



Dr. Brian Cole (right) in his scrubs in the operating room.

Rush Photo Group

The cartilage king

*Doctor wears many hats
at Rush, and for
local sports teams*

By KIMBERLY WEISENSEE

Medill News Service

Dr. Brian Cole is a busy guy. Cole is the team physician for the Bulls and co-team physician for the White Sox. He is the section head of the Cartilage Restoration Center at Rush University Medical Center, where he is researching transplants that restore cartilage and save joints, allowing people to forgo procedures such as knee replacements. He's a practicing physician and a professor of orthopedics, anatomy and cell biology at Rush.

Cole took a few minutes out of his busy schedule to explain cartilage transplants and why he believes in his work.

Are there any sports that make someone prone to cartilage damage?

A large number of the patients have had traumatic injuries in football or other contact and collision sports where they have injury to a knee or ligament. The clock starts ticking after that injury, and the cartilage wears over time. In treatment, part of the cartilage is removed and the patient does fine. Then five to 10 years down the road they start to get arthritis forming in the area where the injury occurred or where cartilage was removed.

So my college athlete friend who had scar tissue removed in her knee could have gotten a transplant done instead?

It's not that simple. The first line of treatment for most people is an arthroscopy to allow the area to breathe and clean up. We see how they do. If they don't do well, then

transplantation is considered. [An arthroscopy uses a camera-guided tube with optical viewing fibers as part of a procedure to clean out scar tissue in a joint.]

How many types of cartilage transplants are there?

There are at least 20 or 30 transplant options in practice around the world. One way is to harness the body's ability to repair cartilage is called an arthroscopic microfracture, where a surgeon creates a small hole in the bone to make the bone bleed into the surrounding area. The bone has primitive cells that heal to form normal cartilage.

If that fails, the patient qualifies for a local transplant called an osteochondral autograft, which is comparable to a hair-plug transfer. The surgeon takes cartilage and bone from the healthy part of the joint and moves it to the damaged area.

A highly advanced and FDA-approved cartilage regeneration technique is called an autologous cartilage cell implantation. Cells are harvested from the patient's cartilage, cultured and re-implanted in the damaged area to repair and restore the cartilage.

For major defects, there are cartilage and meniscus transplants (the meniscus is a C-shaped piece of cartilage in the knee) from organ donors.

How many cartilage transplants have you done?

I've been practicing for 11 years, so I've done well over 1,000 transplants or joint-saving procedures.

Is there any patient you've had who exemplifies the success of cartilage transplantation?

We've been really excited about Chicagoan John Golden, an executive at CNA insurance. At 38 years old, he was in great shape but couldn't walk and had more than 15 surgeries done because of an old football injury. I performed a double cartilage transplant on John. Now he is 42, and he's going to climb Mt. Everest this spring.