# A cushion for your joints

Michael Brager, MD, orthopedic surgeon, St. Mary Mercy Hospital

How are your knees? Is swelling, locking and catching of the knee affecting your ability to work, play sports or even perform daily tasks? If so, you may want to ask your doctor about articular cartilage repair, or autologous chondrocyte implantation (ACI), a minimally invasive outpatient procedure performed at St. Mary Mercy Hospital that can cushion your joints.

If you are the right candidate, your own cartilage cells are cultured and used to repair the cartilage defects. "These defects can be caused by acute or repetitive trauma. Often patients have had an inadequate response to previous surgical procedures, such as arthroscopic surgery," says Michael Brager, MD, orthopedic surgeon, St. Mary Mercy Hospital. Cartilage injuries often occur in combination with other knee injuries, such as a meniscus tear or an anterior cruciate ligament (ACL) tear, he says.

**The benefits of ACI.** Joint cartilage does not usually regenerate in the body once the damage is done. In addition to causing pain and loss of mobility, damaged cartilage can also continue to deteriorate, further damaging the joint, which can hamper a person's ordinary activities.

For this type of cartilage damage in the knee, other procedures are performed with the intent of allowing bone marrow cells to infiltrate the damaged area, resulting in the formation of a fibrous cartilage tissue; however, this can be less durable and resilient than normal articular cartilage. The ACI procedure allows the cartilage to heal, more closely resembling normal cartilage, says Dr. Brager.

**How does ACI work?** From an arthroscopic procedure, a biopsy of healthy knee cartilage is taken and sent to the lab, which is then cultured to grow new cells. After the cells are ready, Dr. Brager performs the minimally invasive ACI surgery, removing damaged tissue and implanting the cultured cells.

"Most patients are back to full weight bearing within six to eight weeks and resume sports activity within six months to one year," says Dr. Brager. Long-term durability is projected to be up to 10 years, he says.

**Find out more.** Knee pain is one of the most common types of chronic joint pain. To find out if you are a candidate for ACI, contact Dr. Brager at **(734) 464-0400**.

## Ouch! Is it a sprain or a strain?

A "sprain" sounds so close to a "strain" that you might think they are nearly the same. But sprains and strains are injuries to different body structures.

**Sprains** are injuries to ligaments, which connect bones to each other in a joint. Sprains can result from a sudden twist. A mild one causes little pain or swelling. More serious sprains cause more pain and swelling, and the joint may be unstable.

**Strains** are injuries to muscles, or to tendons, which connect muscles to bones. Strains are sometimes called pulled or torn muscles. A minor strain usually causes only mild pain. Worse strains cause more pain, and the muscle may have very limited range of motion.

Both ligaments and tendons can be completely torn. In these cases, pain may be severe at first and then disappear. You should see a doctor if you have an injury that causes changes in skin color, severe pain or swelling, or a deformity.

Source: American College of Sports Medicine