Reduction Mammoplasty AHM

Clinical Indications

- Breast reduction surgery is considered medically necessary for non-cosmetic indications. The condition not only must be unresponsive to dermatological treatments (e.g., antibiotics or antifungal therapy) and conservative measures (e.g., good skin hygiene, adequate nutrition) for a period of six months or longer, women must be aged 18 or older or for whom growth is complete and 1 or more of the following criteria is met. Reduction mammoplasty for asymptomatic patients is considered cosmetic.
- Macromastia is documented - ALL of the following are required
  - Patient has persistent symptoms in at least 2 or more of the following anatomical body areas below, affecting daily activities for at least one year
    - Headaches
    - Pain in neck
    - Pain in shoulders
    - Pain in upper back
    - Painful kyphosis documented by X-rays
    - Pain/discomfort/ulceration from bra straps cutting into shoulders
  - ALL of the following criteria are met
    - Photographic documentation confirms severe breast hypertrophy
    - Patient has undergone an evaluation by a physician who has determined that ALL of the following criteria are met:
      - There is a reasonable likelihood that the member's symptoms are primarily due to macromastia
      - Reduction mammoplasty is likely to result in improvement of the chronic pain
      - Pain symptoms persist as documented by the physician despite at least a 3-month trial of therapeutic measures such as ALL of the following
        - Analgesic/non-steroidal anti-inflammatory drugs (NSAIDs) interventions
        - Physical therapy/exercises/posturing maneuvers
        - Supportive devices (e.g., proper bra support, wide bra straps)
- Women 40 years of age or older are required to have a mammogram that was negative for cancer performed within the year prior to the date of the planned reduction mammoplasty.

