

# The Effects of High BMI on Transmasculine Chest Wall Masculinization

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## ABSTRACT

Gender dysphoria is a condition that has a significant impact on a person's long-term physical and psychological health. It is characterized by clinically significant suffering or impairment as a result of gender incongruence, including a desire to change one's primary and/or secondary sex characteristics

Gender-affirming surgery is critical for alleviating these symptoms of gender dysphoria and has been shown to improve quality of life.

Chest masculinization goals include cosmetic chest wall contouring, appropriate nipple reduction and location, and scar minimization on the chest wall. Obese patients are often rejected from this treatment due to worries that one of these four goals would be jeopardized. In contrast to having a high BMI, it was discovered that minimal incision operations, prior testosterone usage, and smoking history were all risk factors for problems that should be considered during preoperative planning. We also request that Plastic Surgery associations such as the Association of Plastic Surgeons of India and the American Society of Plastic Surgeons provide surgical guidelines.

**Keywords:** High BMI, Transmasculinization, Association of Plastic Surgeons of India, American Society of Plastic Surgeons

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Gender dysphoria is a condition that has a major impact on a person's long-term physical and psychological health and is characterized by clinically significant suffering or impairment due to gender incongruence, including a desire to modify one's primary and/or secondary sex characteristics.<sup>1</sup>

For many people, the persistent conflict between their gender identity and their physical characteristics continues to worsen their physical and mental well-being significantly. As a result, many patients choose to mask their sexual characteristics by donning tight, compression clothing. This reduces their anxiety and enables them to live more securely in their chosen identity. Binding has been demonstrated to be painful, and burdensome, and causes various gastrointestinal, respiratory, and dermatological problems.<sup>2,3</sup> Gender-affirming surgery is vital for reducing such symptoms of gender dysphoria and has been found to increase the quality of life.<sup>4,5</sup>

According to a recent poll conducted by the National Center for Transgender Equality, 97% of transmale respondents and 73% of non-binary respondents have done or planned to undergo chest masculinization.<sup>6</sup> Chest wall masculinization,

sometimes known as "top surgery," is the removal of female glandular tissue to shape the masculine chest wall. It is the most frequent, and often the initial, surgical intervention that these individuals have.<sup>7</sup> The most frequent surgical methods are periareolar "keyhole" subcutaneous resections (PAM), circumareolar mastectomies (CAM), and double incision mastectomies with free nipple grafting (DIFNG).<sup>8</sup> Literature, reports increased complication rates when performing minimally visible incision procedures, such as circumareolar/periareolar or keyhole surgery, which provide less access to control bleeding and do accurate tissue contouring.<sup>9,10</sup>

The double incision technique, with a nipple-areolar complex (NAC) graft and a long transverse scar across the chest, is the standard treatment for patients with big breasts, and it has consistently been reported to have the lowest complication rate.<sup>9,10</sup> Obesity is associated with higher breast size; obese individuals are more likely to undergo top surgery with a double incision procedure, which is the least risky strategy.<sup>8</sup> There are two categories of postoperative problems: major and minor. Major complications include fluid collection necessitating surgery, whole flap necrosis,

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and full nipple graft loss, whereas minor issues include seroma, hemorrhage, partial nipple graft loss, partial flap necrosis, and pneumothorax, among others.<sup>8</sup>

The objectives of chest masculinization include aesthetic contouring of the chest wall, optimal nipple reduction and positioning, and scar minimization on the chest wall.<sup>11</sup> Obese patients are typically excluded from this treatment due to concerns about jeopardizing one of these four goals. The apparent relationship between higher breast size with chest scarring, which was discovered in a dutch investigation, is understandably the main source of worry in chest masculinization in the obese population.<sup>11</sup>

Perez-Alvarez et al. examined the impact of demographics, comorbidities, and critical perioperative factors on outcomes (any complication, any free nipple graft (FNG) loss, aesthetic satisfaction) per patient. The only predictor that was significant for the occurrence of any complication was the age at the time of operation ( $P=0.046$ ). Body mass index was not associated with any of the outcomes of interest; however, individuals who experienced problems, FNG loss, or were dissatisfied with their aesthetic outcome had a lower BMI on average.<sup>12</sup>

In contrast to high BMI, Rothenberg KA et al found that minimal incision procedures, prior testosterone use, and a history of smoking were all risk factors for complications that should be taken into account during preoperative planning.<sup>13</sup>

A collaborative decision-making paradigm should be employed to select an operating technique and control testosterone usage, and plastic surgeons should continue to encourage patients to quit smoking before surgery. High BMI should not be a barrier to chest wall masculinization for transmasculine patients, as there is no association between high BMI and complications.<sup>13</sup> We also request Plastic Surgery societies like the Association of Plastic Surgeons of India & American Society of Plastic Surgeons to issue guidelines for the same.

## END NOTE

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**Conflict of Interest:** None declared

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