

Guidelines for Breast Augmentation Surgery

THE AMERICAN ACADEMY OF COSMETIC SURGERY

An Ad Hoc Committee of the American Academy of Cosmetic Surgery (AACCS) was formed to create the following guidelines for breast augmentation surgery.¹

1. Training and Education

Physicians practicing breast augmentation surgery must have adequate training and experience in the field. This training and experience may be obtained, in combination, through residency training, cosmetic surgery fellowship training, observational training programs, CME accredited post-graduate didactic and live surgical programs, or via proctorship with trained credentialed surgeons experienced in breast augmentation techniques. Breast Augmentation Surgery, like other cosmetic surgical procedures, is primarily learned during a surgeon's post residency through ongoing continuing education, training, and experience. While certain residency programs encompass training applicable to breast augmentation surgery, they do not in themselves provide adequate training to render a graduate prepared to perform breast augmentations. Surgeons develop the skill necessary to perform breast augmentations through their post residency training and experience. Accordingly, to identify the most skilled surgeon for any given breast augmentation procedure, one must look to and compare surgeons' post residency training, experience and history. Post-graduate training should include approved completion of a didactic breast augmentation course and the completion of a live surgical workshop on breast augmentation, both certified for Continuing Medical Education or other similar certifying organization. In addition, post-graduate training should include the completion of a proctorship or preceptorship, with one-on-one or observational learning.

Surgeons of various specialties perform breast augmentation surgery. Qualified surgeons who practice breast augmentation surgery must have the necessary skills to perform the procedures and the knowledge to diagnose and manage medical,

surgical, or pharmacological complications that may arise. Surgeons who receive minimal training and surgical experience as either a primary surgeon or co-surgeon as part of their residency, should attend didactic courses, live surgical workshops, and/or preceptorship in which breast augmentation is part of the curriculum. At a minimum, a surgeon must have observed at least 20 cases of breast augmentation procedures, attended 3 didactic courses and 2 live surgical workshops, and proctored at least 6 cases. This "minimum" requirement should be considered a guideline that will vary (and may be inadequate) depending on the surgeon's documented surgical experience.

Annually, all breast augmentation surgeons are encouraged to obtain continuing medical education (CME) specifically in the field of breast augmentation and related surgery through the use of current scientific publications, videotapes, educational scientific conferences, courses or workshops.

2. Preoperative Evaluation

An appropriate documented pre-surgical medical history, physical examination, and laboratory evaluation based upon the patient's general health and age must be performed on all patient candidates for breast augmentation procedures. Special attention should be given to bleeding diathesis, drug interactions, thrombophlebitis and all other surgical risks. A documented informed consent must be obtained. A complete medical history including, without limitation, breast cancer of the patient and her family, past pregnancies, lactation, breast surgeries, and any future plan of pregnancy should be obtained.

A thorough clinical examination should include a detailed evaluation of the breast and chest including a notation of breast shape, position and condition of the nipple and areola, the presence or absence of breast ptosis, scars, and symmetry of the breasts. The quality of the skin (particularly its elasticity) and the presence of stria should be evaluated. Presence or absence of nipple sensation should be noted. Photographic documentation is essential. A preoperative mammogram should be

¹ The members of this ad hoc committee include: Robert F. Jackson, MD; Steven B. Hopping, MD; Paul J. Carniol, MD; and Jung Park, PhD. The ad hoc committee reviewed the guidelines in August 2002. These revised guidelines were presented to and passed by the AACCS Board of Trustees on October 3, 2002.

obtained when it is indicated according to practice standards promoting breast cancer prevention and early detection.

Patients should be thoroughly informed about the nature of breast implants, potential risks related to implants, various available incisions, placement of implants with regard to the pectoralis major muscle, and pros and cons of each choice. Surgeons should discuss the various surgical options with patients, along with what each option can achieve, the potential variable outcomes that may result, the risks associated with each option, the recovery time for each option and corresponding recommendations. An informed consent must be obtained. The medical record should document the thoroughness of preoperative counseling.

