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FEATURES:

PRELIMINARY RESULTS USING A MAGNET-EMBEDDED COMPRESSION GARMENT AFTER LIPOSUCTION SURGERY

STATE OF THE ART IN PHALLOPLASTY

DECREASING THE RECOVERY TIME FROM BREAST AUGMENTATION: CHANGING THE MINDSET OF THE PATIENT,
THE TECHNIQUE OF THE SURGEON, AND THE POSTOPERATIVE CARE

SEAMLESS FACE-LIFT WITH APTOS THREAD: THE BELO MEDICAL GROUP EXPERIENCE

THE USE OF AUTOLOGOUS FAT TRANSPLANTATION TO REMEDY THE IATROGENIC LIPO-ATROPHIC EFFECT OF TISSUE EXPANDERS

CORRESPONDENCE: PHENOL TOXICITY IN LIGHT PHENOL CHEMOABRASION

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ORIGINAL ARTICLES

State of the Art in Phalloplasty

Alexander A. Krakovsky, MD, PhD

Introduction: After Sigmund Freud "opened the bedroom door," significant shifts in social attitudes, behaviors, and institutional regulations concerning male and female body images and the understanding of human sexuality began to occur. Today, male cosmetic genital enhancement surgery, or phalloplasty, has become the subject of recent surgical achievements that are gaining significant popularity in the United States and abroad. Appropriate methodology and surgical techniques have been developed to fulfill the demand in this field of cosmetic surgery. The objective of this study is to review the state of the art in phalloplasty and provide information about the availability of the techniques to the medical community and the public to inform them of surgical treatments that may improve unsatisfactory sexual performance, relationships, intimacy, and love by increasing the size of a man's penis.

Material and Methods: Two surgeons performed phalloplasty on 594 patients at multiple surgical facilities over a 2-year period. Phalloplasty procedures include penile lengthening, penile girth enhancement, dual augmentation (combined lengthening and girth enhancement), penile glanular enhancement, scrotal web resection, and reconstruction. The patients' own satisfaction with the results of their surgeries was analyzed by using the Penis Image Assessment Scale Questionnaire. The assessment was based upon questions related to penis size, satisfaction of sexual experiences, and the psychological perspective of patients regarding their penises before and after phalloplasty.

Results: Patient scores on the Penis Image Assessment Scale Questionnaire were higher before surgery (almost twice as high) than they were after surgery, showing an increase in patient satisfaction with penis size and performance after enhancement. Seventeen patients required subsequent surgery to treat local infection. Twenty-nine patients

experienced localized swelling 3–7 days after surgery. The results showed enormous patient satisfaction with the cosmetic surgical procedures performed.

Discussion: Penis size has always symbolized strength, virility, power, and domination in relationships. Although this subject was taboo some years ago, today many men are interested in learning about how phalloplasty may improve their self-confidence, sexual relationships, and female partners' satisfaction. Consequently, phalloplasty has acquired wide acceptance and tremendous popularity.

From the beginning of Western civilization, the penis was more than a body part; it was an idea, a conceptual yet flesh-and-blood gauge of a man's place in the world. Ideas of the penis vary from culture to culture and from one era to the next. Penis size has always symbolized strength, virility, power, domination in relationships, sexuality, intimacy, and love. This can be easily observed in the most ancient artistic pictures and sculptures. Regardless of the culture, religion, or social class, the awareness of penis size consciously or subconsciously affects many men even today.

One American statistic shows that about 2% of men have penises with dimensions that are considered inadequate for successful sexual intercourse. Historically, socially, and sexually, man's self-esteem and self-image have always been connected to the size of his penis.

Images of women that emphasize sexual characteristics, however, are more complex, with meanings related to sexuality, fertility, and religion. Female nudity is an important marker for fertility, but representations of the nude female are linked to sexual pleasure as well. Sexuality is about style, taste, play, performance, and personal preference. The lure of comely lips has been well known, and full, painted lips—seen today with the use of lipstick—have been a sexual signal for centuries.

By contrast, images of males associated with sexuality and fertility center on a single element of

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This paper was submitted as the first of 2 papers on male cosmetic genital surgery. This first paper is an introduction to what procedures are available. The second paper will describe the surgical technique.

