

Preoperative planning of gluteoplasty and Brazilian Butt Lift (BBL): Some considerations on the aesthetics of female buttocks

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Abstract. Modern cosmetic surgery has seen an increase in demand for gluteal enhancement procedures, reflecting an evolution in beauty standards. This paper reviews some aesthetic ideals and beauty characteristics associated with the female buttocks, examining key attributes of the buttocks that contribute to an ideal appearance, including volume, shape, and proportions. An understanding of these characteristics is essential for clinicians in aesthetic gluteal surgery to meet patient expectations and achieve visually pleasing outcomes. (www.actabiomedica.it)

Key words: ideal buttock, gluteal region, body contouring

Introduction

The perception of the “ideal” female body shape varies across cultures and has changed over time, influenced by fashion, media, and social trends (1). The female buttocks are a focal point of aesthetic appeal in many cultures, with specific attributes often associated with attractiveness (2). Surgeons aiming to achieve patient satisfaction in cosmetic gluteal surgery must be familiar with these beauty characteristics, particularly as patient preferences and cultural ideals evolve. The gluteal region has become the center of attention in cosmetic surgery with more patients seeking procedures that center on the enhancement of this area. Earlier studies have revolved around achieving the correct waist to hip ratio (3). However, a standard attractive buttock is also defined by factors such as shape, volume, projection, as well as the dimples of Venus and the infragluteal sulcus. In some cases, these peculiarities, sometimes purely geometric, often evaluated at an unconscious level, contribute to outlining an excellent result. In this paper, some of these characteristics are briefly described and discussed.

The key aesthetic principles related to the females buttocks

Volume and proportion

When discussing glutes, one of the most critical aesthetic features is volume and the proportionality to waist and hips. Waist-to-hip ratio (WHR) has been extensively researched as an anthropometric measure that is linked to health and beauty (3–4). Generally, a ratio of around 0.7 is desired which means – a slender waist compared to the hips and buttock for an hour-glass look (Figure 1). A study by Glanville et al. (5) revealed that both male and female subjects considered higher buttock volume and narrower waisted thighs more attractive which buttresses the argument of provision in gluteal aesthetics.

Shape and contour

Body, genes, muscle mass and fat distribution aside, all those factors have to vary in the shape of the buttocks. According to Venkatachalam et al. (6),



Figure 1. Ratio of waist (A) to hips (B), ideally equal to 0.7.

the female buttocks can be subdivided into four main shapes: round, heart-shaped, square, and V-shaped. Round and heart shapes are the most preferred. These two rounded and heart shaped features are more youthful depicting a feminine perspective, which contributes to its demand in gluteal augmentations (5). Techniques of fat grafting also known as, the Brazilian Butt Lift (BBL) have worked tremendously in achieving these shapes due to fat redistribution to enhance contour (7).

The Infragluteal fold

The Infragluteal fold or crease under the buttocks is the lower outline of the gluteal region. The length and the curve of this infragluteal fold are frequently regarded as a significant feature for aesthetics as the amount and the degree of folded tissue suggests firm and youthful texture to moderate or pronounced folds. The existence and the degree of the fold must be taken into account before embarking on surgical procedures since excess fat or laxity of this area may make the

