

Lotus vs. Implants



Many patients, and some plastic surgeons, have been dissatisfied with the long term results of breast surgery using silicone implants. This has led to the use of fat transplantation to the breast for both reconstructive and cosmetic breast surgery. For many patients this has been a great option, however, some patients have required multiple fat grafting procedures to achieve the size they desire, or don't have enough body fat for fat transfer. Doctors and scientist have turned to "tissue engineering" fat as a solution. Scientists around the world have used a tissue engineering chamber technique for the last 9 years. In a recent article found in the 70th Anniversary of *Plastic and Reconstructive Surgery*, scientists discovered they were able to generate large volumes of adipose tissue (fat) in animals. In the study, they created a surgical space on a rabbit's back, by lifting the skin and inserting a plastic dome chamber with perforated holes. A blood supply with a small amount of fatty tissue attached to the blood vessel, was inserted into the chamber. At the end of the study, scientists re-operated and found that the chamber was filled with well-perfused adipose tissue. The idea of "transplanting your own fat" is widely accepted in the science and medical industry; however, many people are searching for ways to stimulate a patient's body to engineer a its own fat. Over the past year and a half, Dr.Rehnke has been working on bio-engineering fat tissue for his breast reconstruction and breast augmentation cases. He has created a structure he makes, out of an absorb-able polyester mesh fabric, called a "Lotus Scaffold", because it is shaped like the lotus flower, or water lily. The Lotus acts like a supportive surface in the body for fat to grow on, just as a vine grows on a lattice in the garden. It also takes the tissue engineering chamber concept, and lines up multiple small chambers, or Lotus petals, in a circular structure slightly smaller than a breast implant. The Lotus is made out of P4HB (poly-4-hydroxybutyrate), and is bio absorb-able and eliminated naturally in the body.