BREAST REDUCTION – PATIENT INFORMATION

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This information package is designed to complement your consultation. You can use it to explain to friends and family members what is involved in breast reduction surgery. Please read it carefully and feel free to call my office if you have any questions.

The most common comment that I hear from patients who undergo breast reduction surgery is that they wished that they hadn't waited so long. There is no question that breast reduction surgery can improve back pain, neck pain, shoulder strap grooving, and even headaches. Although the breast cannot be completely lifted up off the chest wall, skin rashes are often significantly reduced. Patients report improved exercise tolerance, improved posture and improved self-esteem.

The word "plastic" in "plastic surgery" comes from the Greek word "plastikos" which means "to mold". Plastic surgery is divided into reconstructive surgery and cosmetic surgery. The reconstructive side of plastic surgery takes the "abnormal" – such as a cleft lip - and makes it "normal". Cosmetic surgery takes the "normal" and tries to improve upon it. You can see that breast reduction surgery incorporates both aspects of plastic surgery – reconstructive and cosmetic.

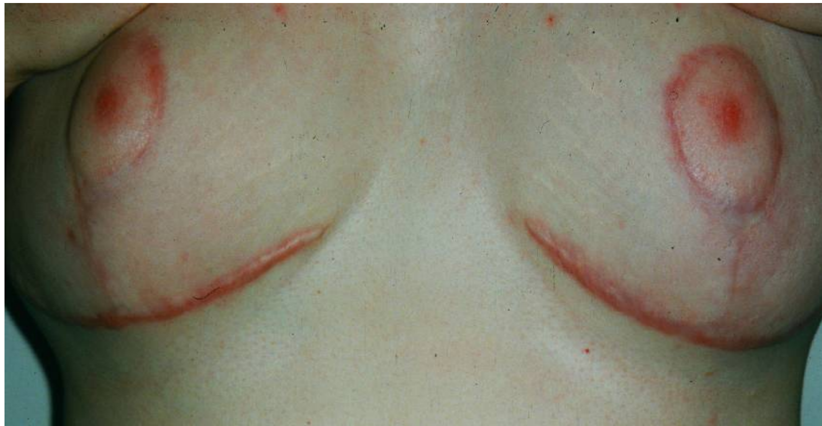
Before deciding whether you should undergo breast reduction surgery, you need to know some of the issues first. The main problems with breast reduction are scarring, sensation and breast feeding potential. I will also discuss other complications later.

There are three main ways to perform breast reduction. The standard method is called the "anchor" method. The method that I use most frequently is called the "vertical" technique. Breast reduction can also be achieved by "liposuction-only" in some patients.

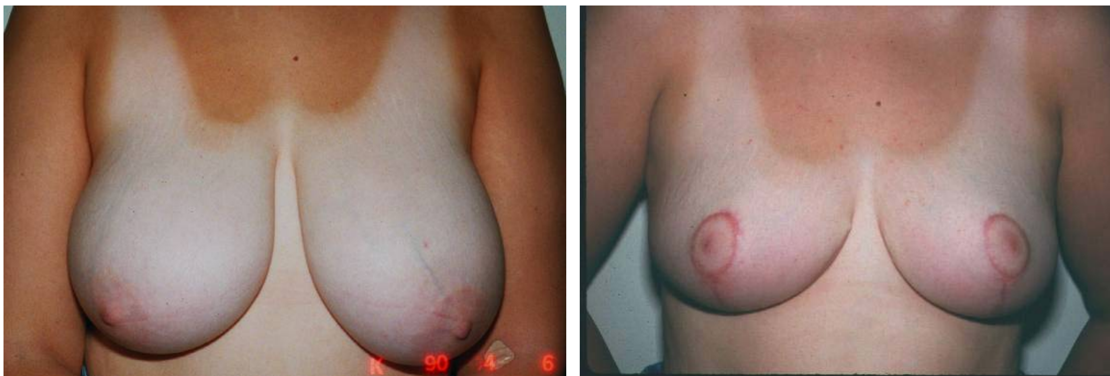
DESCRIPTION OF TECHNIQUES AVAILABLE FOR BREAST REDUCTION:

1. **Anchor technique:**

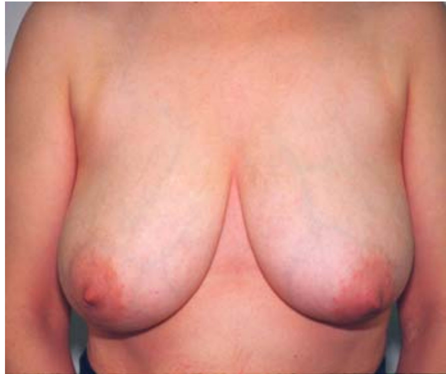
This method has a scar around the areola, a scar down from the areola to the crease (or fold) that runs along underneath the breast, and a scar that runs along the crease (where the underwire in a bra sits) from side to side. Although scars can fade, they do not disappear. Unfortunately, the side-to-side scar along the crease can be permanently quite thick and unsightly. The following photographs show different types of scarring that result from the anchor technique.

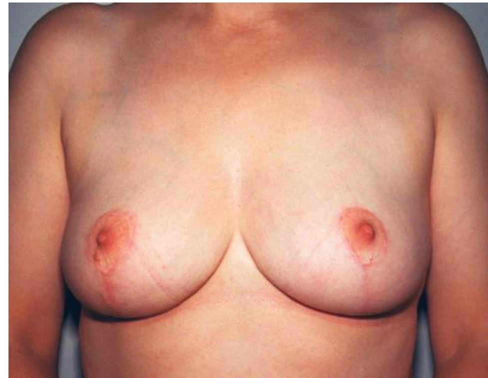


This patient was a bad scar former. These scars did fade to some degree over the years, but this is what she looked like a full year after surgery. Although people think that scars can be improved by laser surgery, special creams, or other methods, there is very little that can be done. Bad scars are genetic – not because of the surgeon, the type of suture used, or what you do or do not do after surgery. You need to realize that your scars will show when you are not wearing clothes.

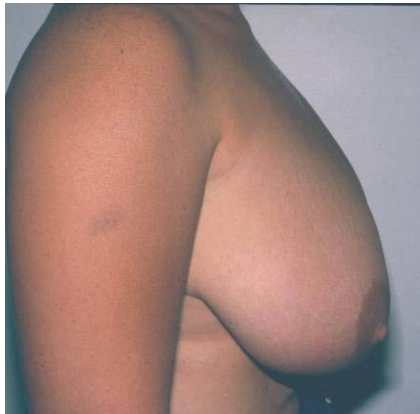


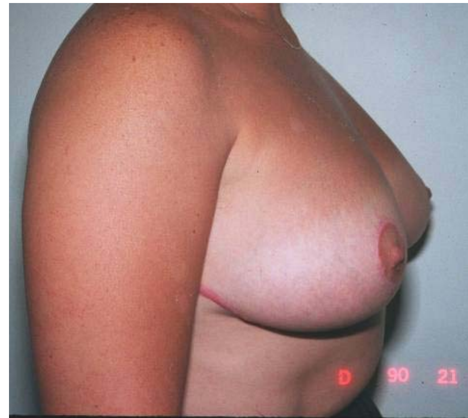
The photo shown above is another example of the anchor technique – you can see the scars in the middle will show with a low-cut dress or bathing suit.



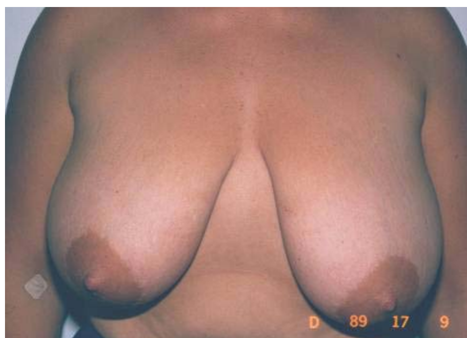


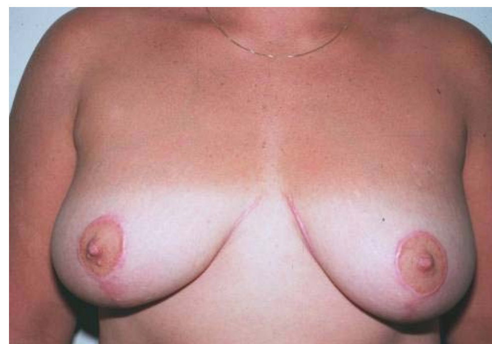
This patient is one of the good scar formers – but the scars are still visible (the other marks seen in the photo are from the brassiere).