- The surgeon estimates that at least 1 or more of the following amounts (in grams) of breast tissue, not fatty tissue, will be removed from each breast, based on the patient's body surface:
  - BSA is equal to 1.40 m\(^2\) and minimum weight of tissue to be removed per breast is 324.3 gms
  - BSA is equal to 1.41 m\(^2\) and minimum weight of tissue to be removed per breast is 330 gms
  - BSA is equal to 1.42 m\(^2\) and minimum weight of tissue to be removed per breast is 335 gms
  - BSA is equal to 1.43 m\(^2\) and minimum weight of tissue to be removed per breast is 340 gms
  - BSA is equal to 1.44 m\(^2\) and minimum weight of tissue to be removed per breast is 350 gms
  - BSA is equal to 1.45 m\(^2\) and minimum weight of tissue to be removed per breast is 355 gms
  - BSA is equal to 1.46 m\(^2\) and minimum weight of tissue to be removed per breast is 360 gms
  - BSA is equal to 1.47 m\(^2\) and minimum weight of tissue to be removed per breast is 365 gms
  - BSA is equal to 1.48 m\(^2\) and minimum weight of tissue to be removed per breast is 375 gms
  - BSA is equal to 1.49 m\(^2\) and minimum weight of tissue to be removed per breast is 380 gms
  - BSA is equal to 1.50 m\(^2\) and minimum weight of tissue to be removed per breast is 385 gms
  - BSA is equal to 1.51 m\(^2\) and minimum weight of tissue to be removed per breast is 395 gms
  - BSA is equal to 1.52 m\(^2\) and minimum weight of tissue to be removed per breast is 400 gms
  - BSA is equal to 1.53 m\(^2\) and minimum weight of tissue to be removed per breast is 405 gms
  - BSA is equal to 1.54 m\(^2\) and minimum weight of tissue to be removed per breast is 415 gms
  - BSA is equal to 1.55 m\(^2\) and minimum weight of tissue to be removed per breast is 420 gms
• BSA is equal to 1.56 m² and minimum weight of tissue to be removed per breast is 430 gms
• BSA is equal to 1.57 m² and minimum weight of tissue to be removed per breast is 435 gms
• BSA is equal to 1.58 m² and minimum weight of tissue to be removed per breast is 445 gms
• BSA is equal to 1.59 m² and minimum weight of tissue to be removed per breast is 455 gms
• BSA is equal to 1.60 m² and minimum weight of tissue to be removed per breast is 460 gms
• BSA is equal to 1.61 m² and minimum weight of tissue to be removed per breast is 470 gms
• BSA is equal to 1.62 m² and minimum weight of tissue to be removed per breast is 480 gms
• BSA is equal to 1.63 m² and minimum weight of tissue to be removed per breast is 485 gms
• BSA is equal to 1.64 m² and minimum weight of tissue to be removed per breast is 495 gms
• BSA is equal to 1.64 m² and minimum weight of tissue to be removed per breast is 495 gms
• BSA is equal to 1.65 m² and minimum weight of tissue to be removed per breast is 505 gms
• BSA is equal to 1.66 m² and minimum weight of tissue to be removed per breast is 510 gms
• BSA is equal to 1.67 m² and minimum weight of tissue to be removed per breast is 520 gms
• BSA is equal to 1.68 m² and minimum weight of tissue to be removed per breast is 530 gms
• BSA is equal to 1.69 m² and minimum weight of tissue to be removed per breast is 540 gms
• BSA is equal to 1.70 m² and minimum weight of tissue to be removed per breast is 550 gms
• BSA is equal to 1.71 m² and minimum weight of tissue to be removed per breast is 560 gms
• BSA is equal to 1.72 m² and minimum weight of tissue to be removed per breast is 570 gms
• BSA is equal to 1.73 m² and minimum weight of tissue to be removed per breast is 580 gms
• BSA is equal to 1.74 m² and minimum weight of tissue to be removed per breast is 590 gms
• BSA is equal to 1.75 m² and minimum weight of tissue to be removed per breast is 600 gms
• BSA is equal to 1.76 m² and minimum weight of tissue to be removed per breast is 610 gms
• BSA is equal to 1.77 m² and minimum weight of tissue to be removed per breast is 620 gms
• BSA is equal to 1.78 m² and minimum weight of tissue to be removed per breast is 635 gms
• BSA is equal to 1.79 m² and minimum weight of tissue to be removed per breast is 645 gms
• BSA is equal to 1.80 m² and minimum weight of tissue to be removed per breast is 655 gms
• BSA is equal to 1.81 m² and minimum weight of tissue to be removed per breast is 665 gms
• BSA is equal to 1.82 m² and minimum weight of tissue to be removed per breast is 680 gms
• BSA is equal to 1.83 m² and minimum weight of tissue to be removed per breast is 690 gms
• BSA is equal to 1.84 m² and minimum weight of tissue to be removed per breast is 705 gms
• BSA is equal to 1.85 m² and minimum weight of tissue to be removed per breast is 715 gms
• BSA is equal to 1.86 m² and minimum weight of tissue to be removed per breast is 730 gms
• BSA is equal to 1.87 m² and minimum weight of tissue to be removed per breast is 740 gms
• BSA is equal to 1.88 m² and minimum weight of tissue to be removed per breast is 755 gms
• BSA is equal to 1.89 m² and minimum weight of tissue to be removed per breast is 770 gms
• BSA is equal to 1.90 m² and minimum weight of tissue to be removed per breast is 780 gms
• BSA is equal to 1.91 m² and minimum weight of tissue to be removed per breast is 795 gms
• BSA is equal to 1.92 m² and minimum weight of tissue to be removed per breast is 810 gms
• BSA is equal to 1.93 m² and minimum weight of tissue to be removed per breast is 825 gms
• BSA is equal to 1.94 m² and minimum weight of tissue to be removed per breast is 840 gms
• BSA is equal to 1.95 m² and minimum weight of tissue to be removed per breast is 855 gms
• BSA is equal to 1.96 m² and minimum weight of tissue to be removed per breast is 870 gms
• BSA is equal to 1.97 m² and minimum weight of tissue to be removed per breast is 885 gms
• BSA is equal to 1.98 m² and minimum weight of tissue to be removed per breast is 900 gms
• BSA is equal to 1.99 m² and minimum weight of tissue to be removed per breast is 915 gms
• BSA is equal to 2.00 m² and minimum weight of tissue to be removed per breast is 935 gms
• BSA is equal to 2.01 m² and minimum weight of tissue to be removed per breast is 950 gms
• BSA is equal to 2.02 m² and minimum weight of tissue to be removed per breast is 965 gms
• BSA is equal to 2.03 m² and minimum weight of tissue to be removed per breast is 985 gms
• BSA is equal to 2.04 m² or greater and minimum weight of tissue to be removed per breast is 1000 gms

