

Breast Asymmetry

A GUIDE FOR FAMILIES



Boston Children's Hospital
Plastic and Oral Surgery

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Our Program

The Adolescent Breast Center at Boston Children's Hospital is the first program in the nation dedicated exclusively to evaluating and treating breast conditions in children, teens and young adults. Our center uses a broad, research-driven approach focused on restoring self-confidence and improving quality of life.

Adolescent Breast Center - Meet Our Team

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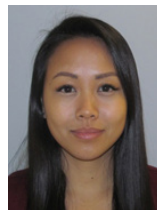
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Overview of Breast Asymmetry

Overview of the condition

An umbrella term encompassing a wide range of differences in breast size, shape and position. Although these differences are common during puberty, breast asymmetry can persist through puberty and into adulthood and result in social and psychological distress. Breast asymmetry conditions include:

- **Amastia.** Absence of one or both mammary glands, nipple, and areola.
- **Amazia.** The absence of one or both mammary glands, with the nipples and areola present.
- **Poland syndrome.** The underdevelopment or absence of the chest wall muscle on one side of the body. This may result in the underdevelopment or absence of one breast and underlying tissues on the affected side.
- **Tuberous breast deformity.** Abnormal breast development in certain areas of the breast. Girls with tuberous breasts may have breasts that are shaped like long, thin tubes or hollow sacs. One or both breasts may be affected.
- **Breast hypoplasia (underdeveloped breasts).** In some girls, the breast tissue does not fully develop, resulting in overall small breast volume. One or both breasts may be affected.
- **It is important to note:**
 - Every woman has some natural level of asymmetry of the breasts before surgery. While we aim to achieve the highest level of symmetry possible during breast surgery, it is common to have some subtle asymmetries remaining.



Fig. 1. Examples of breast asymmetry.

(Above, left) Mild breast asymmetry (about 2 cup sizes different between sides). (Above, right) Moderate breast asymmetry (about 3 cup sizes different between sides). (Below, left) Severe breast asymmetry (about 4 cup sizes different between sides). (Below, center) Tuberous breast deformity. (Below, right) Poland syndrome.

(Image credit: Nuzzi, L. C., Cerrato, F. E., Webb, M. L., Faulkner, H. R., Walsh, E. M., DiVasta, A. D., Greene, A. K., Labow, B. I., (2014). Impact of adolescent breast asymmetry, *PRS Journal* 134:6; 1116-1123. DOI: 10.1097/prs.0000000000000736)

Consultation Appointment

During your consultation appointment you will meet with a physician assistant as well as your surgeon. We gather information regarding your health history and family history. We also gather information regarding how breast asymmetry affects your life including both physical and mental or social symptoms. We will discuss conservative management options and surgical options if appropriate. If you are seriously considering surgery, we will take photographs at the consultation appointment to submit to insurance. Insurance companies require these photographs to determine whether or not they will cover the procedure. We never include a patient's face in these photographs; they are kept confidential and not used for any other purpose.

Conservative Management (Non-surgical solutions)

Surgery isn't the only treatment option for breast conditions. We work closely with the Division of Adolescent Medicine to investigate the underlying causes of breast-related problems in teens. If hormonal problems are suspected, our doctors can refer patients to some of the nation's leading experts, right here at Boston Children's Hospital. Occasionally, additional evaluation is needed in order to investigate potential causes of breast asymmetry. However, most commonly, there is no medical reason that breasts are asymmetrical.

Professional Bra Fitting

We often find that our patients with breast asymmetry are wearing the wrong size bra for them. To optimize comfort and support and to minimize back neck and shoulder pain, it is important to wear a bra which fits based on measurements of your chest circumference and breast cup size. For patients with asymmetry, we recommend that the bra fits the larger breast, and if desired, a prosthesis can then be placed on the smaller side to match the volume of the larger breast. We have found that stores such as Soma, Nordstrom, and Lane Bryant are reliable in fitting girls with larger breasts.

Prosthetics for Asymmetry

Through a unique partnership with Friends' Place at the Dana-Farber Cancer Institute, we also offer our patients — such as those diagnosed with breast asymmetry — prosthetic bras and swimsuits that can help them feel comfortable in their bodies. This pioneering approach was originally developed to help breast cancer patients after mastectomies, and we're proud to be able to similarly help adolescents.

