

Making a Woman Feel Whole Again

A mastectomy often leaves scars on a woman's psyche as well as on her body. Fortunately, Jonathan Keith, a professor of surgery, performs a new breast reconstruction procedure—to pleasing aesthetic and psychological effect.

Debra Francke remembers taking a first look at her mastectomy incisions a few days after surgery. "Seeing myself without breasts was devastating, one of the lowest moments of my life," she says. But she realized this reality was one of many steps she was taking in her determination to beat cancer. Good fortune came her way when she crossed paths with microsurgeon Jonathan Keith. He's one of an elite group of plastic surgeons performing the deep inferior epigastric perforator (DIEP) flap procedure, which uses a patient's abdominal tissue to reconstruct breasts following mastectomy.

Keith is the first surgeon to successfully perform this procedure at Robert Wood Johnson University Hospital in New Brunswick. He became an assistant professor of surgery in 2013 at New Jersey Medical School (NJMS), where he's an integral part of the school's breast reconstruction program, which operates primarily at University Hospital in Newark. He's also an assistant professor of surgery at Robert Wood Johnson Medical School.

In June 2014 Francke, a mother of three who lives in Carteret, New Jersey, went for a checkup and mammogram, which revealed two six-centimeter lumps in her right breast. She went to see Deborah Toppmeyer, chief medical officer and director of both



Jonathan Keith is an assistant professor of surgery at New Jersey Medical School and Robert Wood Johnson Medical School, both part of Rutgers Biomedical and Health Sciences.

the LIFE Center and the Stacy Goldstein Breast Cancer Center at Rutgers Cancer Institute of New Jersey, and surgical oncologist Laurie Kirstein, who performed the biopsy. The tumors were malignant, requiring immediate treatment.

"The diagnosis was a shock," says Francke. "I felt no lump, nothing."

However, there was family history to consider: her mother and aunt had developed breast cancer. There was also the results of genetic testing, leading to Francke's decision to undergo a double mastectomy. There are two options for women who choose breast reconstruction: implant or flap transfer. The implant, made of saline or silicone, is

by far the more common choice.

"I believe DIEP flap surgery is best for patients," says Keith. "You can create a breast that looks and feels natural and is true to its aesthetic." He does offer his patients, however, a choice between flap surgery and implants, adding that thin women may not be able to have DIEP flap surgery because

some abdominal fat is required.

Some women forgo reconstruction altogether, but Francke wanted it. "Without breasts, I didn't feel whole," she says. "My mother didn't have reconstruction, and she always regretted it."

Francke had been informed by Kirstein that Keith performed an all-natural reconstruction. "I didn't want implants or anything foreign in my body," says Francke. "I had great confidence in Dr. Keith and didn't mind being his first patient. It felt good to set the stage for others."

She was in good hands—Keith had trained with the best of the best. Following a plastic surgery residency and fellowship at the University of

a DIEP procedure on Monday; patients typically go home on Friday.

Keith's team includes his partner and fellow microsurgeon Edward Lee, who is the director of the plastic surgery residency program at NJMS and who also trained at Pittsburgh. Their work is not limited to breast reconstruction. "Microsurgery enables us to operate on tiny structures to restore function to people impaired by trauma, cancer, congenital abnormalities, and other problems," Keith says. "It's a great feeling to be able to help these patients."

In the case of Francke, she had been prescribed 20 weeks of chemotherapy to shrink the tumors, underwent a mastectomy procedure in February 2015, and then had reconstructive surgery

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Pittsburgh, he received the Stephen S. Kroll Fellowship in microsurgery at Ghent University Hospital in Belgium. It was an invitation to train under renowned surgeon Phillip Blondeel, who pioneered DIEP flap surgery.

Tissue transfer requires microsurgery: operating on blood vessels and nerves with a microscope and special instruments. Before surgery, CT scans determine the location of perforators, the blood vessels that are vital in keeping transferred tissue alive. The 12-hour procedure is considerably longer than reconstruction with implants. Skin, tissue, and blood vessels from the lower abdomen are moved to the chest and contoured to create breasts. Keith does

five months later. "I was nervous about being under anesthesia for so long but I did fine, thanks to the skill of the surgical team," she says. Her daughter and a visiting nurse helped her through the first weeks, which were painful "but absolutely worth it." In January 2016 she returned for an outpatient procedure to create nipples. Skin from the new breasts was cut and folded like an origami figure. In a final step, the areola and nipple were tattooed.

"My breasts look and feel natural, just like they were before. My stomach is flatter, too," she says. "My cancer is gone and I feel whole again. Life is good."

— Mary Ann Littell