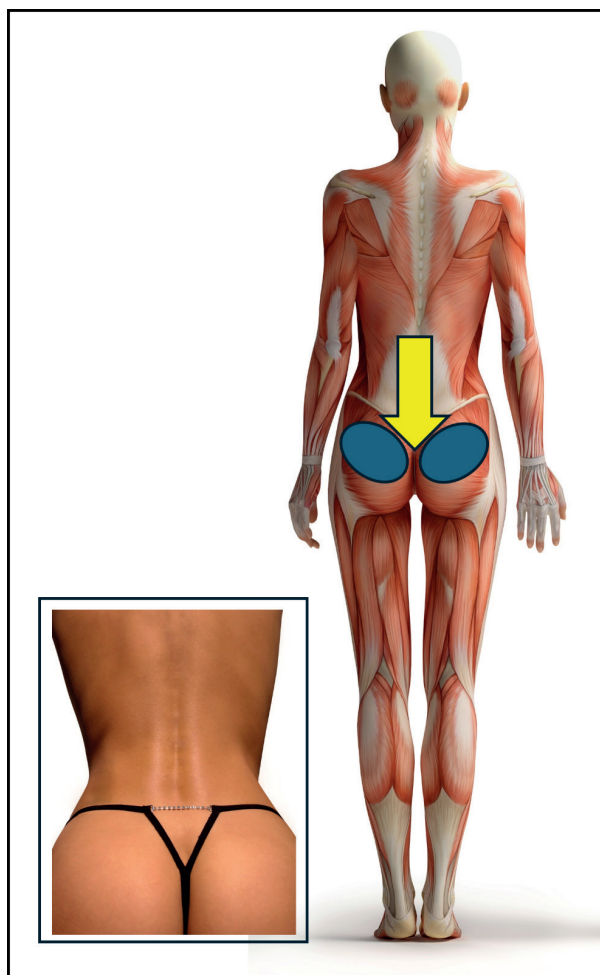


Figure 2. Liposculpture: areas to be liposuctioned are marked in yellow, and areas to be augmented with autologous adipose tissue grafts are marked in purple, to accentuate an arrow-like silhouette (see box).

definition of the fold not pronounced and may affect the aesthetic outcome. The use of a clearly delineated infragluteal fold is crucial in achieving a sculpted and lifted look in many of the cosmetic procedures. In our opinion, the ideal length of the infragluteal sulcus should vary between a third and a half of the total (Figure 2).

Venus dimples

These dimples are considered to be present in the fitness practitioners and are aesthetically pleasing regions of lower back and gluteal indentations on the

skin that are just above the buttocks in females. The dimple formation results from the ligaments being attached to the posterior superior iliac spine and these features can improve the attractiveness of a lower back and the gluteal area. While researching the aesthetics of the gluteal area, The Venus dimples, in both female and male buttocks, help to define the height and shape of the bottom. Liposculpture is among the procedures that aim to recreate these natural contours or enhance them.

Surgical implications of gluteal beauty characteristics

Improving their understanding of these aesthetic parameters is important in the framework of planning for cosmetic surgery of the buttocks. Such procedures as gluteal implants, fat grafting and liposuction are often customized to meet the patient's needs and the surrounding culture. For instance, BBL is one of the plastic surgeries that made its way into the modern outfit as it made it possible to augment the volume and shape of the buttocks, without the use of implants (7). The surgeon's caution is required here, since first of all, gluteal augmentation specifically BBL has been reported to possess high complication rates including fat embolism (8). Therefore, there is the necessity of individualizing treatment strategies in order to minimize risks and enhance results. This strategy is paramount based on the differential understanding of anatomy and the perceived beauty of an individual.

Considerations for designing optimal pre-operative planning

Rear view

In the posterior view, an ideal buttock (and surrounding structures, see the erector spinae muscles in particular) should delimit what is unconsciously interpreted as an “arrow”, which points towards the genital area (9). This desired appearance can be achieved by surgeons through a combination of fat tissue aspiration and fat grafting techniques (Figure 2). The ‘arrow’

effect can be accentuated by performing liposuction of the sacral triangle (inferior vertex) while simultaneously performing autologous medial lipofilling along the medial and distal margins of the spine. As far as the lateral profile is concerned (again, from a posterior point of view) the advice is to get as close as possible to what delimits a golden spiral inscribed in the gluteal region (Figure 3). The curve of a golden spiral is unconsciously and universally perceived as harmonious and aesthetically pleasing (10). According to this model, when determining the point of greatest lateral projection of a female buttock, it should be positioned slightly below the midpoint of the lateral arch (Figure 3-D), rather than directly at its center, as one might assume. Similarly, the lower apex of the inferior