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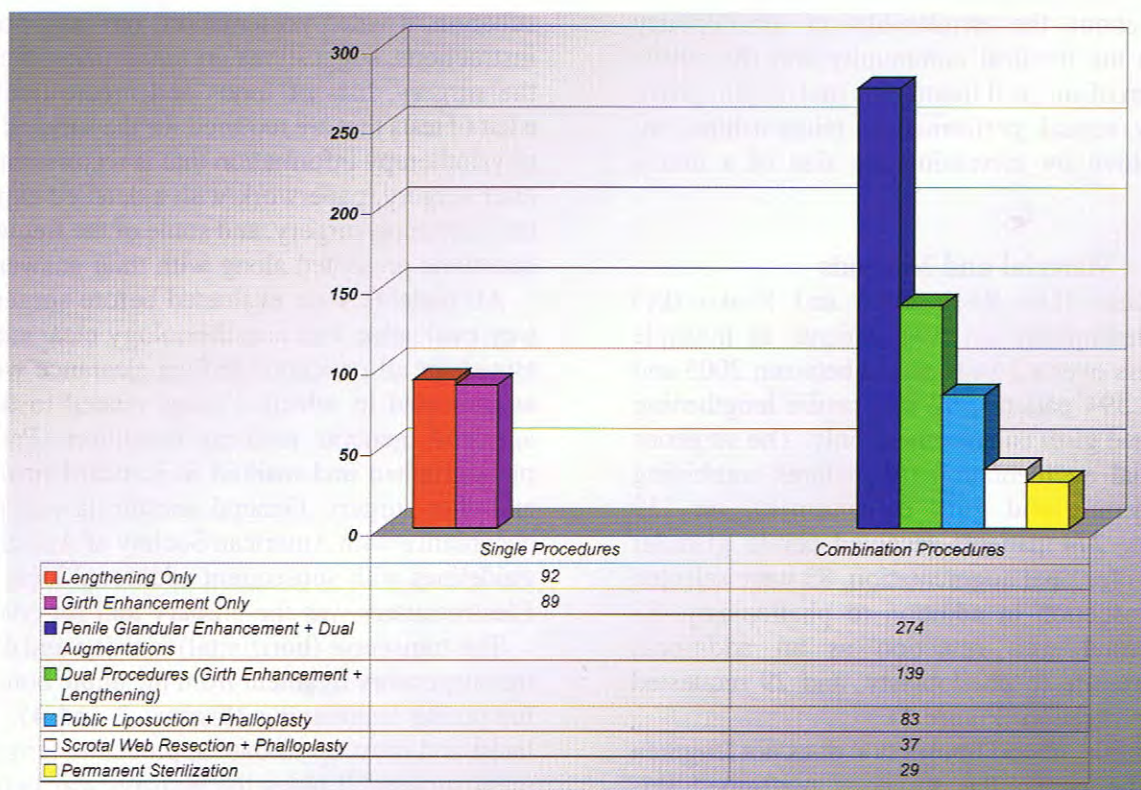


Figure 1. *Phalloplasty procedures statistics. Between 2003 and 2005, 594 patients underwent phalloplasty at multiple surgical centers. Of these, 92 had lengthening only, 89 had girth enhancement only, and 139 had procedures that combined girth enhancement with lengthening. 274 dual augmentations combined with penile glanular enhancement were performed at multiple surgery centers. Eighty-three patients received phalloplasty combined with pubic liposuction, 37 received male enhancement surgery and scrotal web resection, and 29 requested permanent sterilization.*

the male body, namely, the erect penis (phallus). For tens of thousands of years, the phallus was not only seen as a reproductive organ but was worshipped as the sacred symbol of man's creative power. Representations of the phallus were everywhere—in temples and festivals, on street corners and in front of houses, mounted on chariots in triumphal processions, and even in the wind chimes of Roman homes. Representations of gods and mortals with erect penises, as well as isolated phallic images and amulets, were common and connoted fertility, sexuality, and even comedy.

Comparing the cultural acceptability of male and female plastic and cosmetic surgery, we find that what is acceptable for female body cosmetic surgery is not acceptable in our society for male cosmetic surgery. Indeed, over the past quarter of a century, facial cosmetic surgery has increased in popularity tremendously, and female breast and buttocks aesthetic surgeries have gained worldwide acceptance. Society's acceptance of male genital cosmetic surgery has been much slower.