Over the counter prosthetics are also available at both Target.com and Walmart.com for patients with a 1 to 2 cup size difference between the breasts. For a greater degree of asymmetry, custom prosthesis through a Friends Place allows for a more closely matched volume from side to side.

Physical Therapy

Patients with larger breasts and some patients with breast asymmetry often have related upper back, neck and shoulder pain. A trial of physical therapy to learn exercises to improve posture and strengthen muscles can offer some relief of discomfort. We are happy to provide prescriptions and referrals for physical therapy to patients who would benefit from these services.

Psychological support

Breast conditions can affect more than just physical health. We understand that living with a breast disorder can cause body-image problems and low self-esteem in teens. Girls with breast asymmetry have significantly worse psychosocial wellbeing than unaffected girls their age. They have worse social functioning, emotional wellbeing, and self-esteem (Nuzzi et al., 2014). Improved symmetry greatly improves physical and psychosocial wellbeing in those affected.

If you or your child is already seeing a therapist or other mental health professional, our team can partner with that person to evaluate treatment options and coordinate follow-up care.

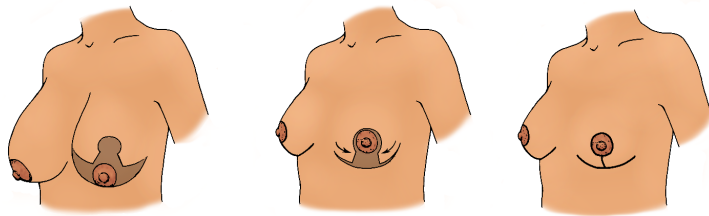
Surgical Management

- Some breast conditions, such as breast asymmetry, can be successfully treated with surgery. Our experts conduct a thorough evaluation and advise patients on the surgical options that may be appropriate for their condition, age and physical maturity. Due to the varying shape and volume differences patients may have, the surgical options can vary as well.
- Most procedures can be handled on an outpatient basis or with an overnight stay in the hospital. We carefully evaluate each patient on a number of factors to make sure they're an appropriate candidate for surgery.
- It's still safe to have mammograms in the future with breast implants, as well as after breast reduction and fat grafting procedures.

Bilateral or Unilateral Reduction Mammoplasty (Breast Reduction Surgery)

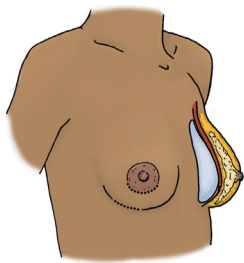
- A breast reduction removes adipose (fatty) tissue, glandular tissue and skin from the breast in order to make it smaller and lighter. The breast is also lifted during this procedure and the areola is made smaller in proportion to the new smaller breast. The areola is also repositioned to be in the appropriate position on the breast. depending on their goal size and desired result.
- We often consider this surgical option when excessively large or abnormal breast growth is interfering with quality of life or causing pain. For patients with asymmetry, we often plan to reduce one breast more than the other in order to achieve symmetry.
- For other patients having a breast reduction on just one side is the best approach in order to approve symmetry.

- Surgical Technique
 - Wise Pattern, inferior pedicle technique or superomedial technique



- The “anchor” incision involves making a horizontal incision along the inframammary fold in addition to the incisions around the areola and down the center of the breast. The anchor-shaped incision pattern allows the surgeon to remove some of the great excess of skin that some women have, in order to achieve the best cosmetic result following their breast reduction.
- After the incision is made, the nipple (which remains tethered to its original blood and nerve supply) is then repositioned. The areola is reduced by excising skin at the perimeter, if necessary.
- Underlying breast tissue is reduced, lifted and shaped. Occasionally, for extremely large pendulous breasts, the nipple and areola may need to be removed and transplanted to a higher position on the breast (free nipple graft).
- The incisions are brought together to reshape the now smaller breast. Sutures are layered deep within the breast tissue to create and support the newly shaped breasts; sutures, skin adhesives and/or surgical tape close the skin.
- Incision lines are permanent, but in most cases will fade and significantly improve over time. The pattern of scar is generally an “anchor” shape pattern, although in some cases, a “lollipop” pattern scar may be possible.
- A vertical incision pattern (the “lollipop” incision) is a technique that involves making an incision around the areola and then a vertical incision from the areola, down the center of the breast, to the inframammary fold (where the bottom of the breast connects to the chest wall).
- Lollipop incisions alone limit the scar but also limit the amount of skin that can be removed.