3. Surgical Setting

Breast augmentation surgery may be performed in a fully equipped accredited, peer-reviewed surgery facility; ambulatory surgery center; or in an inpatient hospital setting. The procedure must be performed using sterile technique and with routine monitoring of vital signs, oxygen saturation, EKG monitoring (and end tidal CO₂ monitoring if done under general anesthesia). IV access must be maintained.

The healthcare-provider administering anesthesia must be properly trained and qualified to provide the required level of anesthesia. At least one healthcare provider in the operating room must have adequate training in cardiopulmonary resuscitation techniques (ACLS current). In addition, a healthcare provider current in ACLS must be available as long as the patient remains in the facility.

The operating facility should be AAAHC, JCAHO, AAAASF certified or function under equal guidelines as those required for such certification.

4. Expected Sequellae

There are a variety of side effects the surgeon may encounter; some of which are:

- a.) Usual side effects -- edema, ecchymosis, dysesthesia, fatigue, rippling, soreness, scar and minor contour imperfections are expected sequellae.
- b.) Occasional side effects -- persistent dysesthesia, nipple anesthesia, asymmetry,

hematoma, seroma, infection, contouring imperfections, palpable implant, capsular contracture, and drug and tape reaction.

- c.) Rare complications -- skin necrosis and loss of breast tissue secondary to severe infection, pneumothorax or fatal anesthetic complications are extremely rare.

All potential risks and side effects must be discussed with the patient in advance of the procedure.

5. Post operative care

Post-operative care varies from patient to patient, depending on the surgical procedure and individual patient recovery and response. Patients need to be monitored for a minimum of ten weeks following the surgical procedure.

6. Documentation of Care

Patients undergoing breast augmentation surgery should have standardized pre and postoperative photographs to document results. An operative report should specify, but not be limited to the following points.

- 1) The type of anesthesia.
- 2) The incision site and its length
- 3) The total dosages of drugs utilized
- 4) The technique utilized
- 5) The implant manufacturer, type of implant, size, lot number and the amount of final fill with saline
- 6) The suture material used to close the incision
- 7) Use of drains
- 8) Blood loss and fluid replacement
- 9) Complications encountered

Review and comparison of before and after photographs should be used by the surgeon to objectively evaluate the quality and extent of final results. Critical outcome analysis is valuable from the surgeon's and the patient's perspective.

7. Recording Adverse Events

It is the surgeon's **duty** and **responsibility** to report adverse events, including morbidity and mortality to their respective accrediting organizations.

8. Disclaimer

These Guidelines provide information to consider when contemplating breast augmentation surgery. The Guidelines are not intended to be all-inclusive or otherwise limit the inquiry and consideration applicable to one considering breast augmentation surgery. The Guidelines neither endorse nor make any representation regarding the qualifications, capabilities, skill or competence of any individual physician. The Guidelines present general information for educational purposes only and are not intended nor should it be used as a substitute for professional medical advice. AACS expressly disclaims all responsibility and liability arising from your use of or reliance on the Guidelines, and assumes no responsibility or liability for any claims that may result directly or indirectly from your use of the information.