• Breast reduction surgery will be considered medically necessary for women meeting the symptomatic criteria specified above, regardless of BSA, with more than 1 kg of breast tissue to be removed per breast
• The patient has gigantomastia of pregnancy accompanied by 1 or more of the following complications, and delivery is not imminent:
  ▪ Massive infection
  ▪ Significant hemorrhage
  ▪ Tissue necrosis with slough
  ▪ Ulceration of breast tissue
• Breast reduction, surgical mastectomy or liposuction for gynecomastia, either unilateral or bilateral, is considered a cosmetic surgical procedure. Medical therapy should be aimed at correcting any reversible causes (e.g., drug discontinuance). Furthermore, there is insufficient evidence that surgical removal is more effective than conservative management for pain due to gynecomastia.
Evidence Summary

Background

- Reduction mammaplasty is among the most commonly performed cosmetic procedures in the United States. Reduction mammaplasty performed solely for cosmetic indications is considered not medically necessary.
- Reduction mammaplasty has also been used for relief of pain in the back, neck and shoulders. Because reduction mammaplasty may be used for both medically necessary and cosmetic indications, the objective criteria are considered medically necessary reduction mammaplasty from cosmetic reduction mammaplasty.
- Reduction mammaplasty has been performed to relieve back and shoulder pain on the theory that reducing breast weight will relieve this pain. For pain interventions, evidence of effectiveness is necessary from well controlled, randomized prospective clinical trials assessing effects on pain, disability, and function. Well designed trials are especially important in assessing pain management interventions to isolate the contribution of the intervention from placebo effects, the effects of other concurrently administered pain management interventions, and the natural history of the medical condition. Because of their inherently subjective nature, pain symptoms are especially prone to placebo effects.
- In the case of reduction mammaplasty for relief of back, neck and shoulder pain, this procedure medically is considered necessary in women with excessively large breasts because it seems logical, even in the absence of firm clinical trial evidence, that this excessive weight would contribute to back and shoulder pain, and that removal of this excessive breast tissue would provide substantial pain relief, reductions in disability, and improvements in function.
- The goal of medically necessary breast reduction surgery is to relieve symptoms of pain and disability. If an insufficient amount of breast tissue is removed, the surgery is less likely to be successful in relieving pain and any related symptoms from excessive breast weight (e.g., excoriations, rash).
- Some individuals, however, have argued that reduction mammaplasty may be indicated in any woman who suffers from back and shoulder pain, regardless of how small her breasts are or how little tissue is to be removed (ASPS, 2002). They have argued that removal of even a few hundred grams of breast tissue can result in substantial pain relief. These individuals cite evidence from observational studies to support this position (e.g., Chadbourne, et al., 2001; Kerrigan, et al., 2001). These studies did not find a relationship between breast weight or amount of breast tissue removed and the likelihood of response or magnitude of relief of pain after reduction mammaplasty.
- It is not intuitively obvious, however, that breast weight would substantially contribute to back, neck and shoulder pain in women with normal or small breasts. Nor is it intuitively obvious that removal of smaller amounts of breast tissue would offer significant relief of back, shoulder or neck pain.
- Criteria for reduction mammaplasty surgery from the American Society of Plastic Surgeons (ASPS, 2002) states, among other things, that breast weight or breast volume is
not a legitimate criterion upon which to distinguish cosmetic from functional indications. This conclusion is based primarily upon the Breast Reduction Assessment of Value and Outcomes (BRAVO) study, which is described in several articles (Kerrigan, et al., 2001; Kerrigan, et al., 2002; Collins, et al., 2002). There are also several earlier, smaller studies that found reductions in symptoms and improvements in quality of life after reduction mammoplasty (Glatt, et al., 1999; Bruhlmann & Tschopp, 1998; Blomqvist, et al., 2000; Behmand, et al., 2000).

• As explained below, the studies used to support the arguments for the medical necessity of breast reduction surgery are poorly controlled and therefore subject to a substantial risk of bias in the interpretation of results. Furthermore, the lack of an expected "dose-response" relationship between the amount of breast tissue removed and the magnitude of symptomatic relief in these studies raises questions about the validity of these studies and the effectiveness of breast reduction as a method of relieving shoulder and back pain.