Augmentation Mammoplasty (Breast Implant)



(Above, left) The dotted line represents possible incision or scar patterns.

(Above, right) Showing the implant placed under the pectoralis major muscle.

- In patients with asymmetry due to little or no growth of breast tissue on one side, we often will place a breast implant on the smaller side in an effort to match the volume of the larger breast. This helps to achieve symmetry in volume and improve appearance while in clothing.
- Breast implants used by our surgeons are smooth and made of silicone gel. Patients require a different sized breast implant depending on existing breast size, level of asymmetry, personal goals, and the surgeon's recommendations.
- It is important to note that a breast with a breast implant is often more perky and round than a natural breast and therefore some asymmetry can still be noted without clothing. For this reason, some patients decide to also have their larger breast reduced and lifted in order to more appropriately match the symmetry.
- **Surgical Technique:**
 - Depending on your specific condition, the breast implant could be placed under, or over the muscle, or a combination of the two. Your surgical team will discuss which would be the best option for improvement in symmetry.
 - Inframammary technique: In this procedure, a small incision is made in the fold underneath the breast (called the inframammary fold). The advantages of this technique are that the incision allows the surgeon to have a wider access point to insert the implant with greater precision. In addition, the remaining scar (generally about 1 to 2 inches long) can be concealed under the crease.
 - Periareolar: A small incision is made along the lower portion of the areola. The breast implant will be inserted in this opening by the surgeon.

Fat grafting

- For patients with a 1-2 cup size difference between breasts, sometimes the best option to achieve symmetry of volume and shape is to fat graft the smaller breast. This allows the surgeon to maintain the shape of the breasts but add volume to improve symmetry. In Poland syndrome, fat grafting is also used to camouflage chest wall asymmetry.
- Depending on the volume difference between the breasts, this may require multiple rounds of fat grafting, as there is a limit to how much volume can be injected at one time.
- **Surgical Technique:**
 - Liposuction is performed of either the thighs or the abdomen. It is normal for this area to be bruised after surgery and there are typically 2 or 3 small incisions required in the area that the fat is taken from.
 - The fat is then injected into the breast in order to increase the volume. This leaves no incisions on the breast.
- **Appropriate Timing**
 - It is important that pubertal breast development is completed before surgery. Stable breast size for at least 6 months to 1 year is a good indicator that pubertal breast growth has stopped.
 - In patients considering losing weight, it is important that this is done prior to surgery. After breast reduction, the breasts will still undergo the normal physiological changes of natural breast tissue. If weight is gained, the breasts will become larger. With weight loss, the breasts often become more ptotic (saggy). A breast with a breast implant will not undergo physiological changes like natural breast tissue. For the best overall aesthetic outcome, and long term symmetry, it is important that our patients are at their ideal weight prior to surgery.
- **Sizing Considerations**
 - We aim to help you reach your desired cup size as well as keep you proportionate for your body frame. Some patients are more comfortable with their smaller side, while some prefer their larger side. Our experts help to guide patients and families as to surgical options to achieve their

goal. There are some limitations to each of the different surgical options. For this reason, your surgeon will discuss your goal size and any potential limitations during your consultation appointment.

Potential Risks and Complications

- **Scar Formation**

- The incision lines that remain are visible and permanent scars, although usually well concealed beneath a swimsuit or bra.
- We will guide you on appropriate scar care and management in order to help facilitate the most esthetic scars possible.
- Everyone scars differently, and poor scarring, hypertrophic (thickened) or keloid scars are possible.
- It takes a full year for a scar to mature, meaning that it will slowly improve in appearance throughout that time, typically becoming less pink, less raised and less firm.

- **Sensation changes in breast reduction patients**

- Changes in sensation of the breasts, specifically along the scars, along the lateral portion of the breast (outside portion of breast closest to the arm) and of the nipple areola complex are common. This is most often a decrease in sensation described as a slight numbness, although full loss of sensation of the nipple areola complex is possible. Sometimes the nipple can become hypersensitive after surgery.
- In the event of numbness, sensation often returns slowly over the course of a year, while hypersensitivity can resolve more quickly, often in a few weeks to months.

