



**Medical
Blueprints**

NATURAL BREAST RECONSTRUCTION: AN ALTERNATIVE TO IMPLANTS REPORT #2754

BACKGROUND: Breast cancer refers to a malignant tumor that has developed from cells in the breast. It usually begins in the cells of the lobules, which are the milk-producing glands, or the ducts, which are the passages that drain milk. Cancer cells can invade nearby healthy breast tissue and make their way into the underarm lymph nodes. If they get into the lymph nodes, they have a pathway into other parts of the body. The stage of breast cancer refers to how far the cancer cells have spread beyond the original tumor. Besides skin cancer, breast cancer is the most commonly diagnosed cancer among American women. It is currently estimated that about 30% of newly diagnosed cancers in women will be breast cancers. About 5-10% of breast cancers can be linked to known gene mutations inherited from one's mother or father, whereas, about 85% of breast cancers occur in women who have no family history of breast cancer. These occur due to genetic mutations that happen as a result of the aging process and life in general, rather than inherited mutations. (Source: https://www.breastcancer.org/symptoms/understand_bc/what_is_bc and https://www.breastcancer.org/symptoms/understand_bc/statistics)

NATURAL RECONSTRUCTION: BENEFITS AND RISKS: Autologous fat transfer, or fat grafting, is emerging as a new breast reconstruction technique. Fat tissue is removed from your thighs, belly, and buttocks by liposuction and then processed into liquid and injected into the breast area to recreate the breast. The fat injected into the breast area may be reabsorbed by the body over time and lose some volume. Depending on the size you want your reconstructed breast to be, multiple fat grafting procedures may have to be done over a period of months. Because it doesn't involve major surgery, many think fat grafting is a safer procedure. However, there have been no large clinical studies done on the procedure. Christopher Reid, MD, UC San Diego Health, says, "For the DIEP flap reconstruction, there are two operative sites, so recovery is a bit longer, more on the order of 1-2 weeks. My patients do not even need to take narcotics because of our advance protocols and techniques. Many implant patients, 15-30%, come back within one to two months from surgery and have to go to OR for removal of infected implant. That is not the case for flaps." (Source: <https://www.breastcancer.org/treatment/surgery/reconstruction/types/autologous/fat-grafting>)

NEW BREAST REDUCTION TECHNIQUE: Research led by Frank Lau, MD, Assistant Professor of Clinical Surgery at LSU Health New Orleans School of Medicine, found that long-term breast reduction outcomes can be improved by using techniques that minimally disrupt the lower breast suspensory ligaments. Dr. Lau said, "We offer an improved technique that preserves more of the critical breast anatomy. This study provides an anatomical foundation for why our technique may yield better, longer-lasting results." About 50% of patients who undergo the most commonly used breast reduction technique, experience pseudoptosis or "bottoming out" as a long-term complication. This occurs when breast tissue drops to the lower portion of the breast independent of nipple position. By measuring the sternal notch-nipple distance and the nipple-inframammary fold distance, the study found a differential rate of stretch. For every 1 cm in upper sensory ligament stretch, the lower sensory ligament length increases by 0.45 cm. "This study is one of the largest breast measurement studies ever performed," said Lau. "These results help us provide the best breast reduction outcomes to our patients." (Source: https://www.eurekalert.org/pub_releases/2017-04/lsh-tib041317.php)

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