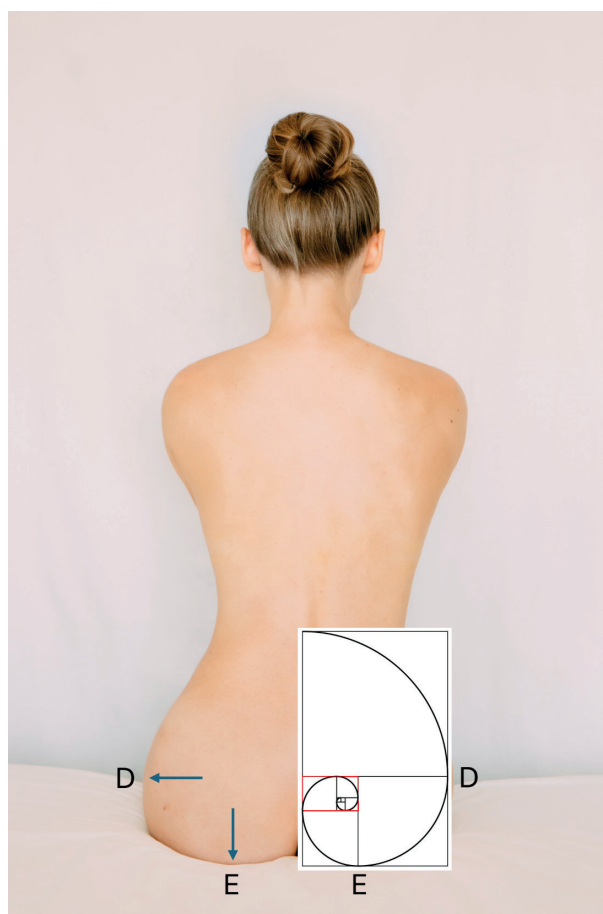


Figure 3. Superimposition of a logarithmic spiral on the buttock contours to highlight the optimal positions for the points of greatest lateral (D) and inferior (E) projection.

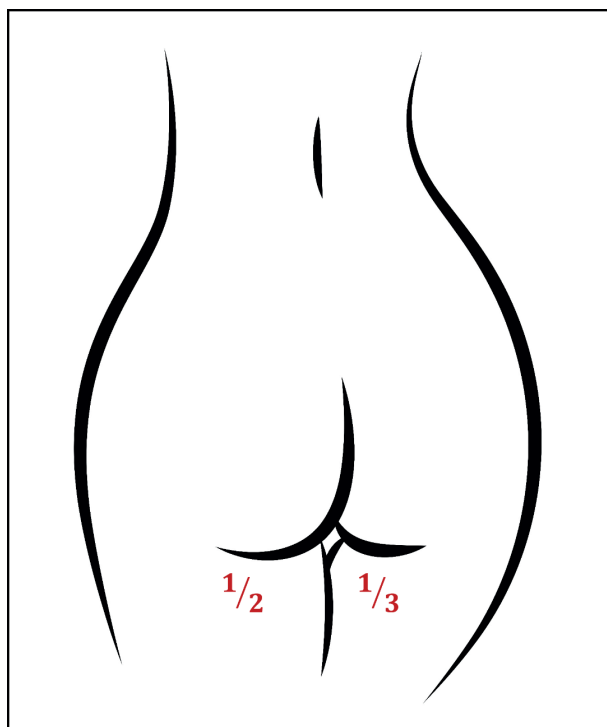


Figure 4. Ideal length of the infra-gluteal grooves, which, depending on individual preferences, should range between half (left) and one-third (right) of the total length.

gluteal semi-arch (Figure 3-E) should be positioned slightly medial to the center of the arch itself.infragluteal folds.

As for the infragluteal sulcus (11), it should, in our opinion, extend from the medial third to the medial half of the entire hypothetical inferior arch (Figure 4). Women's goal in the aesthetic modelling of the inter-gluteal region is to achieve a well-balanced shape which looks coherent with the shape and curvature of the glutei.

This part, situated along the intergluteal sulcus or cleft, is pivotal in the making of the curve at the lower back and buttocks and contributes to the overall balance of the contour of the buttocks. The sulcus should be aesthetically pleasing soft, narrow and slightly tapered at the ends along the medial contour of the gluteus muscles so that the hourglass figure looks proportional and there are no abrupt cut-outs. The refinement in this region includes fat grafting and liposuction harnessed around the upper and lower

poles of the sulcus in such a way that is harmonious with the natural muscle and the symmetry. As for the intergluteal space, in our opinion, the ideal shape to aim for is the 'diamond' shape (Figure 5). Alternatively, a wider intergluteal space (referred to as π), depending on the patient's build, can also be equally appealing (12).