There is no doubt in the medical and scientific world that all human tissues have the ability to expand,

lengthen, and widen. With this knowledge, male cosmetic genital enhancement surgery, or phalloplasty, has become accepted around the world after several years of development in the United States and other countries. The American Academy of Phalloplasty Surgeons has established worldwide standards for phalloplasty and does not consider it to be an experimental procedure. Phalloplasty procedures include penile lengthening, penile girth enhancement, dual augmentation (combined lengthening and girth enhancement), penile glanular enhancement, scrotal web resection, male sterilization procedure, reconstruction of previously failed phalloplasty, and liposuction of the pubic region.

Men who wish to undergo phalloplasty request a fairly broad range of procedures, from primary lengthening to multiple procedures. Data were collected for several aspects of the operations, following the patients for subsequent sequelae. Phalloplasty was performed on patients over a 2-year period, and patient satisfaction was measured. The objective of this study is to present the results for the purpose of providing

information about the availability of phalloplasty techniques to the medical community and the public to inform them of surgical treatments that may improve unsatisfactory sexual performance, relationships, intimacy, and love by increasing the size of a man's penis.

Material and Methods

Two surgeons (Drs Rheinschild and Krakovsky) performed phalloplasty on 594 patients at multiple surgical centers over a 2-year period between 2003 and 2005. Of the 594 patients, 92 had penile lengthening only and 89 had girth enhancement only. The surgeons performed dual augmentation (procedures combining penile lengthening and girth enhancement) on 139 patients. Also, 274 patients received penile glanular enhancement plus dual augmentation, 83 were selected for pubic liposuction in addition to phalloplasty, 37 requested scrotal web resection as an additional cosmetic procedure to phalloplasty, and 29 requested permanent sterilization (Figure 1).

Although pubic mound liposuction does not lengthen or broaden the penis, the surgeons performed this procedure in addition to phalloplasty because the pubic mound may protrude and hide a significant portion of the proximal penile shaft, thus making the penis appear smaller than it is. Therefore, the pubic mound has become a common treatment area for phalloplasty. Of the 83 patients who requested pubic liposuction in addition to their phalloplasty, 22 had liposuction added to their lengthening procedure, 23 had liposuction added to their girth enhancement procedure, and 38 had liposuction added to their dual augmentation procedure.

In addition, the surgeons performed reconstructive procedures to correct previously failed phalloplasties for the 32 patients who were unsatisfied with their outcomes.

Patients' satisfaction with their bodies, specifically with their penis image, was measured by using the Penis Image Assessment Scale Questionnaire (Figure 2). The author developed this questionnaire as a tool to assist with patient selection before surgery and to measure patient satisfaction after surgery. Patient satisfaction is a primary concern with any cosmetic procedure and is very subjective. The assessment was administered before and after surgery. Scores on the assessment greater than 30 indicated the patient was a candidate for phalloplasty. Scores over 50 indicated significant dissatisfaction with penis image.

Patient education regarding the phalloplasty procedure was provided in all cases by a medical con-

sultation, a video presentation, pre- and postoperative instructions, suggestions on maximizing the success of the surgery, lists of foods and medications to avoid, a list of tests that are required for the surgical procedure, physiotherapy information that is recommended for use after surgery, paperwork with a detailed explanation of the upcoming surgery, and some of the frequently asked questions presented along with their answers

All patients were evaluated before surgery. Laboratory evaluation and anesthesiology clearance were obtained for all patients. Medical clearance was obtained as indicated in selective cases related to the patient's age and general medical condition. Patients were photographed and marked in standard position before and after surgery. General anesthesia was provided in accordance with American Society of Anesthesiologists guidelines with subsequent additional local anesthesia. Electrocautery was the primary tool for coagulation.

The transverse (horizontal) incision and dissection of the suspensory ligament from the pubic bone were used for penile lengthening (Figures 3 and 4). This is the latest and most up-to-date approach to length enhancement surgery. It hides the incision scar better than the pre-existing methods, the vertical incision, the inverted T incision, V-Y plasty, and modified V-Y plasty. When fully healed, the incision scar is almost invisible beneath the pubic hair.

For the patients who required girth enhancement, the surgeons offered 2 options: dermal autograph from the patient's own tissue or acellular dermal matrix allograft (Alloderm). Alloderm represents tissue that has been processed from donated human skin supplied from US tissue banks. The allograft skin is processed to remove epidermal and dermal cells through a patented method while preserving the remaining bioactive components and structure of the dermis. The resulting allograft serves as a framework to support cellular repopulation and vascularization. It should be noted that the Food and Drug Administration regulates Alloderm as a human tissue for transplantation, and Alloderm is processed in accordance with the Food and Drug Administration's requirements for the procurement and processing of banked human tissue. The standards and guidelines of the American Association of Tissue Banks were indicated for use for repair or replacement of damaged or inadequate integumental tissue, including gingiva.