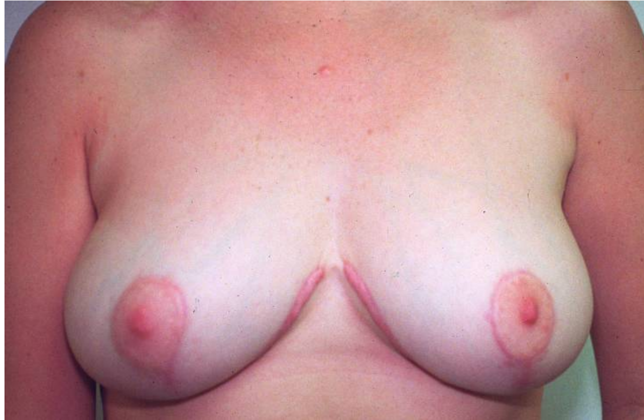
The patient above shows the thickness of the scar that can develop to the side of the breast as it goes toward the armpit. This scar can remain thick, raised, and red forever.



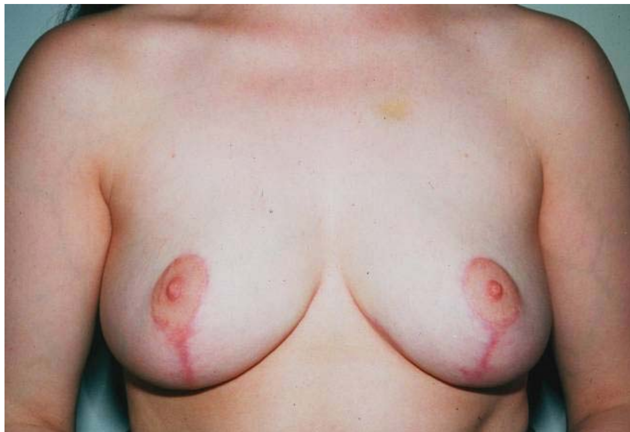


You can see that the scars in the middle are also thick and would be visible with certain types of clothing and bathing suits. Although many people will try to explain why the

scar on one side looks better than the scar on the other side, it is actually not easily explained. Whoever solves the problem of scarring should win the Nobel Prize!



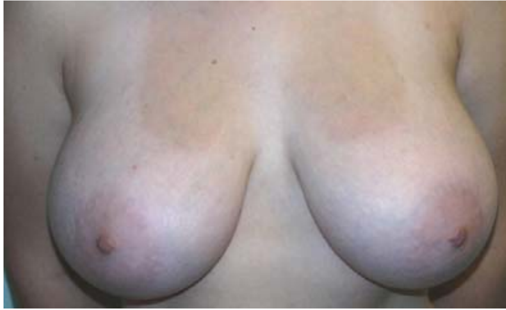
We always think that bad scars form in dark skinned patients, but the patient shown here was a blue-eyed blonde. This is actually one of the worst scars that I have seen in a breast reduction. They did flatten and fade over the years, but it is important for patients to understand that bad scarring can happen. Unless you have scars already, it may be difficult to know before surgery what type of scars you will form.

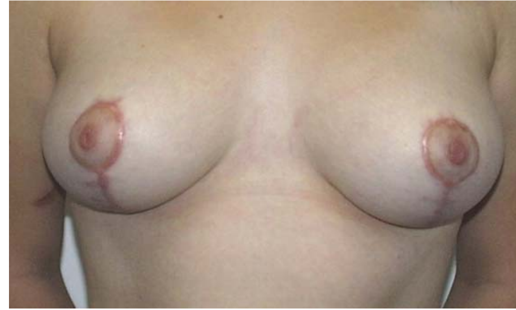


The above patient shows fairly typical scars that result from breast reduction surgery. This photograph was taken about 7 months after surgery. Scars are often at their worst at 3-4 months and they can take two years and more to settle.

