

# Liposuction Assisted Abdominoplasty (LAA)

## Citation for published version (APA):

Brauman, D. (2019). *Liposuction Assisted Abdominoplasty (LAA): A Comprehensive Approach to Body Contouring*. ProefschriftMaken Maastricht. <https://doi.org/10.26481/dis.20190625db>

## Document status and date:

Published: 01/01/2019

## DOI:

[10.26481/dis.20190625db](https://doi.org/10.26481/dis.20190625db)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

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## Valorization Addendum

According to the American Society of Plastic Surgeons (ASPS), 1,790,832 aesthetic surgical procedures were performed in the US during 2017. Of these, there were 129,753 abdominoplasties, 246,354 liposuctions, and 9,075 body uplifts, Altogether 385,182 body contouring surgeries in one year. Of note, abdominoplasties more than doubled in number since 2000, when 62,713 abdominoplasties were performed.<sup>1</sup>

When assigning a value to a surgical procedure such as an abdominoplasty, it would be easy to monetize it by calculating its financial value and its contribution to the economy. Nevertheless, this would omit the considerable positive effect of such an aesthetic-reconstructive procedure on those who underwent it, despite the risks and costs. The removal of a hanging panniculus for example, improves a person's self-esteem, level of activity and day to day comfort because the discomfort, intertrigo, and backaches -helped by a tighter core are eased. Moreover, in a market-based economy it is reasonable to assume that a person who is content and has a better self-esteem would contribute by producing and consuming more. This thesis chronicled the advances made in body contouring surgery since Grazer 1973 and Grazer and Goldwyn 1977 first pointed out the safety issues in abdominoplasty and since Illouz introduced liposuction to the US in 1981.<sup>2-4</sup> Since then, the general advances in anesthesia, techniques and medical care have rendered body contouring surgery safer and its outcomes more predictable. The thesis relates the author's approach to this field and the effort to further improve the safety and effectiveness of body contouring into the future.

Obesity has reached an epidemic proportion in the western world and during a visit to Amsterdam in 2012 at the NVEPC 6th International Congress on Body Contouring, a Netherlands plastic surgeon surprised me by conveying that morbid obesity was no longer an "American problem", it has also become a problem in the Netherlands. What's more, the patient I was assigned to, turned out to be a massive weight loss patient who successfully lost weight with her Lap-Band port still in place. Obesity is a public health problem. The Center for Disease Control and Prevention (CDC) website discloses that 39% of Americans in 2015-2016 were obese, that the estimated annual medical cost of obesity in the United States was \$147 billion (in 2008), and the medical cost for people who are obese was \$1,429 higher than for normal weight adults. Morbid obesity is about 8% and the CDC considers obesity an epidemic.<sup>5</sup>

Bariatric surgery has been recognized by the National Institute of Health (NIH) to be the only effective treatment for severe obesity. Bariatric surgeries are effective in that the majority of individuals are successful in maintaining 50% or more of their excess weight loss following bariatric surgery.<sup>6</sup> However, despite the improvement in their health, sagging tissues plague those who undergo bariatric surgery and their body image issues and discomfort lead them to seek body uplift type surgeries. According to the ASPS there was a 4000% increase in body uplifts

since 2000.<sup>1</sup> A staged approach to these surgeries as a means to limit complications and untoward sequelae has been described in this thesis through classifying this surgery massive weight loss surgery.<sup>7</sup> Staging the procedures kept complications at bay and helped the understanding of the massive weight loss problem. The study of massive weight loss surgery also raised the question if pre-existing morbid obesity in it of itself, places candidates for surgery in a medically higher risk category regardless of the type of surgery planned.

According to data published on the CDC website (page last reviewed on February 5, 2018), deep vein thrombosis and pulmonary embolism (DVT/PE) is estimated to affect approximately 900,000 people in the (US, 0. 1% - 0. 2% of the population) each year, although the precise number is unknown.<sup>8,9</sup> Estimates further suggest that 60,000-100,000 Americans die premature death due to DVT/PE each year and that 10 to 30% of those diagnosed, will die within one month of diagnosis with sudden death. Sudden death is the first symptom in about 25% of people who have a PE. It is also estimated that 50% of those who have had DVT will have long-term complications as in post-phlebotic leg syndrome, that 33% will have another DVT within 10 years, and that approximately 5 to 8% of the U.S. population has a genetic risk factor for DVT originating from disorders known as inherited thrombophilias.<sup>8,9</sup>

The health care costs of DVT/PE are estimated at \$10 billion or more each year in the United States. Over half of blood clots are related to a recent hospitalization or surgery and most of these do not occur until after discharge.<sup>10-13</sup> Furthermore, despite estimates that as many as 70% of cases of hospital derived DVT/PE could be prevented, less than 50% of these patients receive adequate prevention measures.<sup>14-16</sup>

The statistics, even if half true are sobering. The CDC therefore recommends that best-practices, proven prevention tools and evidence-based education tools be “shared for partners and stakeholders”. Accordingly, it is wished that this thesis will contribute in some measure to this effort.

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