Postoperative monitoring after general anesthesia was provided in the recovery room for a standard period of time, and all patients were discharged after surgery in stable medical condition. After adequate pain control

PENIS IMAGE ASSESSMENT

#	Question	Never 0	Sometimes-1	Often-2	Always-3
1	I don't like looking at myself nude in the mirror.				
2	I don't like to be looked at in the nude by others.				
3	I avoid participating in activities, or wearing clothes, that will show my penis size.				
4	I avoid showering/changing/using urinals in front of others.				
5	I feel ashamed of my penis.				
6	I feel ashamed of my body (penis) in the presence of others.				
7	I don't like my penis.				
8	I think my penis is too small in the flaccid (soft) state.				
9	I think my penis is too small in the erect state.				
10	I feel that other people must think my penis is unattractive.				
11	I feel that other people must think my penis is inadequate.				
12	I compare my penis to others to see if they are larger than I am.				
13	I wish my penis was longer and thicker.				
14	Enjoying sex is difficult because I am self-conscious about the size of my penis.				
15	I am preoccupied with feelings of guilt about the size of my penis.				
16	I have negative and self-critical thoughts about the size and appearance of my penis.				
17	I avoid sex because of my penis.				
18	I would change my penis if I could.				
19	I feel that I am less of a man because of my penis.				
20	I think that enhancing my penis would give me added self-confidence.				

TOTALS					
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SURVEY TOTAL _____ *

I have not yet had enhancement surgery.

I have had enhancement surgery.

Date of surgery: _____

Procedure: _____

Today's date: _____

*If your survey score is 30 or higher, you are a candidate for male enhancement surgery.

Figure 2. Penis image assessment. Developed to assess a patient's feelings about the size and appearance of his penis. A survey score of 30 or higher indicates that a patient is a candidate for phalloplasty.

