New Knees Energize Younger, Active Patients

By Bruce R. Holladay, M.D.

Retirement is still years away, and you’re eager to continue the active lifestyle you’ve always enjoyed, but pain from that old high school knee injury—the one you thought was “fixed” long ago—is interfering with daily activities. Think you’re too young for a knee replacement? Think again.

Once strictly reserved for the over-60 population, total knee arthroplasty (TKA), also known as total knee replacement, is on the upswing among younger patients, says orthopaedic surgeon Bruce Holladay, M.D., who has found a niche treating such patients who yearn to get moving again. “I’ve done total knees on people in their 30s,” though this is certainly not common or desirable, he says. TKA is a major surgery, but in the appropriate circumstances it offers young people the best chance for a return to active living.

Why Total Knee Replacement?

Several factors can contribute to the need for total knee arthroplasty, including osteoarthritis/degenerative joint disease caused by genetics, and arthritis caused by the wear-and-tear of repetitive motion such as running. The most common reason for TKA in a young person, however, is post-traumatic arthritis, explains Dr. Holladay. For instance, an ACL torn on the football field 20 or 30 years ago may have caused permanent damage, even though a surgical repair seemed to fix the problem at the time. After years of activity, the knee may be consistently painful, weak and swollen.

Still, certain criteria must be met before Dr. Holladay will consider operating. Conservative treatments are tried first. “We may try a brace initially,” he explains, as well as anti-inflammatory medication (Advil, Aleve, Celebrex or Mobic). Cortisone shots or viscosupplementation (hyaluronic acid) are also explored. If pain continues, a small number of patients will be candidates for a partial (or unicompartmental) knee replacement, in which a small portion of the knee is resurfaced. However, only 5–7 percent of knee replacement patients throughout the country fit into this category, Dr. Holladay notes. The remainder of patients require replacement of all knee components—the lower ends of the femur (thigh bone), the top surface of the tibia (shin bone), and the back surface of the patella (knee cap).

Younger Patients, Unique Issue

Before replacing an active person’s knee with an artificial implant comprised of metal alloys and polyethylene plastics, Dr. Holladay must be certain that his patient fully comprehends the significance of this surgery and is willing to work for a good outcome. He insists that every patient understand the following:

• A total knee is a man-made product with a finite lifespan. “It can wear out. It’s just like a
car. The harder and faster we drive it, the quicker it is going to wear out or have problems,” Dr. Holladay says. The goal of TKA is a knee that lasts for decades, but long-term studies with younger patients are still in the works so longevity cannot be predicted. Nonetheless, consistent improvements in materials (including Trabecular Metal to assist bone growth and highly cross-linked polyethylene surfaces that reduce wear and debris, for example) are improving the odds of a longer-lasting implant.

• An implant requires care to last. Be realistic with your expectations. A total knee replacement does not have quite the same range-of-motion as a natural knee. “The worse the knee is when you go into surgery, the less motion you will get out of it,” Dr. Holladay warns. Moreover, not all activities are good for the prosthesis. High impact activities such as running should be avoided. Cycling, weight lifting, golf, even tennis may be acceptable, he says. Some patients even water ski, snow ski and hike.

• TKA surgery carries risks. Infection, sensitivity to component materials, or loosening of the prosthesis after surgery may occur. Cement is sometimes used to affix the components and this can become loose as well. Rarely, patients may still hurt even after the post-surgical period. Typically, this happens due to related soft tissue problems, i.e. scar tissue, Dr. Holladay explains.

• If you're very young and very active, you are likely to live longer than your new knee. Further surgery (revision) to replace the replacement may be needed.

Achieving the Best Outcome

A typical TKA takes about an hour, Dr. Holladay explains, and patients generally return home after a two-day hospital stay. After surgery, no mobility restrictions are necessary and weight bearing is permitted as tolerated, “which means put all of your weight on it the day you’re done with surgery,” he says. A cane, walker or crutches may be used for a short time. Some patients may transfer to an inpatient rehabilitation facility for physical therapy, but most will work with Commonwealth Orthopaedic’s physical therapists on an outpatient basis, two or three times a week for about two months.

This is where the real work happens, Dr. Holladay explains. “This is not a quick fix. It is not a magic pill or a magic potion.” Those who approach the rehabilitation process with a positive attitude and a good work ethic do very well. In fact, “90 – 95 percent of total knee patients have good to excellent results,” he says.

An athlete himself (and a surgical patient, at times), Dr. Holladay identifies with individuals who push themselves to succeed and admits that his style of surgery and recovery tends to be “aggressive.” “Nothing good comes easy,” he says. “I will fix everything as well as I can so you can push it and get better quicker.” Many of Dr. Holladay’s patients are comfortable on the golf course in three months. Most are feeling really good in 6 – 12 months.

Dr. Holladay is certified by the American Board of Orthopaedic Surgery and is a Fellow of the American Academy of Orthopaedic Surgeons. He joined Commonwealth Orthopaedic Centers in 1993. He served as team physician for the 2007 Pan American Games USA men’s and women’s basketball teams and as a USOC team physician. Locally, Dr. Holladay has worked with Highlands, Ryle and Beechwood High School sports teams and currently is a consultant for Thomas More College.