



# **Comparative Study between Complications of Abdominoplasty after Weight Loss by Bariatric Surgeries versus Weight Loss by Non Surgical Methods**

**Thesis**

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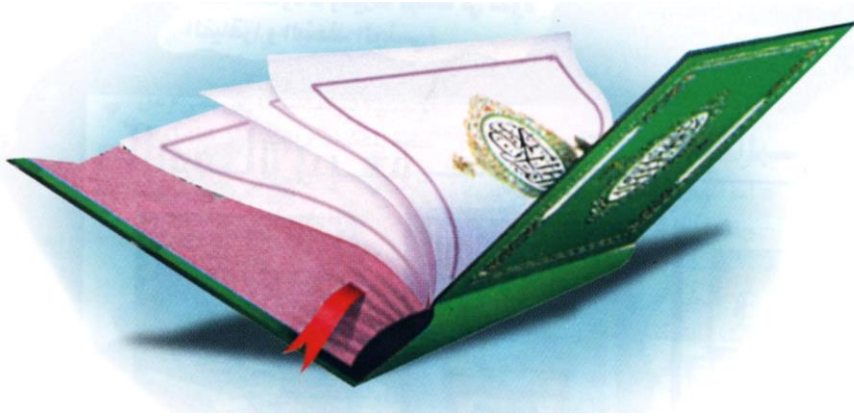
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَقُلْ اَعْمَلُوا فَسَيَرَى اللَّهُ  
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ



صدق الله العظيم

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# List of Abbreviations

Abb.	Full term
<b>AGB</b> .....	<i>Adjustable gastric banding</i>
<b>ASIS</b> .....	<i>Anterior superior iliac spine</i>
<b>BMI</b> .....	<i>Body mass index</i>
<b>BPD</b> .....	<i>Biliopancreatic diversion</i>
<b>CBC</b> .....	<i>Complete blood count</i>
<b>Cm</b> .....	<i>Centimeter</i>
<b>DIEA</b> .....	<i>Deep inferior epigastric artery</i>
<b>DM</b> .....	<i>Diabetes mellitus</i>
<b>DS</b> .....	<i>Duodenal switch</i>
<b>DSEA</b> .....	<i>Deep superior epigastric artery</i>
<b>DVT</b> .....	<i>Deep venous thrombosis</i>
<b>EML</b> .....	<i>Expected weight loss</i>
<b>GBD</b> .....	<i>Global burden disease</i>
<b>HCG</b> .....	<i>Human chorionic gonadotrophin</i>
<b>HLT</b> .....	<i>High lateral tension</i>
<b>IM</b> .....	<i>Intra-muscular</i>
<b>INR</b> .....	<i>International normalized ratio</i>
<b>IV</b> .....	<i>Intra-vascular</i>
<b>Kg</b> .....	<i>Kilogram</i>
<b>Mg</b> .....	<i>Milligram</i>
<b>MWL</b> .....	<i>Massive weight loss</i>
<b>NAFLD</b> .....	<i>Non-alcoholic fatty liver disease</i>
<b>OSA</b> .....	<i>Obstructive sleep apnea</i>

## List of Abbreviations cont...

Abb.	Full term
<i><b>PE</b></i> .....	<i>Pulmonary embolism</i>
<i><b>PT</b></i> .....	<i>Prothrombin time</i>
<i><b>PTS</b></i> .....	<i>Progressive tension sutures</i>
<i><b>PTT</b></i> .....	<i>Partial thromboplastin time</i>
<i><b>RYGP</b></i> .....	<i>Roux en-y gastric bypass</i>
<i><b>SA</b></i> .....	<i>Suction area</i>
<i><b>SAL</b></i> .....	<i>Suction assisted lipectomy</i>
<i><b>SFS</b></i> .....	<i>Scarpa's fascial system</i>
<i><b>SGOT</b></i> .....	<i>Serum glutamic oxaloacetic transaminase</i>
<i><b>SGPT</b></i> .....	<i>Serum glutamate pyruvate transaminase</i>
<i><b>SVC</b></i> .....	<i>Superior Vena Cava</i>
<i><b>VSG</b></i> .....	<i>Vertical sleeve gastrectomy</i>
<i><b>WHO</b></i> .....	<i>World health organization</i>
<i><b>WRAP</b></i> .....	<i>Wide rectus abdominal plication</i>

## INTRODUCTION

The abdomen plays a leading role in the aesthetic image of the human body, and is of prime importance in defining the overall contour of the individual (*Pitanguy & Radwanski, 2005*).

As the rates of obesity continue to rise, more patients are seeking the health benefits of weight loss by different methods. Prior to weight loss, they often desire to know what to expect for future abdominal contour. Post-weight loss, many of these patients find themselves plagued with the development of excess skin and abnormal body contour, specifically in the area of the abdomen. This skin is recognized as a displeasing consequence, resulting in dissatisfaction with personal appearance and significant desire to undergo body contouring procedures (*Valença-Filipe et al., 2015*).

The abdomen is cited as the location with the most severe deformities after weight loss and the deformities are highly variable (*Staalesen et al., 2013*).

Body contouring after massive weight loss by bariatric surgeries is also rapidly growing. Once the majority of these patients stabilize and shed greater than 50 percent of their excess weight, they are often left with loose skin and unexpected folds. In addition to contributing to the perception

Of an unattractive body, the excess skin results in physical symptoms such as pain and itching, mobility limitations, and hindrances in daily life. As a result, the desire for body contouring surgery among post-bariatric weight loss patients is very high (*Mitchell et al., 2008*).

Abdominoplasty is one of the most popular body-contouring procedures. It is among the top five procedures in aesthetic surgery. The aim of abdominoplasty is to remove the excess of skin and redundant fat in order to recreate a slim profile (*Grieco et al., 2015*).

Patient expectations of abdominoplasty include improved appearance, self-confidence, and quality of life. Abdominoplasty has shown to be successful in these regards, as well as in improving the functional status of patients (*Kitzinger et al., 2012*).

Numerous different incisions have been proposed over the years for abdominoplasty, but most surgeons prefer a mainly horizontal low abdominal incision located in or close to “bikini line” (*Holzman et al., 2015*).

In spite of the progress in the abdominoplasty techniques, it is associated with a significant number of complications. The most common complications are seroma, hematoma, infection, wound-healing problems, and skin flap

necrosis. Avoidance of these complications begins with proper choice of the patient (*Ghnnam et al., 2016*).

Seroma formation remains the most frequent complication following abdominoplasty. Seroma alone is still reported with frequencies as high as 30 percent (*Mangan0, 2011*).

Multiple risk factors has been proposed to increase the rate of complications including smoking, obesity, hypertension and previous abdominal surgery including weight-loss surgery (*Grieco et al., 2015*).

Obese patients (BMI > 30 kg/m<sup>2</sup>) have increased operative time, hospital stay, drainage duration and drainage amount leading to an increased total, major, and minor complication rate as compared with nonobese patients (BMI < 30 kg/m<sup>2</sup>). The obese patients are commonly post bariatric patients who remain obese despite prior bariatric surgery (*Ghnnam et al., 2016*).

Multiple surgical strategies have been described to lower the complication rate, such as Scarpa fascia preservation, lip0abdominoplasty, selective undermining, internal fixation techniques, use of negative pressure dressings and fibrin glue (*Valença-Filipe et al., 2015*).