• A study reporting on a survey of health insurer policies on breast reduction surgery (Nguyen, et al., 2004) found that no insurer medical policies could be supported by the medical literature. The authors (Nguyen, et al., 2004) argue, based primarily on the results of the ASPS-funded BRAVO study (described below), that (with a single exception) no objective criteria for breast reduction surgery are supportable, including criteria based upon the presence of particular signs or symptoms, requirements based upon breast size or the amount of breast tissue removed, any minimum age limitations, any limitation based upon maximum body weight, requirements for a trial of conservative therapy, or the exclusion of certain procedures (liposuction). The only criterion that the authors found supportable was a requirement for a preoperative mammogram for women age 40 years and older. The authors leave the reader with the conclusion that decisions about the medical necessity of breast reduction surgery in symptomatic women should be left entirely to the surgeon's discretion.

• Several important points should be considered in evaluating these challenges to insurers' criteria for breast reduction surgery. First, the opinions and guidelines of medical professional organizations and consensus groups are considered according to the quality of the scientific evidence and supporting rationale. Second, it is the burden of the proponent of an intervention to provide reliable evidence of its effectiveness, not the burden of ones who question the effectiveness an intervention to provide definitive proof of ineffectiveness. Third, reliable evidence is especially important for pain interventions, because of the waxing and waning nature of pain and the susceptibility of this symptom to placebo effects and other biases that may confound interpretation of study results. Fourth, insurers have provided coverage for reduction mammoplasty in women with excessively large breasts; thus, the debate is about the effectiveness of removal of smaller amounts of breast tissue from women whose breast size most persons would consider within the normal range.

• The authors of the BRAVO study reached several conclusions about reduction mammoplasty, most notably that breast size or the amount of breast tissue removed does not have any relationship to the outcome of breast reduction surgery (Kerrigan, et al., 2002; Collins, et al., 2002). The authors reach the remarkable conclusion that a woman with normal sized breasts who has only a few ounces of breast tissue removed is as likely
to receive as much benefit from breast reduction surgery as women with large breasts that has substantially more breast tissue removed. However, the BRAVO study is not of sufficient quality to reach reliable conclusions about the effectiveness of breast reduction surgery as a pain intervention. Although the BRAVO study is described as a controlled study, the "control" group is obtained, not from the same cohort, but from a separate cohort of individuals recruited from newspaper advertisements and solicitations at meetings for inclusion in a study of the population burden of breast hypertrophy; three-quarters of this control group were obtained from two centers, but the characteristics of those two centers were not described. The control group was not followed longitudinally or treated according to any protocol to ensure that they received optimal conservative management; conclusions about the lack of effectiveness of conservative management were based on their responses to a questionnaire about whether subjects tried any of 15 conservative interventions, and whether or not they thought these interventions provided relief of symptoms. Based largely upon these results, Nguyen, et al. (2004) reached the conclusion that a trial of conservative management is not an appropriate criterion for insurance coverage, even though responses to the BRAVO questionnaire indicated that operative candidates and hypertrophy controls received at least some pain relief from all of the conservative interventions, and for some conservative interventions, virtually all subjects reported at least some pain relief. In addition, Nguyen, et al. (2004) ignored a wealth of published evidence of the effectiveness of physical therapy, analgesics and other conservative measures on back and neck pain generally.

