CAN I REPLACE PART OF MY KNEE?

Years ago, knee replacement surgery meant replacing the entire joint. Today, partial knee replacement gives qualified patients the option of replacing only the damaged part of the knee in lieu of the entire joint. Understanding how a partial or "unicompartmental" knee surgery works first requires a brief anatomy review.

by Richard Greenfield, MD

KNEE JOINT BASICS

As the largest joint in the body, the knee is made up of the lower end of the femur (thigh bone), which rotates on the upper end of the tibia (shin bone) and the patella (kneecap), which slides into a groove on the end of the femur. Ligaments attach to the femur and tibia to provide stability. In addition, the joint surfaces where these bones touch are covered in cartilage, which provides cushioning. Another membrane releases a fluid that lubricates the knee as well. When one or more of these compartments fail to function normally due to a disease such as osteoarthritis, then pain, muscle weakness and reduced functioning may result.

Active people who want to remain active often experience great results with a partial knee replacement. Candidates must have a healthy patella femoral compartment (front of the knee), a good lateral compartment (outside of the knee) and an intact anterior cruciate ligament (ACL), a knee-stabilizing ligament. The recovery is faster; and the outcome and the results are as good, if not better, than a whole knee replacement. In addition, it's more functional. With the passage of time, if the partial replacement fails, the patient is still a candidate for a total knee replacement, if necessary.

WHO QUALIFIES?

Wear and tear, old sports injuries or any injury to the joint surface creates grounds for a partial knee replacement. A possible candidate includes a person with knee pain who has been through the normal routine of anti-inflammatory medications, cortisone injections, injections of visco-supplementary materials (injections of anti-inflammatories such as hyaluronic acid and derivatives that reduce friction) and who has not responded to any of them. Often, a patient may begin to look bow-legged due to the damage to one part of the joint.

An MRI shows damage primarily in the medial, or inner, compartment of the knee. Replacing the medial compartment is the most common procedure and the one that works the best. The operation can be done on the lateral compartment, but the results are not as good as they are with the medial compartment. The patient may have had prior arthroscopic surgery, showing that two of the compartments are good. Pain shows up primarily on the inside of the knee, and X-rays show the medial compartment has collapsed.

When all these criteria line up, the patient is potentially an excellent candidate for a partial knee replacement. Partial knee replacement surgery can often be done on an overnight or an outpatient basis. Compared to a full-knee replacement, advantages include: less pain, faster recovery time, less time off from work and a faster return to activities. It usually takes several months for the full positive effects of the surgery to be realized, however, and it works best on physically active people who plan to continue to be active after the surgery.