# Breast Reshaping after Bariatric Surgery

Essay

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# إعاده تشكيل شكل الثدى بعد جراحات انقاص الوزن


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توطئة للحصول على درجة الماجستير فى الجراحة العامة

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# Introduction

Obesity is a global disease with epidemic proportion, where severe cases are associated with multiple co-morbidities which reduce the life expectancy and markedly impair the quality of life ***(Marema et al., 2011).***

Management of morbid obesity includes several modalities such as; regulation of diet, exercise and the bariatric surgery. However bariatric surgery became the most expected modality for sustained weight loss ***(Sebastian, 2008).***

Over the last decade, many bariatric surgical techniques have been developed of which the Roux-en-Y gastric bypass, adjustable gastric band, sleeve gastrectomy, and biliopanceratic diversion with duodenal switch are the most common ***(Herron and Roohipour, 2011).***

Massive weight loss (MWL) is defined as 50% or greater loss of the excess weight ***(Shrivastava et al., 2008).*** The body contour deformities that develop in morbidly obese patients following massive weight loss involve almost all areas of the body ***(Gusenoff et al., 2009).***

Plastic surgeons have been involved in removing excess tissue and in body contouring, but the massive weight loss patient presents unique challenges that require more than just the simple application of traditional techniques, because of distribution and quantity, as well as the quality of inelastic skin and fat left behind ***(Buckley, 2007).***

After massive weight loss, one of the stigmas that afflict women is the remaining breast deformity. Management of the breast following massive weight loss is done for aesthetic reasons and in order to probably manage these patients, it is crucial to understand the deformities that affect the breast In fact, the breasts become flaccid, drooping, and the upper pole is absent or flat. Striae are frequently seen due to the loss of elasticity of the skin, which presents poor or no ability to retract due to changes in the skin matrix, namely, a reduction in the dermal elastin content ***(Losken, 2010).***

Techniques that are described for breast contouring includes; Breast reduction, augmentation using either implants or local tissues of the lateral chest wall (auto-augmentation), mastopexy, that are chosen based on the

deformities that occur after massive weight loss ***(Hurwitz , 2004).***

Although many articles focused on ways to improve shape, projection, and long-term results of breast management after massive weight loss, yet no consensus was reached upon the best technique for management ***(Colwell, 2010) (Highton et al., 2012).***

# Aim of the work

The current study addresses the aesthetically undesirable effects of massive weight loss on the size, shape, and contour of the female breast and to address the different methods to restore the desirable aesthetically accepted contour of the breast.

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| | |
|---|---|
| BC | Body-Contouring surgery |
| BMI | Body Mass Index |
| DIEAP flap | Deep Inferior Epigastric Artery Perforators flap |
| ICAP flap | Intercostal Arterial Perforator flap |
| IMF | Infra-Mammary Fold |
| MWL | Massive Weight Loss |
| NAC | Nipple Areola Complex |
| TRAM flap | Transverse Rectus Abdominus Myocutaneous flap |
| TTM® chart | Toma T. MUGEA chart |

# Chapter 1

# Anatomy of the breast

A knowledge of breast anatomy is critical for understanding the advantages and disadvantages of different techniques for breast reshaping, and it is therefore critical for selecting which techniques are best suited for certain patients, minimizing vascular compromise, healing problems, and sensory changes; and maximizing preservation of function and long-term stability of the post-operative shape ***(Romrell and Bland, 2004)*.**

## General Anatomy

The adult breast sits on top of the anterior chest wall. Superiorly, the breast extends to the second intercostal space, while inferiorly it extends to the infra-mammary fold, located at the sixth or seventh intercostal space. The medial margin is at the lateral margin of the sternum, and the lateral margin sits at the mid-axillary line. The shape of the breast is not spherical, but rather than of a teardrop, with an

extension of breast tissue toward the axilla known as the tail of Spence (Figure1) ***(Sabel, 2009).***

On average, the breast is 10 to 12 cm in diameter and 5 to 7 cm thick at its center. The volume of the breast can range from 21 to 2000 ml, with an average of 400 ml. The contour and volume of the breast, however, vary greatly among individuals, and may vary from left to right ***(Romrell and Bland, 2004).***

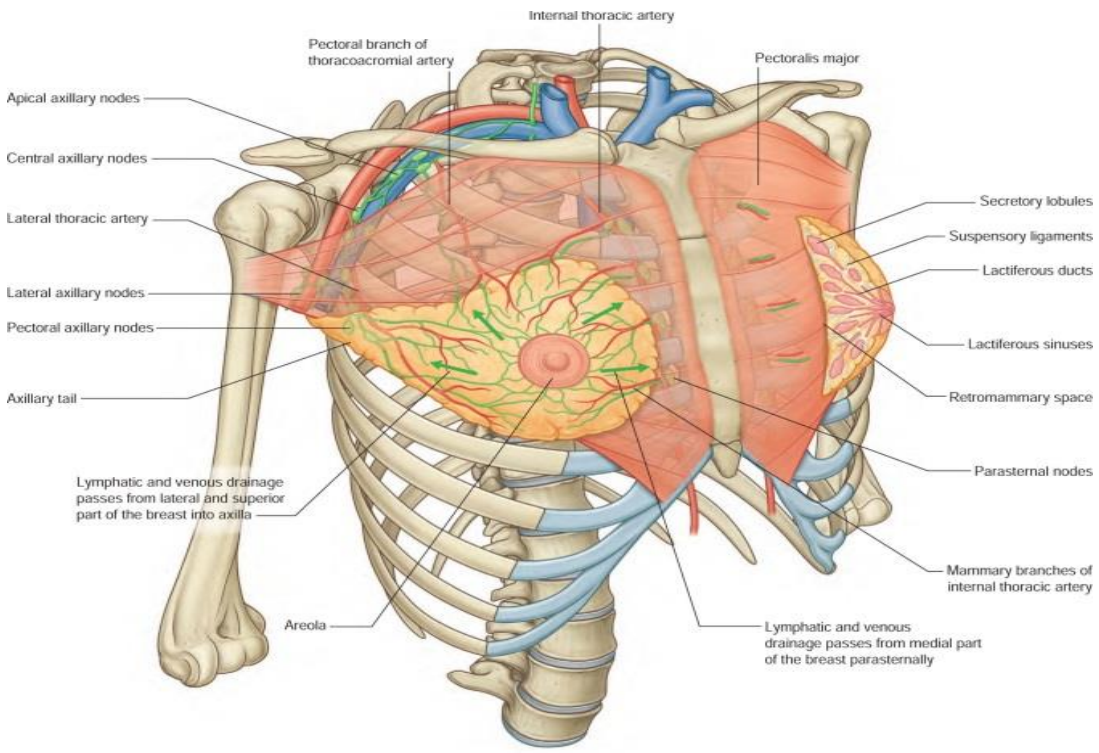


**Figure 1:** The relations of the breast ***(De la Torre and Davis, 2013).***