• The operative group in the BRAVO study was drawn from a number of surgical practices that volunteered to participate in the study; no details are provided about how each center selected candidates for reduction mammoplasty, or how they chose patients who underwent mammoplasty for inclusion in the study. Of 291 subjects who were selected for inclusion in the study, only 179 completed followup. Thus, more than one-third of operative subjects selected for inclusion in the study did not complete it; most of the operative subjects who did not complete the study were lost to followup. Although the BRAVO study nominally included a "control group", there was no comparison group of subjects selected from the same cohort, who were randomized or otherwise appropriately assigned to reduce bias, and treated with conservative management according to a protocol to ensure optimal conservative care. Clinical outcomes were measured by operative subjects' responses to a questionnaire about symptoms and quality of life. The authors stated that operative subjects were told that their responses to the questionnaire were not to be used for insurance and thus the subjects had no motivation to exaggerate symptoms prior to surgery in questionnaire responses; however, it is not clear whether operative subjects would be willing to submit responses to a questionnaire from the doctor that differed substantially from the history that they provided to the doctor during their preoperative evaluation. Although operative subjects were examined before and after surgery, there was no attempt to employ any blinded or objective measures of disability and function to verify these self-report. Operative subjects who completed the study reported reductions in pain and improvements in quality of life; however, these improvements may be attributable to placebo effects, the natural history of back pain, other concurrent interventions, regression to the mean, improvements in cosmesis (for
quality of life measures), or other confounding variables that may bias in interpretation of results. Thus, this study would not be considered of sufficient quality to provide reliable evidence of the effectiveness of a pain intervention.

- Other references to smaller studies published prior to the BRAVO study have been cited, examining symptoms before and after reduction mammaplasty; each of these studies suffer from limitations similar to those identified with the BRAVO study. A study by Glatt, et al. (1999) was a retrospective analysis of responses to questionnaires sent to patients who underwent reduction mammaplasty regarding physical symptoms and body image. Of 110 subjects who were mailed questionnaires, approximately half (61 subjects) provided responses. The investigators found little difference between obese and nonobese women concerning patient's reports of resolution of symptoms and improvement in body image. A study by Bruhlmann and Tschopp (1998) was a retrospective study of 246 patients from a surgical practice, approximately half (132) of whom returned a questionnaire about their symptoms and satisfaction with aesthetic results, and their recollection of symptoms prior to surgery. It should be noted that this study reported a strong correlation between the amount of tissue removed and pain amelioration. It was also found that only three percent of subjects reported that they had no aesthetic motivation for surgery. Behmand, et al. (2000) reported on the results of a questionnaire pre- and post-surgery in 69 subjects from a single practice that underwent reduction mammaplasty. Subjects were compared to age-matched norms from another study cohort. No data were provided on loss to follow up. The article by Blomqvist, et al. (2000) is to another questionnaire study about health status and quality of life before and after surgery. Approximately one quarter of the 49 subjects included in this study did not return the postoperative questionnaire. Subject’s responses were compared to an age-matched comparison group of women, although no further details about how this comparison group was provided. The investigators reported that subjects who were of normal weight were as likely to report benefit from reduction mammaplasty as subjects who were overweight.

- The studies used to support the arguments for the medical necessity of breast reduction surgery are poorly controlled and therefore subject to a substantial risk of bias in the interpretation of results. Well-designed, prospective, controlled clinical studies have not been performed to assess the effectiveness of surgical removal of modest amounts of breast tissue in reducing neck, shoulder, and back pain and related disability in women. In addition, reduction mammaplasty needs to be compared with other established methods of relieving back, neck and shoulder pain. Well designed clinical trials provide reliable information about the effectiveness of an intervention, and provide valid information about the characteristics of patients who would benefit from that intervention.

- For these reasons, there is insufficient evidence to support the use of reduction mammaplasty, without regard to the size of the breasts or amount of breast tissue to be removed, as a method of relieving chronic back, neck, or shoulder pain.

- In the case of reduction mammaplasty for relief of back, neck and shoulder pain, Aetna has considered this procedure medically necessary in women with excessively large breasts because it seems logical, even in the absence of firm clinical trial evidence, that
this excessive weight would contribute to back and shoulder pain, and that removal of this excessive breast tissue would provide substantial pain relief, reductions in disability, and improvements in function.

- Insurers have commonly used the amount of breast tissue to be removed as a criterion for evaluating the medical necessity of breast reduction surgery. In a survey of managed care policies regarding breast reduction surgery, Krieger and colleagues reported (2001) found that most of the respondents stated that they use weight of excised tissue as the main criterion for allowing the procedure, with an average cut-off value of 472 grams for a typical woman. Seitchik (1995) reviewed the amount of breast tissue removed from a series of 100 patients that underwent breast reduction surgery. The author average amount of breast tissue removed for women in 5 kg weight bands, ranging from 45-49 kg to 90+ kg.