Profile view

In profile view, the ideal gluteal contour is widely recognized as having an arc-like curvature: the critical point is determining where to position the maximum projection (in the lateral view). In our opinion, the point of maximum lateral projection should align with the termination of the anterior abdomino-pubic curve (Figure 6).

Using these approaches in relation to a patient's anatomy enhances the aesthetics of the buttock shaping procedures.

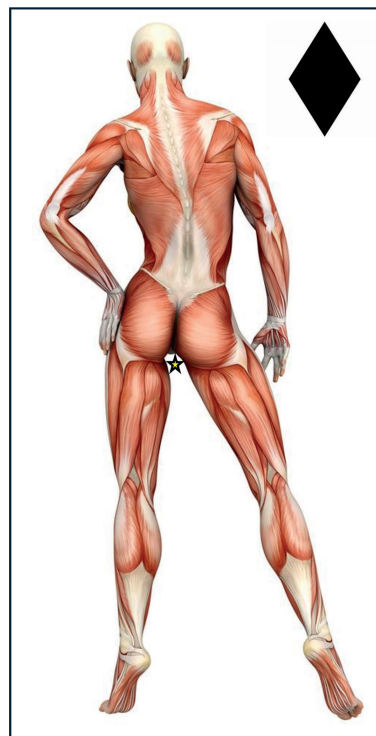


Figure 5. Infra-gluteal space at the base of the thighs (yellow star): it should ideally have a diamond shape (see top right), with varying elongation depending on body shape.

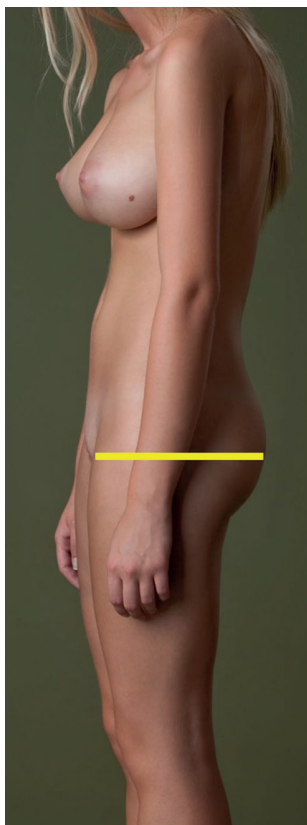


Figure 6. Profile view: The point of maximum lateral projection should ideally correspond to the lower end of the abdominopubic convexity (as shown by the yellow line).

Conclusions

The attributes of female buttocks deemed attractive in each culture are presented quite differently and are said to reflect cultural ideals, proportion and specific physical features. For the surgeons' eye, these aesthetic standards get away to reinforce strategies onto the planned surgical operations that are customized to an individual's expectations. Some measures like volume and WHR have a straight and specific threshold. Adhering to these standards, aesthetic surgeons will improve the cosmetic appeal of the gluteal enhancement procedures widening the range of satisfied patients. Different nations have had different levels of appreciation of gluteal aesthetics. Afro and Latin American cultures, for instance, historically regarded large and rounded buttocks as a symbol of

femininity, childbearing and health (3). On the other hand, Western-centric views did not change much before the late 20th century. Then, the cultural shift—driven by the media—altered this perspective. Only then did curvy women become fashionable icons. It can be observed that these changing values have resulted in increased demands for gluteal enhancement and contouring surgeries all over the globe.

In this paper, we have summarized some aesthetic and geometric considerations that, in our opinion, could facilitate preoperative planning for cosmetic surgery of the female buttocks, with the hope that they may be helpful, especially for less experienced surgeons.

Evidence based medicine level: V.

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Authors' Contribution: ER invented and described all the techniques, methodologies and models; IB wrote the manuscript

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