

Breast Augmentation

Dirk Lazarus, May 2009

Breast augmentation with breast implants is an operation to increase the size of your breasts. The operation can also help to improve the shape and symmetry of your breasts and provide a small degree of lift. The operation is usually done for women with small breasts or whose breasts have emptied out following pregnancies and breast feeding and who now want to achieve a greater degree of femininity. The surgery can be combined with other body procedures.

Three important decisions need to be made in relation to breast augmentation surgery:

1. Incision site: Options

- a) **Crease incision:** Allows accurate placement of the implant, most importantly in relation to height. The incision is about 4-5 cm long (2") and is well camouflaged under the shadow of the breast, in the crease and within natural body tension lines. It is therefore well hidden and heals well. Because of its advantages, this has become the commonest incision used globally and is my default incision.
- b) **Peri-areolar incision:** Around the areola. I use this in two situations: women who have large areolae and want an areola reduction or in women who may need a small lift. Disadvantages of this approach are that it is some distance away from the cavity and further dissection is required either through or around the breast to place the implant. The scar is left on the breast mound which can be quite visible. The areolae may stretch out and become larger with this incision or a purse-string is used which may be palpable (you can feel it).
An extension of this is the lollipop approach used when I do a breast lift. In addition to a peri-areolar incision a vertical component is needed down to the crease to tighten the skin and to lift the breasts. This is my usual way of doing an augmentation-mastopexy: a breast lift plus implants.
- c) **Armpit incision:** This goes through a "dirty" area, the dissection down to the crease to set the implant heights is a long way away and even in good hands a 15% incidence of implant height discrepancy between the two sides has been reported and, finally, the scar in the armpit can be quite visible. Bleeding can be difficult to control. For these reasons, I have abandoned this incision and no longer use it.
- d) **Umbilical incision:** through the belly button (TUBA – trans-umbilical breast augmentation) is rarely done (7% of plastic surgeons in one survey) and not by me. Special equipment is required, one is confined to saline implants (second best) and one creates a cavity from the breast down to the belly button into which the implants can fall. This approach is generally regarded as converting a simple operation into a complicated one and which saves minimal scarring.
- e) **Existing scars**

2. Implant position or cavity

- a) **Sub-glandular placement:** under the breast, but on top of the muscle. This is a quick, easy dissection and I therefore use it when I can. Disadvantages of sub-glandular placement are that the implant may be more visible and palpable. Visibility can present as a prominent edge, a dome shape to your breasts with a sharp cut-off between breast and chest, wrinkling or folding. In women who have enough padding, though, this is less of a problem.
- b) **Sub-fascial placement:** A thin membrane lies on top of the muscle, the fascia, and some surgeons like to lift this tissue paper thin fascia to allow the implants to sit under the fascia. I do not believe that this adds any benefit to the surgery and so I do not do this.
- c) **Sub-muscular placement:** deeper than subglandular, underneath the pectoralis major muscle of the chest. The operation takes slightly longer than subglandular placement, is more sore and there is a slightly greater risk of bleeding post-operatively. Implants are placed under the muscle to disguise the implant more, either because saline implants are used or in very thin patients where implant show can be a problem. To prevent the implants riding up, a chest band needs to be worn post-operatively. In addition, sub-muscular placement can result in implant displacement or deformation with muscular activity and so this method is not recommended for sporty individuals.
- d) **Dual plane placement:** a refinement of submuscular placement. The lower attachments of the muscle to the sternum (breast bone) are divided to allow the muscle to ride up. This allows the upper, inner part of the implant to be covered with muscle while the lower, outer part of the implant is sub-glandular. This is a refinement of sub-muscular placement and my choice of implant placement in very thin patients.

3. Implant

A number of factors need to be considered in relation to the implant itself.

- a) **Shell:** All implants have a silicone outer shell which contains the contents. Two options exist: textured or smooth. Textured implants bind to your tissue and the risk of hardness (capsular contracture – see below) is slightly lower. I therefore use textured implants.
- b) **Content or Fill:** Traditionally saline or silicone gel. Saline implants can slosh, wrinkle, deflate and really are simply bags of salt water which do not feel or look like breast tissue. Where patients and surgeons have the choice, silicone gel filled implants are by far the most popular choice. Silicone gel fill may have different degrees of cohesivity. Older implants contain non-cohesive silicone – when cut the silicone can leak out and has the consistency of honey. Modern implants have more highly cohesive silicone so that when cut the implant resembles a jelly baby, or, as they call them in the USA, gummy bear implants. The higher the cohesivity, the firmer the implant. I use medium cohesivity implants to minimise the risk of wrinkling and yet keep the benefits of a cohesive implant. See a further discussion on the safety of silicone gel filled implants below.
- c) **Shape:** Round or anatomical. Anatomical implants have a tear drop shape: fuller in the lower pole and tapering in the upper pole. While these implants may have some benefits in breast reconstruction patients, in the typical breast augmentation patients, upper pole fullness is desirable and so I tend to use round implants as a routine. In addition anatomical implants are

considerably more expensive and there is the risk that they can turn in the breast creating exactly the opposite effect to that which is desirable.