- The average amount of breast tissue removed ranged from 430 g per breast to 1.6 kg per breast, with increased body weight associated with an increased amount of breast tissue to be removed. The average amount of tissue removed from an average weight woman (within the 70 to 74.9 kg weight band) in this study was 60 g per breast, with a range of 502 g to 700 g of tissue removed per breast.

- Schnur, et al. (1991) reported on a sliding scale assigns a weight of breast tissue to be removed based on body weight and surface area. The study by Schnur, et al. was based on a survey of 92 plastic surgeons who reported on their care for 591 patients. Each surgeon who participated in the study reported on the height, weight, and volume of reduction of their last 15 to 20 patients, and each surgeon provided their "intuitive sense" regarding the motivation of each patient for breast reduction surgery. Schnur subsequently refuted the validity of the Schnur sliding scale and stated that the scale should no longer be used as a criterion for the determination of insurance coverage for breast reduction surgery (Nguyen, et al., 1999).

- The American Society of Plastic Surgeons' evidence-based clinical practice guideline on reduction mammaplasty (ASPS, 2011) states that in standard reduction mammaplasty procedures, evidence indicates that the use of drains is not beneficial. However, if liposuction is used as an adjunctive technique, the decision to use drains should be left to the surgeon's discretion.

- The American Society for Plastic Surgery (2011) advises to delay surgery until breast growth ceases: "Although waiting may prolong the psychological awkwardness, it is advisable to delay surgery until breast growth ceases in order to achieve the best result." This is similar to the American College of Obstetricians and Gynaecologists' 2011 Guidelines for Adolescent Health Care chapter on breast concerns in adolescents, which states regarding breast hypertrophy: "Preferably, treatment should be deferred until breast growth has been completed. If breast growth has been completed, breast reduction surgery is an option." Marshall and Tanner (1969) shows that the final stage of breast maturity occurs about age 15 on average, but there is wide variation.

- Sabiston's Textbook of Surgery (Burns & Blackwell, 2008) states that breast size should be stable for one year: "There is no set lower age limit but, for the adolescent with breast hypertrophy, reduction is deferred until the breasts have stopped growing and are stable in size for at least 12 months before surgery."
• Gynecomastia Surgery
• Gynecomastia is a very common concern of male adolescence. Sixty to 70% of males develop a transient subareolar breast tissue during their adolescence (Tanner Stages II and III). Causes may include testosterone-estrogen imbalance, increased prolactin levels, or abnormal serum binding protein levels.
• Gynecomastia has been classified into 2 types. In Type I (idiopathic) gynecomastia, the adolescent presents with a tender, firm mass beneath the areola. Most cases of type I gynecomastia are unilateral, and 20% of cases are bilateral. Type II gynecomastia is more generalized breast enlargement. Pseudo-gynecomastia refers to excessive fat tissue or prominent pectoralis muscles.
• Gynecomastia may be drug-induced. Drugs commonly associated with the development of gynecomastia include amphetamines, marijuana, mebrobamate, opiates, amitriptyline, chlor diazepoxide, chlorpromazine, cimetidine, diazepam, digoxin, fluphenazine, haloperidol, imipramine, isoniazid, m esoridazine, methyldopa, perphenazine, pheno thiazines, reserpine, spironolactone, thi ethylperazine, tricyclic antidepressants, trifluoperazine, trimeparazine, busulfan, vincristine, tamoxifen, , methyltestosterone, human chorionic gonadotropins, and estrogens. Klinefelter's syndrome, testicular, adrenal, or pituitary tumors, and thyroid or hepatic dysfunction are also associated with gynecomastia.
• Henley et al (2007) reported that repeated topical exposure to lavender and tea tree oils may be linked to prepubertal gynecomastia (idiopathic gynecomastia).
• Management of gynecomastia should include evaluation, including laboratory testing, to identify underlying etiologies. Work-up of gynecomastia may include the following (GP Notebook, 2003):
  • A detailed drug history, including list of medications, an assessment of indirect or environmental exposure to estrogenic compounds, and recreational drug use.
  • A detailed physical examination, including testicular examination.
  • Liver and thyroid function tests.
  • Measurement of plasma gonadotrophins, human chorionic gonadotropin (hCG), testosterone, estradiol, and dehydroepiandosterone sulphate (DHEAS)
  • An ultrasound scan of testicular masses
  • Computed tomography scan of adrenal glands to identify adrenal lesions.
  • Treatment should be directed at correcting any underlying reversible causes. If gynecomastia is idiopathic, reassurance of the common, transient and benign nature of the condition should be given. Resolution of idiopathic gynecomastia may take several months to years. In a majority of boys with pubertal gynecomastia, the condition resolves within 18 months. Medical reduction has been achieved with agents such as dihydrotestosterone, danazol, and clomiphene. However, these medications should be reserved for those with no decrease in breast size after 2 years. Surgical removal is rarely indicated and the vast majority of the time is for cosmetic reasons, as there is no functional impairment associated with this disorder.
• Many men with breast enlargement are found to have pseudo-gynecomastia. Removing the adipose tissue in pseudogynecomastia usually has no long term effect as adipose
tissue reaccumulates unless the individual loses weight. A physician-supervised diet and exercise plan may be indicated in obese patients.

