

## Leading-Edge Knee Surgery

Orthopedic surgeon Kevin Stone, M.D., has seen the future of arthritis surgery, and it doesn't involve plastic or metal—the materials most commonly used in joint-repair surgery today. “The wave of the future is biologic knee replacement,” says the San Francisco doc, “using the body’s own tissues to restore healthy joints.”

Stone has developed a promising (if awkwardly word-

ed) procedure called *articular cartilage paste grafting*. Articular cartilage—the Teflon-like coating that gives joints their smooth, pain-free motion—usually can't repair itself when it's injured. But Stone has found that thin or bare spots in the knee cartilage can be repaired by applying a paste made of healthy cartilage and bone tissue taken from the patient.

In an arthroscopic procedure, the surgeon shaves down the defective cartilage, then—using a tiny awl—creates minuscule fractures in the underlying bone. Next, the paste is applied to the joint, and it grows to fill in the defects in the cartilage. The

result: less bone-on-bone pain, a slowing of joint deterioration, and a delay of total joint-replacement surgery.

Right now, cartilage repair is in its infancy, and it's not a viable option for people with advanced arthritis. Think of it as the equivalent of a tire retread: for patients who don't need a total joint replacement, the procedure—sometimes done in tandem with a bone-shaving operation called an *osteotomy*—may offer a little more pain-free mileage on arthritic knees. One added benefit is that the technique doesn't prevent you from having a total joint replacement later, if needed. —K.G.