- d) **Profile:** How much the implant projects. Various profiles exist: low, medium, high, extra high, etc. For the average patient going from small to a full B or a C cup, I usually use a medium profile implant.
- e) **Percentage fill:** Implants may be under-filled, over-filled or 100% full. Under-filled increases the risk of wrinkling and I therefore prefer 100% full implants.
- f) **Size:** Most women are most concerned about size. Women are fearful of going too big and looking ridiculous or going too small and being dissatisfied. There are a number of ways of determining size.
 - (i) At consultation in-bra sizers will be used so that you can get a feel for the implants of different sizes. This process also makes sure that we are on the same page in relation to sizing and that I understand what you want.
 - (ii) The bio-dimensional approach is also used. This is based on your breast width and skin thickness. Given a breast of a certain size, and a patient with a certain amount of skin and fat covering, the implant diameter can be calculated so that the implant fills the breast when centred on the nipple-areola.
 - (iii) Viewing before and after pictures of other patients can be helpful to give me an idea of what you want in terms of size.
 - (iv) At surgery, once the incision has been made and the cavity created, in-breast sizers are placed to determine what looks right for you, makes you in proportion and is in accordance with your desires in terms of size.

Further issues in relation to size:

1. The difference between one size and the next size up or down is 20-25 ml which is only a few teaspoonfuls – not a great deal!
2. Post-operatively you will be swollen, perhaps up to one cup size bigger than your final size will be. That swelling will take a couple of weeks to subside.
3. During that period, in fact, very quickly, your brain will adapt to your new body image.
4. Over time your breasts will shrink as part of the aging process.
5. It is therefore possible to wake up from surgery, look down at your breasts and feel that they are too big. Over the next week or two as the swelling subsides and as you get used to the implants, you may feel that they go through a good phase, but end up too small. I am aware of this and my aim is to make you happy in the long term. I will advise you accordingly and ultimately size you so that I believe that I give you what you want in the long term. If you know what you want then I will get it right and it is very unusual for me to get the sizing wrong – I understand what most women want and I have done this operation many times on happy patients.

Safety of silicone gel-filled implants

All breast implants in current use are made from a silicone shell. This shell may be filled with either silicone gel, saline (salt water) solution or other solutions such as hydrogel, vegetable oils, etc. I still

believe that silicone gel filled implants are superior to saline or any other material with regard to look and feel.

Silicone gel implants were first introduced in 1963 and were in wide use up until 1992. In 1992, following an episode of the Connie Chang show, silicone breast implants were placed under moratorium by the Food and Drug Administration (FDA) in the USA. (They were still allowed to be used for breast reconstruction after cancer surgery.) The reason for the moratorium was that they were thought to cause human adjuvant disease - a group of arthritis-like conditions which may be associated with rashes, fevers, weight loss, poor appetite, malaise, tiredness and even depression. Silicone breast implants subsequently became the subject of one of the largest legal proceedings and class actions in history. The company responsible for the silicone, Dow Corning, went insolvent. Other countries followed suit and banned their use.

Since the initial moratorium by the FDA in 1992 much research has been done. This research has been conducted by non-plastic surgeons and physicians with no commercial interest in breast augmentation. In essence it has been absolutely shown that there is no correlation between silicone gel breast implants and human adjuvant disease or indeed with any similar condition. Over 20 studies looking at more than half a million women who have had breast implants have found no conclusive evidence of breast implants being associated with connective tissue diseases.

The current view of the American College of Rheumatology, the Centre for Disease Control and the American Medical Association feel that there is no relationship between silicone breast implants and any disease process and this view has also been formally expressed by the FDA.

Many doctors (not just Plastic Surgeons) feel that the moratorium was too hastily carried out, not well thought through and some have even labeled it hysterical. Silicone gel filled implants still give the most natural look and feel and I still believe them to be the best form of augmentation.

The surgery

All breast augmentation surgery is carried out in my own ambulatory surgical facility as day case surgery. Twilight sedation is administered by an anaesthetist who also gives antibiotics. In addition to the sedation, I inject the breasts with local anaesthetic. The incision is made, pocket created, bleeding stopped, sizers are used, I wash the cavity out with an antiseptic solution, place the implant with a minimal touch technique and close the wound with 3 layers of dissolving sutures. A small dressing is applied and a surgical bra is given to support and compress the breasts. A breast band may be used if a dual plane or purely sub-muscular placement is used. The surgery takes me around an hour.