- Transient pain that may occur as the breast enlarges and the capsule is stretched; these symptoms may be managed with analgesics. Mental health care professionals may be consulted to address psychological distress from gynecomastia.

- Autologous Platelet Gel During Breast Surgery

  In a within-patient, randomized, patient- and assessor-blinded, controlled study, Anzarut et al (2007) evaluated the use of completely autologous platelet gel in 111 patients undergoing bilateral reduction mammoplasty to reduce post-operative wound drainage. Patients were randomized to receive the gel applied to the left or right breast after hemostasis was achieved; the other breast received no treatment. The primary outcome was the difference in wound drainage over 24 hours. Secondary outcomes included subjective as well as objective assessments of pain and wound healing. No statistically significant differences in the drainage, level of pain, size of open areas, clinical appearance, degree of scar pliability, or scar erythema were noted. These investigators concluded that their findings do not support the use of completely autologous platelet gel to improve outcomes after reduction mammoplasty.

References

Appendix

- Drugs associated with gynecomastia:
- Estrogens and estrogen like drugs, including:
  - diethylstilbestrol
  - exposure to partners using estrogen containing vaginal creams
  - cosmetics containing estrogens
  - digitoxin
- Drugs that enhance estrogen formation, including:
  - gonadotrophins such as hCG
  - following withdrawal of clomiphene
- Drugs which inhibit testosterone synthesis, including:
  - ketoconazole
  - metronidazole
  - spironolactone
  - cancer chemotherapy (alkylating agents, methotrexate, vinca alkaloids, imatinib, combination chemotherapy)
- Drugs that inhibit testosterone action, including:
  - androgen receptor blockers - bicalutamide
  - 5 alpha reductase inhibitors - finasteride, dutasteride
  - H2 blockers and proton pump inhibitors
  - marijuana
- Drugs whose mechanism of action is unknown:
  - tricyclic antidepressants
  - angiotensin converting enzyme inhibitors (captopril, enalapril)
  - heroin
  - amiodarone
  - busulfan
  - methyldopa
  - captopril
  - growth hormone
  - reserpine
  - highly active antiretroviral therapy
  - calcium channel blockers (diltiazem, nifedipine, verapamil)
  - isoniazid
- Others situations which can cause or lead to gynecomastia:
- Anabolic steroids (e.g., in body builders)
• Healing balms, scented soaps, skin lotions, shampoos and styling gels containing lavender oil or tea tree oil
• Adapted from General Practice Notebook.
• American Society of Plastic Surgeons’ gynecomastia scale:
• Grade II: Moderate breast enlargement exceeding areola boundaries with edges that are indistinct from the chest.
• Grade III: Moderate breast enlargement exceeding areola boundaries with edges that are indistinct from the chest with skin redundancy present.
• Grade IV: Marked breast enlargement with skin redundancy and feminization of the breast

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Footnotes

[A] Chronic intertrigo, eczema, dermatitis, and/or ulceration in the infra-mammary fold in and of themselves are not considered medically necessary indications for reduction mammoplasty. [A in Context Link 1]

[B] Breast size stable over one year [B in Context Link 1]

Codes

CPT® or HCPCS: 19301, 19316, 19318, 77055, 77056, 77057