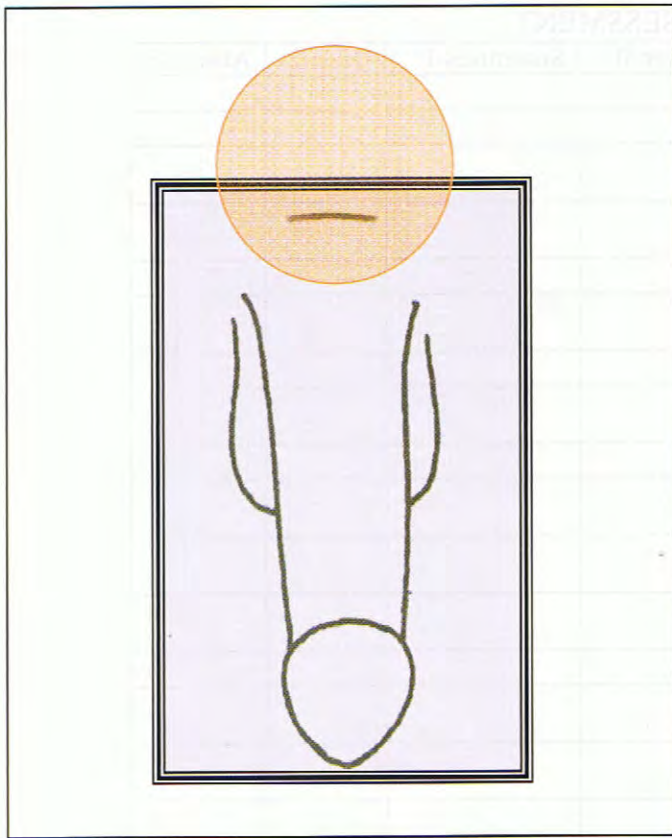


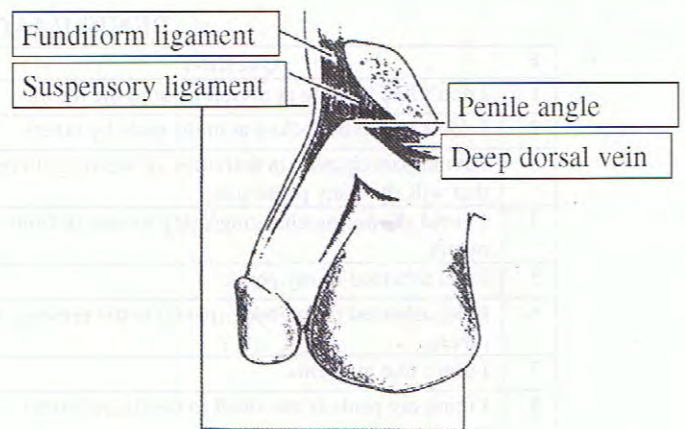
Figure 3. *The transverse incision is the latest and most up-to-date approach to length enhancement surgery. It hides the incision scar better than the 4 pre-existing methods. When fully healed, the incision scar is almost invisible beneath the pubic hair.*

and appropriate instruction, the patients were discharged from the surgical center with subsequent follow-up on a regular basis. After surgery, all patients received prescriptions for pain control for 5 days and oral antibiotics for 3 weeks. The patients were informed that they could resume sexual activities after 6 weeks, if the patients were cleared by the surgeons. Physiotherapy was started 8 weeks after surgery if the surgical healing process was complete.

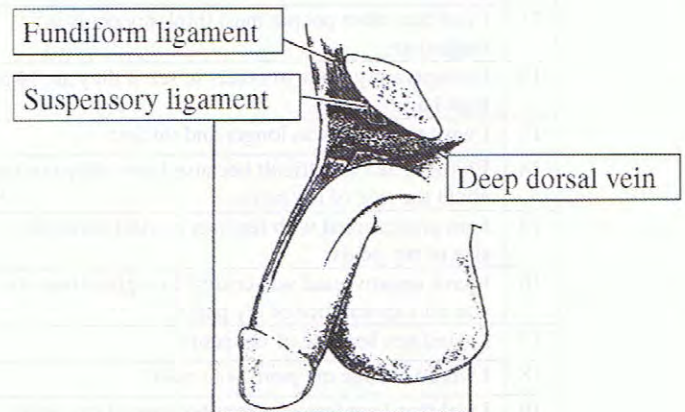
All patients were instructed to contact the surgeons or the surgical center with any questions during the first 24–72 hours and returned for reevaluation and dressing change the day after surgery. All patients were followed-up again 3 days after surgery and were discharged home after their dressings were changed.

Results

Figures 5–7 provide before-and-after photographs of the results of 3 types of enhancement surgery: dual enhancement, thickening, and lengthening. The photo-



A



B

Figure 4. *Lengthening. (A) Positioning of the fundiform and suspensory ligaments before penile enhancement. (B) Positioning of the penis after the fundiform and suspensory ligaments have been severed. Note the new length as well as positioning and penis angle.*

graphs clearly show enhancement of penile length, girth, or both. However, to analyze patient satisfaction with the results of phalloplasty, the Penis Image Assessment Scale Questionnaire was provided to each patient before and after surgery. The questionnaire contained 20 questions, where scores of 0 and 1 represented satisfaction and scores of 2 and 3 represented dissatisfaction. The questions were related to patients' self-image as it relates to penis size and represented each patient's own psychological perspective of the size of his penis. Overall, scores before surgery were greater than 50 and scores after surgery were less than 20. Most (95%) of the patients who underwent phalloplasty and participated in the post-operative survey reported great satisfaction.