After surgery you will recover in the recovery room until mid or late afternoon. You can be discharged once you are awake, up and about, your pain is controlled, you are eating, drinking and have passed urine.

Check ups

Usual follow ups are within a day or two of surgery (patients operated on a Friday will be seen on the Monday as their first visit), a few days after that for a change of dressings and about a week

later. Additional or further follow up is arranged as is needed. For local patients I will usually see you at 3 months post-op and a year post-op. I have an open door policy after surgery – if you have any concerns or want a check up, I will see you without charge.

Patients who are not from Cape Town will usually be seen for three post-operative visits prior to their departure home. If you return to Cape Town, I would like to see you for a check up and will not charge for that.

Normal post-operative course

Post-operatively you can expect some pain for which we will give you pain killers to take home. Pain thresholds vary from patient to patient – some women are fine after 3 days, others need a week. When you can lift and move your arms easily, then driving can be resumed, usually by about a week after surgery. A few days to a week off work is usually all that is required. Gym and exercise can be resumed after about 3 weeks.

Bruising will last about 10 days to 2 weeks, swelling a little longer. These are the usual durations which may vary. Final appearance is really only achieved months after surgery. For all surgery, an exact end-result cannot be predicted due to uncontrollable factors such as how you scar, etc.

Risks, Complications and other Issues

All surgery carries the potential for risks and the possibility of complications. Risks, however are low and complications are unlikely. Minor complications are more common than major complications. If a complication occurs then my policy is to aggressively manage it. This may not need surgery, but certainly I will want to see you more frequently to ensure that your recovery goes as smoothly as possible.

1. **Anaesthetic related problems:** All surgery and anaesthesia carry a risk. That risk is probably equivalent to the risk of flying
2. **Bleeding:** The risk of bleeding is low, around 1-2%. Bleeding into the breast, if it occurs, typically does so early after surgery. The symptoms of a bleed are increased pain associated with marked swelling and possibly more bruising on the side of the bleed. Treatment usually requires a return to theatre to drain the haematoma, stop the bleeding. The cost for this additional surgery is not included in my initial quote for surgery. Bleeding may carry a slightly increased risk of capsular contracture (hardness – see below) down the line.
3. **Infection:** Infection may be minor or major. Minor infection – a bit of redness, pain and perhaps a low grade fever – can be managed with antibiotics, perhaps over a longer than normal course. Severe infection can manifest as a wound breakdown with pus and exposure of the implant. This usually requires the implants to be removed to allow the breasts to settle down. The implants can be replaced after 6 months.
4. **Wound healing problems:** either impairment or delay. Slow or deficient wound healing (made worse by smoking) can result in skin or tissue loss and require dressings for a prolonged period of time to allow healing.
5. **Nipple-areola loss:** Due to interruption of the blood supply to the nipple areola can occur with any breast operation, but is very rare after breast augmentation.

6. **Numbness:** The nerves to the breast are microscopic and can be injured (cut, bruised, pulled, etc) during the process of cavity creation. Most patients will experience some degree of numbness following surgery, usually a patch on the lower part of the breast which slowly resolves (over months) and usually returns to normal. Loss of nipple areola sensation, even erogenous sensation can occur, but this is rare.
7. **Scars:** How well you scar is largely a function of your skin type. I will suture you up as best I can, but some people do form bad scars. In the early part of the healing process, the scars may be red and raised, but after a few weeks this will settle down. To minimise the scarring response in the wound you should tape the wound with micropore tape. The tape should be applied and then left in position along the scar until it starts to peel off – usually after a week or ten days. The tape should then be removed and re-applied. For optimal scars you should continue this until the scar is no longer red or raised – usually a period of 6-12 months.
8. **Cosmetic problems:** This primarily relates to problems of size, shape or symmetry.
 - a. **Size:** too big or too small. As mentioned above, this is rarely a problem. The larger your implant, the worse your breast will look over time. A larger implant will stretch your tissues over time and will cause more tissue-thinning and sagging than a smaller implant. Your tissues do not improve with age, and they will be less able to support the additional weight of any implant, especially a larger implant.
 - b. **Shape:** Abnormalities of shape are possible, but rare. Perhaps the most common is a “snoopy droop” appearance when the breast hangs off the implant.
 - c. **Symmetry:** No woman has truly symmetrical breasts, but what one wants to achieve is acceptable asymmetry. Pre-existing asymmetries in breast size tend to be made less by increasing the breast size and in markedly asymmetrical cases I will use different sized implants. Asymmetries can also occur due to differences in implant position. Most asymmetries are due to pre-existing differences in nipple or crease height or in breast size.
9. **Implant related complications:** These include –
 - a. **Wrinkling:** usually seen along the inner or outer edge of the implant
 - b. **Folding:** A folded implant can present as a pointy breast lump. Sometimes this is intermittent or goes on its own or can be manipulated away.
 - c. **Palpability:** The ability to feel the implant. If you can feel your ribs with your finger, beneath the breast or at the side of your breast, you *will* be able to feel the edge of your implant beneath your breast and at the side of your breast. Currently manufactured implants that strive to achieve durability of the shell have a thicker shell to prolong the life of your implant, and a thicker shell may be easier for you to feel. If feeling an edge of an implant shell could be a problem for you, do not have an augmentation. We cannot change the quality or thickness of your tissues. If you are thin or have very little breast tissue, you will be more likely to feel your implant. Any implant will feel firmer than a normal breast, regardless of the filler material. If the implant shell folds, it could fail sooner and require you to have a re-operation sooner (most patients accept a firmer breast in exchange for a possibly longer life of the implant shell).
10. **Emotional changes:** Prior to surgery you are healthy, but surgery induces the sick state – you will be sore, bruised, swollen and tender. You will need downtime and not be able to do the usual things you do for a few days. These changes can affect some patient’s moods and you may find that you become tearful or depressed for a few days post-operatively.
11. **Long-term Issues and Complications:**