9. Bibliography

1. Becker H, Springer R: Prevention of capsular contracture. *Plast Reconstr Surg* 1999; 103: 1766-1768.
2. Bogetti P, Boltri M, Balocco P, Spagnoli G: Augmentation mammoplasty with a new cohesive gel prosthesis. *Aesthetic Plast Surg* 2000; 24: 440-444.
3. Brinton LA, Brown SL, Colton T, Burich MC, Lubin J: Characteristics of a population of women with breast implants compared with women seeking other types of plastic surgery. *Plast Reconstr Surg* 2000; 105: 919-927.
4. Brown SL, Middleton MS, Berg WA, Soo MS, Pennello G: Prevalence of rupture of silicone gel breast implants revealed on MR imaging in a population of women in Birmingham, Alabama. *Am J Roentgenol* 2000; 175: 1057-1064.
5. Choudhary S, Cadier MA, Cottrell BJ: Local tissue reactions to oil-based breast implant bleed. *Br J Plast Surg* 2000; 53: 317-318.
6. Cohen JA, Lieberman C: Breast augmentation: inferior periareolar technique with local tumescent anesthesia only. *Am J Cosm Surg* 2000; 3: 155-160.
7. Cunningham BL, Lokeh A, Gutkowski KA: Saline-filled breast implant safety and efficacy: a multicenter retrospective review. *Plast Reconstr Surg* 2000; 105: 2143-2149.
8. Dalal M, Cooper M, Munnoch DA: Coagulated blood within a replaced intact silicone gel breast implant. *Plast Reconstr Surg* 2000; 105: 2270-2271.
9. Di Giuseppe A: Double skin technique with polyglactine or mixed mesh in mastopexy and breast reduction. *Am J Cosm Surg* 1998; 15: 229-235.
10. Dryden RM, DeBacker CM, Remigio D: The use of tumescent anesthesia for breast augmentation. *Am J Cosm Surg* 2000; 17: 207-210.
11. Duskova M, Sosna B, Kletensky J, Vrtiskova J: Capsular contracture in augmentation mammoplasty. *Acta Chir Plast* 2000; 42: 79-82.
12. Feng LJ, Amini SB: Analysis of risk factors associated with rupture of silicone gel breast implants. *Plast Reconstr Surg* 1999; 104: 955-963.
13. Fryzek JP, Signorello LB, Hakelius L, Lipworth L, McLaughlin JK, Blot WJ, Nyren O: Local complications and subsequent symptom reporting among women with cosmetic breast implants. *Plast Reconstr Surg* 2001; 107: 214-221.
14. Fulton Jr, JE, Rahimi AD, Abuzeni P: Breast Reduction with Tumescent Liposuction. *Am J Cosm Surg* 2001; 18: 15-20.
15. Gerszten PC: A formal risk assessment of silicone breast implants. *Biomaterials* 1999; 20: 1063-1069.
16. Haiavy J, Tobin HA: Augmentation mammoplasty with saline-filled textured implants: review of 9 years experience and results of patient survey. *Am J Cosm Surg* 2002; 19:15-20.
17. Hammond DC, Hidalgo D, Slavin S, Spear S, Tebbetts J: Revising the unsatisfactory breast augmentation. *Plast Reconstr Surg* 1999; 104: 277-283.
18. Hernandez-Perez E, Lozano-Guarin C: Fat grafting: techniques and uses in different anatomic areas. *Am J Cosm Surg* 1999; 16: 197-204.
19. Hidalgo DA: Breast augmentation: choosing the optimal incision, implant, and pocket plane. *Plast Reconstr Surg* 2000; 105: 2202-2216.
20. Jackson RF: Eight years of fat transplantation experience. *Am J Cosm Surg* 1999; 16:287-290.
21. Jacques WS: Breast augmentation with autologous lipograft. *Am J Cosm Surg* 1998; 15: 109-116.
22. Josefson D: United States clears silicone breast implants. *BMJ* 1999; 319: 8.
23. Kamel M, Protzner K, Fornasier V, Peters W, Smith D, Ibanez D: The peri-implant breast capsule: an immunophenotypic study of capsules taken at explantation surgery. *J Biomed Mater Res* 2001; 58: 88-96.
24. Khouri RK, Schlenz I, Murphy BJ, Baker TJ: Nonsurgical breast enlargement using an external soft-tissue expansion system. *Plast Reconstr Surg* 2000; 105: 2500-2512.
25. Leventhal M, Wittenberg JM: Transumbilical retroglandular breast augmentation, a review of 158 cases and a comparison with traditional approaches. *Am J Cosm Surg* 1998; 15: 387-393.
26. Lugowski SJ, Smith DC, Bonek H, Lugowski J, Peters W, Semple J: Analysis of silicon in human tissues with special reference to silicone breast implants. *J Trace Elem Med Biol* 2000; 14: 31-42.
27. Massiha H: Augmentation in ptotic and densely glandular breasts: prevention, treatment, and classification of double-bubble deformity. *Ann Plast Surg* 2000; 44: 143-146.
28. Nelson N: Institute of Medicine finds no link between breast implants and disease. *J Natl Cancer Inst* 1999; 91: 1191.