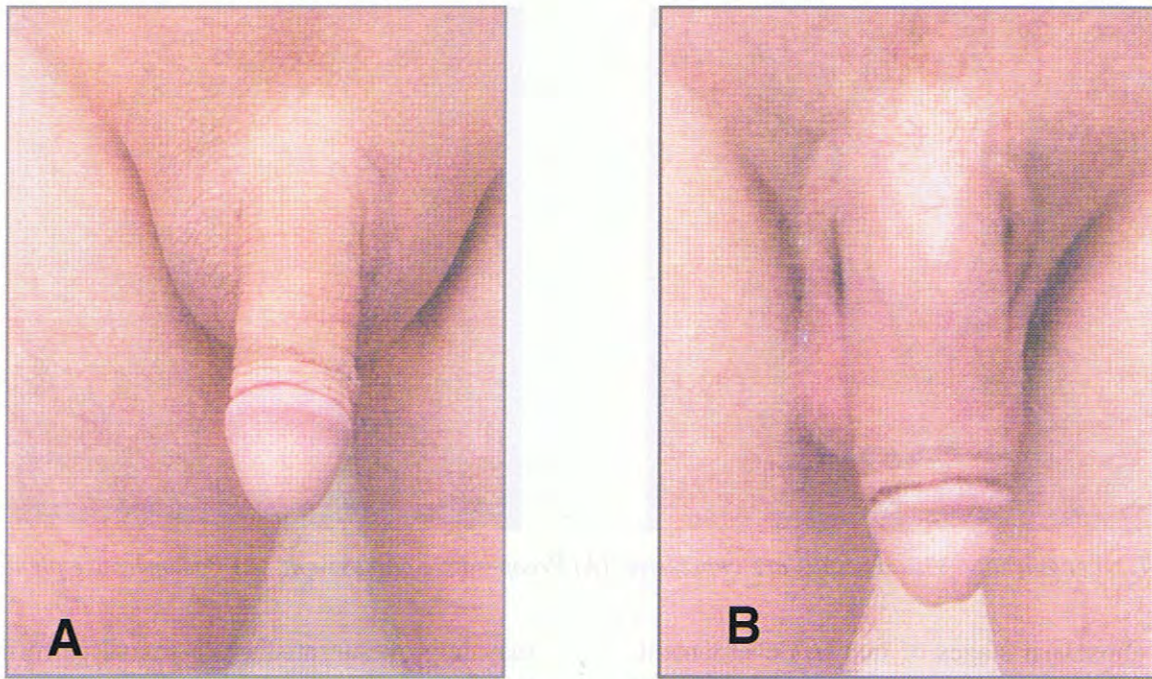


Figure 5. *Dual augmentation. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.*

Seventeen patients developed serious infections that required surgical intervention. To save the Alloderm, a drain was positioned in each of these patient's pubic area with extension into the penile shaft. Irrigation with triple antibiotic solution was applied. After 2 weeks of continuous treatment with general and local antibiotics, the infections were cured in 12 patients. These patients were successfully signed off from the treatment with instructions regarding continuity of care. In the other 5 patients, the Alloderm required removal to successfully treat the infections. Twenty-nine patients experienced localized swelling 3–7 days after surgery.

Discussion

During the past 10 years, phalloplasty has gained wide acceptance and tremendous popularity. Although this subject was taboo some years ago, today many men are interested in learning about how phalloplasty may improve their self-confidence, sexual relationships, a female partner's satisfaction, pleasure, intimacy, and love. There is little doubt that no matter how successful a man is, how much money he may have, or how powerful he may be, he must come to terms with his powerful sexual desire for women. This process often involves his perception of the size of his penis.