a. Capsular Contracture

Around every breast implant, the body will form a capsule composed of fibrous and cellular material. In most women, this capsule remains soft and pliable and does not cause problems. However, in a small percentage of women, the capsule can become firmer and harder resulting in discomfort or even pain, distortion and hardness. This is called capsular contracture.

With modern implants, rates of formation of capsular contracture are relatively low, probably around under 1% per year and some studies show the rate at 10 years to be about 2-3%. However the risk increases the longer the implants have been in. The treatment for developed capsular contracture is surgery: removal of all or part of the capsule (capsulectomy) and replacement (modernisation/upgrade) of the implants. This operation can be combined with breast lift or other surgery which may be required or desired at that time.

b. Leak or rupture

Leak or rupture of the implants can occur due to trauma such as a motor vehicle accident or due to wear and tear. Modern implants have a very low rupture rate and with cohesive silicone gel as a filler, the silicone does not leak out as happened with older implants. If modern, cohesive gel implants are cut, the surface is like a jelly baby (so called gummy bear implants). Leak or rupture can be diagnosed on a scan of the breast (MRI and ultrasound) and since recommended screening for breast cancer involves mammograms and ultrasound of the breast, leaks may be detected on routine scanning. If you are involved in some traumatic event and are concerned about your implant, then a scan can be arranged. Ruptured implants can result in silicone leak. It is now well proven, by non-plastic surgeons, that silicone gel has no effect on your body and the silicone controversy has been proven to have no validity at all. Free silicone in the breast, however, if left, can result in the formation of lumps called granulomas or siliconomas which require surgical removal. Otherwise a ruptured or leaking implant should be changed which would require surgery.

c. Fertility

Breast implants have no effect on your fertility or ability to fall pregnant.

d. Breast feeding

Breast implants are placed either under the breast or under the muscle and so do not interfere with your ability to breast feed.

e. Cancer

Breast implants do not cause cancer. In fact in large studies where age and risk factor matched groups of women are compared, one set with implants, the other without, the rate of breast cancer occurrence is slightly lower in those women who have had breast implants. The reason for this is unknown, although it might be due to the fact that these women have smaller breasts and therefore less tissue to become cancerous.

f. Cancer screening

Cancer screening can proceed as normal by monthly self examination and regular mammography and ultrasound after the age of 40 or as recommended. Note that for

mammography special views will be required to see around the implant and that with sub-glandular implant placement there is the theoretical risk that some breast cells will be left below the implant and that these may not be visualised by routine breast cancer screening techniques.

12. **If you want a totally natural breast, you should not have a breast augmentation.**
13. **Young women should take into account that they may well need to have their implants changed or further breast surgery at some point later in life.**

For all surgery

Please note the following points:

The practice of medicine and surgery is not an exact science. You should therefore understand that no guarantee or assurance can be given as to the results that may be obtained. Even reputable practitioners cannot guarantee results.

The two sides of the human body are not the same and can never be made the same.

Complications are rare and complications requiring revision surgery even more rare. If complications occur, then this is usually soon after surgery. Complications will be dealt with as appropriate and generally aggressively managed, but most complications will end up healing and improving as time goes by.

For many women, the result of breast augmentation can be satisfying, even exhilarating, as they learn to appreciate their new, fuller appearance. Your decision to have breast augmentation is a highly personal one that not everyone will understand. The important thing is how you feel about it. Overall, despite much of the previous media hype around breast augmentation, it is one of the better procedures offered by plastic surgeons and one with a high degree of patient satisfaction.

Dirk Lazarus