What is the MasterFit™ Knee Replacement?

There are three components of the MasterFit™ knee replacement that I have developed over the last 30 years.

1. Medial Skin Incision

The skin incision is placed on the inside of the knee. This improves the cosmetic appearance of the incision because it is under less muscle tension than the traditional knee incision placed in the middle of the knee. It also causes less skin irritation when you try to kneel after surgery.

2. Subvastus, Muscle Sparing Approach

Instead of cutting the quadriceps tendon (traditional parapatellar) or muscle splitting (midvastus), I utilize the muscle sparing, subvastus approach. Incidentally, it is the subvastus approach to the knee that has been recently trademarked and advertised as the Jiffy knee, even though it has been around since 1929 and was popularized in the western United States in the early 1980's. I have been using this approach routinely for over 25 years. It has allowed my patients to experience less pain and a faster recovery in the early postoperative period.

3. Custom Fit Using Computer Assistance

I utilize some type of computer assistance for planning the fit of the implant to your bone. I performed the first FDA approved navigated knee replacement in the early 2000's, brought the first robot to Ohio in 2007, helped develop custom cutting guides in the 2010s, and helped develop and validate two other robotic systems in the last 5 years. I also began using fully custom knee devices over a decade ago. Currently, I generally use either custom cutting guides or fully custom implants in most patients depending on your specific implant needs. Customizing the fit of the implant to your bone allows me to avoid cutting your ligaments to correct your arthritis and leads to a more natural feeling knee replacement with a quicker recovery and less pain from surgery.

It's these three components: medial incision, muscle sparing, and custom fit that distinguish the MasterFit™ from more traditional approaches to knee replacement surgery.

- Dr. Michael Swank