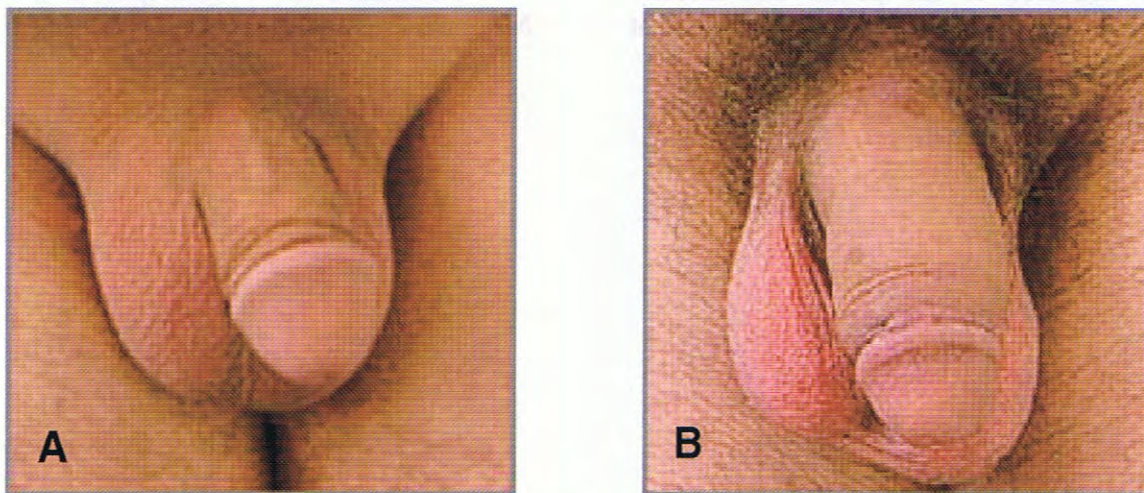


Figure 6. *Thickening. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.*

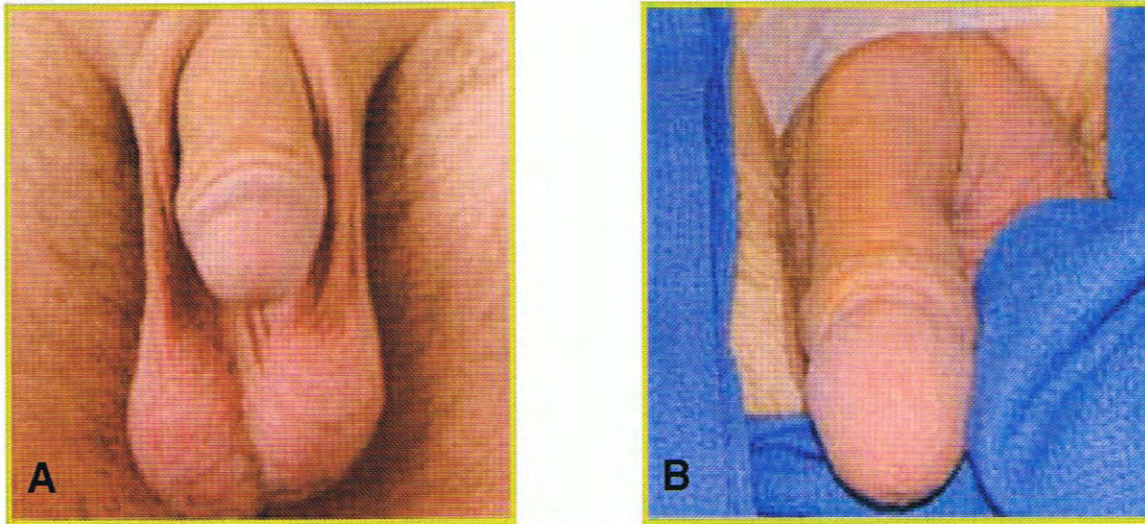


Figure 7. Lengthening. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.

In his psychosexual stages of human development, Sigmund Freud centered his analysis on the drive for sexual pleasure and the immature penis, which he considered the libidinal object of infantile sexuality in men. Many men are proud or ashamed of their penis size, shape, and performance. Men often experience anxiety and reduced self-confidence because of the size and functionality of their penises. Anxiety, self-confidence, and penile function directly relate to sexual performance, female satisfaction, intimacy, and love. Until recently, men had to accept whatever Mother Nature had given to them.

Today, penile enhancement is a process that is available from physicians practicing in the plastic and cosmetic surgery fields. The information about the availability of phalloplasty techniques has to be appropriately delivered to the public and medical community to inform them of surgical treatments that

may improve unsatisfactory sexual performance, relationships, intimacy, and love by increasing the size of a man's penis.

Phalloplasty surgery is a cosmetic solution for the patient who is not satisfied with the natural size of his penis. Pubic liposuction is the most recent addition to the options offered in our own phalloplasty practice.

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painted lips – seen today with the use of lipstick – have been a sexual signal for centuries.

By contrast, images of males associated with sexuality and fertility center on a single element of the male body, namely, the erect penis (phallus). For tens of thousands of years, the phallus was not only seen as a reproductive organ but was worshipped as the sacred symbol of man's creative power. Representations of the phallus were everywhere - in temples and festivals, on street corners and in front of houses, mounted on chariots in triumphal processions, and even in the wind chimes of Roman homes. Representations of gods and mortals with erect penises, as well as isolated phallic images and amulets, were common and connoted fertility, sexuality, and even comedy.

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Postoperative monitoring after general anesthesia was provided in the recovery room for a standard period of time, and all patients were discharged after surgery in stable medical condition. After adequate pain control and appropriate instruction, the patients were discharged from the surgical center with subsequent follow-up on a regular basis. After surgery, all patients received prescriptions for pain control for 5 days and oral antibiotics for 3 weeks. The patients were informed that they could resume sexual activities after 6 weeks, if the patients were cleared by the surgeons. Physiotherapy was started 8 weeks after surgery if the surgical healing process was complete.

