapula**; **heaviness in the arm** when performing overhead activities; or a **noticeable hitch or jump** in scapular motion when the arm moves.

A SICK scapula is corrected by strengthening the muscles that hold the bone in place. If you have received a diagnosis of SICK scapula or scapular dyskinesis, we can design an exercise program to strengthen the muscles that hold the scapula in place in a balanced, corrective way. If left untreated, SICK scapula can progress to conditions that need surgical correction or end an athletic career. We can provide an exercise program to help alleviate your shoulder pain.