29. O'Brien J: History of breast prostheses. *Plast Surg Nurs* 1999; 19: 59-61.
30. O'Hanlon TP, Lawless OJ, Katzin WE, Feng LJ, Miller FW: Restricted and shared patterns of TCR beta-chain gene expression in silicone breast implant capsules and remote sites of tissue inflammation. *J Autoimmun* 2000; 14: 283-293.
31. Oliver DW, Walker MS, Walters AE, Chatrath P, Lamberty BG: Anti-silicone antibodies and silicone containing breast implants. *Br J Plast Surg* 2000; 53: 410-414.
32. O'Toole M, Caskey CI: Imaging spectrum of breast implant complications: mammography, ultrasound, and magnetic resonance imaging. *Semin Ultrasound CT MR* 2000; 21: 351-361.
33. Peters W, Smith D, Lugowski S, Pritzker K, Holmyard D: Calcification properties of saline-filled breast implants. *Plast Reconstr Surg* 2001; 107: 356-363.
34. Sanger JR, Sinha R, Walker AP: False-positive radiographic diagnosis of breast implant rupture because of breast abscess. *Ann Plast Surg* 1999; 42: 564-567.
35. Sarwer DB, Nordmann JE, Herbert JD: Cosmetic breast augmentation surgery: a critical overview. *J Womens Health Gen Based Med* 2000; 9: 843-856.
36. Scholze R, Morgan WR: Flaps: salvage for augmentation catastrophes. *Am J Cosm Surg* 2001; 18: 141-147.
37. Scholze R, Muller W, Morgan WR: Stacking textured breast prostheses for shaping. *Am J Cosm Surg* 1998; 15: 49-52.
38. Shiffman MA, Mirrafati S: Possible nerve injuries in the axillary approach to breast augmentation surgery. *Am J Cosm Surg* 2001; 18: 149-151.
39. Solomon MP: Tumescence technique as an adjunct to breast implant removal and capsulectomy. *Ann Plast Surg* 2000; 44: 495-497.
40. Springer R: Saline augmentation mammoplasty: nursing implications. *Plast Surg Nurs* 1999; 19: 9-14.
41. Stomblor RE: Breast implants and the FDA: past, present and future. *Bull Am Coll Surg* 1993; 78: 11-15.
42. Van Ongeval C: MR imaging of the breast – present indications. *JBR-BTR* 2000; 83: 80-84.
43. Villafane O, Garcia-Tutor E, Taggart I: Endoscopic transaxillary subglandular breast augmentation using silicone gel textured implants. *Aesthetic Plast Surg* 2000; 24: 212-215.
44. Winther JF, Friis S, Bach FW, Mellemkjaer L, Kjoller K, McLaughlin JK, Lipworth L, Blot WJ, Olsen JH: Neurological disease among women with silicone breast implants in Denmark. *Acta Neurol Scand* 2001; 103: 93-96.
45. Wolfe F, Anderson J: Silicone filled breast implants and the risk of fibromyalgia and rheumatoid arthritis. *J Rheumatol* 1999; 26: 2025-2028.
46. Yvorchuk W: Central pedicle breast reduction. *Am J Cosm Surg* 1999; 16: 65-71.
47. Yvorchuk W: Transaxillary endoscopic augmentation: an analysis of 100 cases. *Am J Cosm Surg* 1998; 15: 335-344.
48. Yvorchuk W: The treatment of breast implant Exposure: A Brief Report. *Am J Cosm Surg* 1999; 16: 197-204.
49. No authors listed: General and plastic surgery devices; effective date of requirement for premarket approval of the silicone inflatable breast prosthesis. *Fed Regist* 1999; 64: 45155-45161.

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