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Results

Figures 5-7 provide before-and-after photographs of the results of 3 types of enhancement surgery: dual enhancement, thickening, and lengthening. The photographs clearly show enhancement of penile length, girth, or both. However, to analyze patient satisfaction with the results of phalloplasty, the Penis Image Assessment Scale Questionnaire was provided to each patient before and after surgery. The questionnaire contained 20 questions, where scores of 0 and 1 represented satisfaction and scores of 2 and 3 represented dissatisfaction. The questions were related to patients' self-image as it relates to penis size and represented each patient's own psychological perspective of the size of his penis. Overall, scores before surgery were greater than 50 and scores after surgery were less than 20. Most (95%) of the patients who underwent phalloplasty and participated in the post-operative survey reported great satisfaction.

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In his psychosexual stages of human development, Sigmund Freud centered his analysis on the drive for sexual pleasure and the immature penis, which he considered the libidinal object of infantile sexuality in men. Many men are proud or ashamed of their penis size, shape, and performance. Men often experience anxiety and reduced self-confidence because of the size and functionality of their penises. Anxiety, self-confidence, and penile function directly relate to sexual performance, female satisfaction, intimacy, and love. Until recently, men had to accept whatever Mother Nature had given to them.

Today, penile enhancement is a process that is available from physicians practicing in the plastic and cosmetic surgery fields. The information about the availability of phalloplasty techniques has to be appropriately delivered to the public and medical community to inform them of surgical treatments that may improve unsatisfactory sexual performance, relationships, intimacy, and love by increasing the size of a man's penis.

Phalloplasty surgery is a cosmetic solution for the patient who is not satisfied with the natural size of his penis. Pubic liposuction is the most recent addition to the options offered in our own phalloplasty practice.

Penis Image Assessment

Never 0

Sometimes-1

Often-2

Always-3

1. I don't like looking at myself nude in the mirror.
2. I don't like to be looked at in the nude by others.
3. I avoid participating in activities, or wearing clothes, that will show my penis size.
4. I avoid showering/changing/using urinals in front of others.
5. I feel ashamed of my penis.
6. I feel ashamed of my body (penis) in the presence of others.
7. I don't like my penis.
8. I think my penis is too small in the flaccid (soft) state.
9. I think my penis is too small in the erect state.
10. I feel that other people must think my penis is unattractive.
11. I feel that other people must think my penis is inadequate.
12. I compare my penis to others to see if they are larger than I am.
13. I wish my penis was longer and thicker.
14. Enjoying sex is difficult because I am self-conscious about the size of my penis.
15. I am preoccupied with feelings of guilt about the size of my penis.
16. I have negative and self-critical thoughts about the size and appearance of my penis.
17. I avoid sex because of my penis.
18. I would change my penis if I could.
19. I feel that I am less of a man because of my penis.
20. I think that enhancing my penis would give me added self-confidence.

Survey Total

I have not yet had enhancement surgery.

I have had enhancement surgery.

Date of surgery:

Procedure:

Today's date:

If your survey score is 30 or higher, you are a candidate for male enhancement surgery.

Figure 1. Phalloplasty procedures statistics. Between 2003 and 2005, 594 patients underwent phalloplasty at multiple surgical centers. Of these, 92 had lengthening only, 89 had girth enhancement only, and 139 had procedures that combined girth enhancement with lengthening. 274 dual augmentations combined with penile glanular enhancement were performed at multiple surgery centers. Eighty-three patients received phalloplasty combined with pubic liposuction, 37 received male enhancement surgery and scrotal web resection, and 29 requested permanent sterilization.

Figure 2. Penis image assessment. Developed to assess a patient's feelings about the size and appearance of his penis. A survey score of 30 or higher indicates that a patient is a candidate for phalloplasty.

Figure 3. The transverse incision is the latest and most up-to-date approach to length enhancement surgery. It hides the incision scar better than the 4 pre-existing methods. When fully healed, the incision scar is almost invisible beneath the pubic hair.

Figure 4. Lengthening. (A) Positioning of the fundiform and suspensory ligaments before penile enhancement. (B) Positioning of the penis after the fundiform and suspensory ligaments have been severed. Note the new length as well as positioning and penis angle.

Figure 5. Dual augmentation. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.

Figure 6. Thickening. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.

Figure 7. Lengthening. Visual results are impressive. (A) Preoperative photograph. (B) Postoperative photograph.

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