- **Implant Specific Considerations:**

- All implants in the body have a life span. It is reasonable to anticipate having to replace a breast implant every 10 years, sometimes sooner. For many of our young patients this means it is likely to have to replace a breast implant multiple times throughout their lives.

- Once a breast implant is in place, fibrous scar tissue forms around it, creating a tissue capsule. The body forms a protective capsule like this around any object it recognizes as foreign. The tissue capsule is usually soft or slightly firm, not noticeable, and helps to keep the implant in place. In some women, a tissue capsule forms that is unusually hard and dense. The capsule tightens around and squeezes the implant. This condition, called capsular contracture, can cause discomfort and distortion in the shape of the breast, and it can make the breast rise higher on the chest.
- Some implants, in extremely rare instances, have been associated with an extremely rare form of lymphoma called BIA-ALCL, or breast implant associated anaplastic large-cell lymphoma. To date, these lymphomas have only been associated with a type of implant that we do not use; however, it is advisable to follow-up with us or another qualified plastic surgeon postoperatively on a regular basis for routine evaluation.
- The FDA recommends serial MRI's for assessment of breast implants.

Preparing for Surgery

- **Pre-surgical Appointment**
 - After your surgery is approved and scheduled, you will have a pre-surgical appointment. During your presurgical appointment, your physician assistant or surgeon will review the surgical plan with you and answer any questions you may have.
- **Medications**
 - Avoid taking aspirin, anti-inflammatory drugs (NSAIDS such as Motrin, Naproxen and herbal supplements as they can increase bleeding) for 10 days prior to surgery.
- **Stop smoking well in advance of breast surgery. Smoking can cause wound healing issues, compromise blood supply to the nipple areola complex and complicate your recovery.**

Day of Surgery

- **Anesthesia**

- You will meet with your anesthesia team prior to surgery. Please let them know if you have had any history of nausea or vomiting after previous general anesthesia or become car sick. This will help them to preventatively treat any nausea/vomiting you may have. They will start an IV for you after using a numbing spray and can give you medication through this IV that will help you to relax.

- **Surgical Marking**

- You will change into a gown and be in a private area before surgery. Your surgeon will use a surgical marker to draw the surgical plan on your chest. While some of these surgical markings are areas where incisions will be, others are measurements and landmarks that are used to help give you the best esthetic and symmetrical result possible.

- **Surgical Timing**

- Your surgical time will vary based on your procedure. As soon as you are awake and comfortable in the PACU (post anesthesia care unit) we will bring your family in to accompany you.

- **Post-operative Recovery**

- In most cases, after surgery you'll have some padded gauze and a surgical bra in place. Under the gauze and surgical bra, you will have Steri-strips (white adhesive bandages) that cover the incision lines.
- Occasionally, placement of surgical drains is needed. These are small plastic tubes which help to drain any excess fluid from the breast. These are often removed the morning after surgery before you are discharged home, and therefore you do not need to care for them at home.
- You'll need to take about one week off from work or school.
- Don't do any activity that is intense or strenuous. Don't lift anything more than 10 pounds or swim until your surgical team gives you clearance to do so. You can get excuse notes from the surgeon's office at your follow-up appointment.

- Check with your surgeon before starting to exercise.
- You can go back to driving 24 hours after you stop taking prescription pain medication.

Post-Operative Course (After Surgery)

- Your post-operative instructions and timing of follow up will vary depending on which surgery is the right option for you.
- In general, you can plan for a one week follow up visit, as well as a four week follow up visit. We are always available for questions or concerns at any time.

Insurance Information

- Understanding your insurance coverage and benefits can be challenging as each situation, treatment plan and insurance policy is so widely variable. Insurance companies often consider surgical correction of breast asymmetry to be a cosmetic or uncovered procedure. Our team is here to help you navigate through this process.

Resources

- 1. <http://www.childrenshospital.org/centers-and-services/programs/a--e/adolescent-breast-center-program>

Notes:

Boston Children's Hospital Department of Plastic and Oral Surgery



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