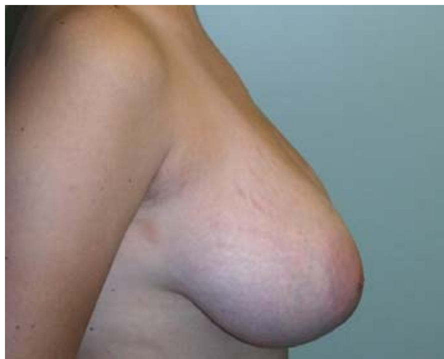
We are always searching for ways to improve scars. We have tried vitamin E, aloe vera, silicone sheeting and silicone creams. None of these methods have really helped much. There is some evidence that paper tape might help. We put paper tape (3M Micropore) tape over the incisions at the time of surgery and we leave it on for a few weeks. You shower directly over the tape and pat it dry. You can trim the edges of the tape, but otherwise leave it alone. If you wish to try the tape long term, it is important to apply it and leave it on for several weeks at a time – for about 6 months to a year.

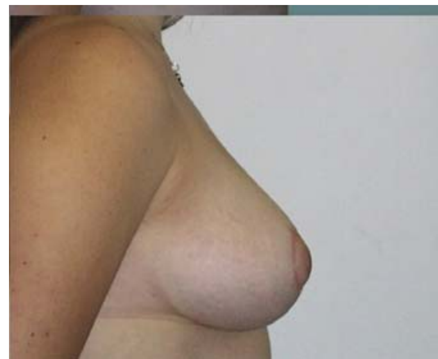
2. **Vertical technique:**



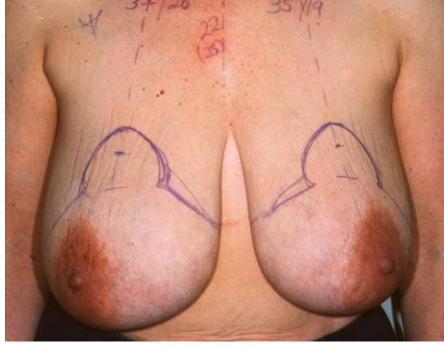


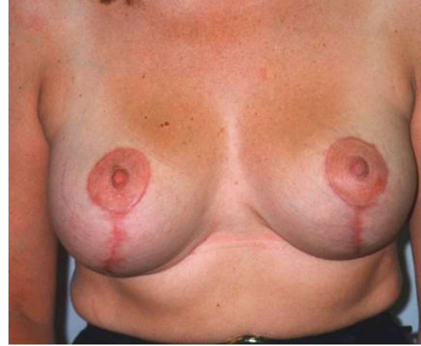
Although this patient is also a bad scar former, the vertical technique resulted only in a scar around the areola and down – she would have ended up with an even thicker scar underneath along the fold if I had used the anchor technique.



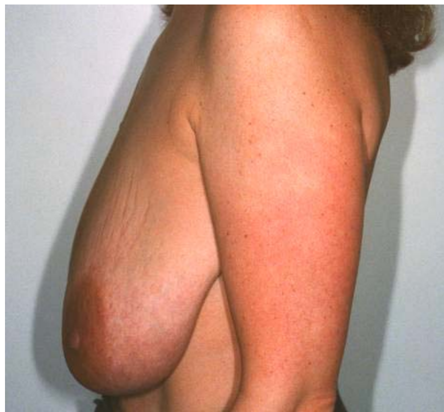


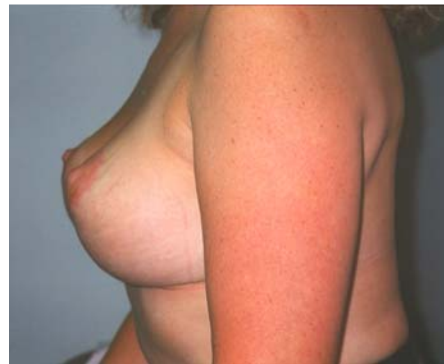
The above photos show the same patient from the side. It is important to note that the stretch marks are still there. No one has yet figured out a way to improve stretch marks.





This patient had two children. Her breasts sagged because of genetics – not because she did or did not wear a brassiere.



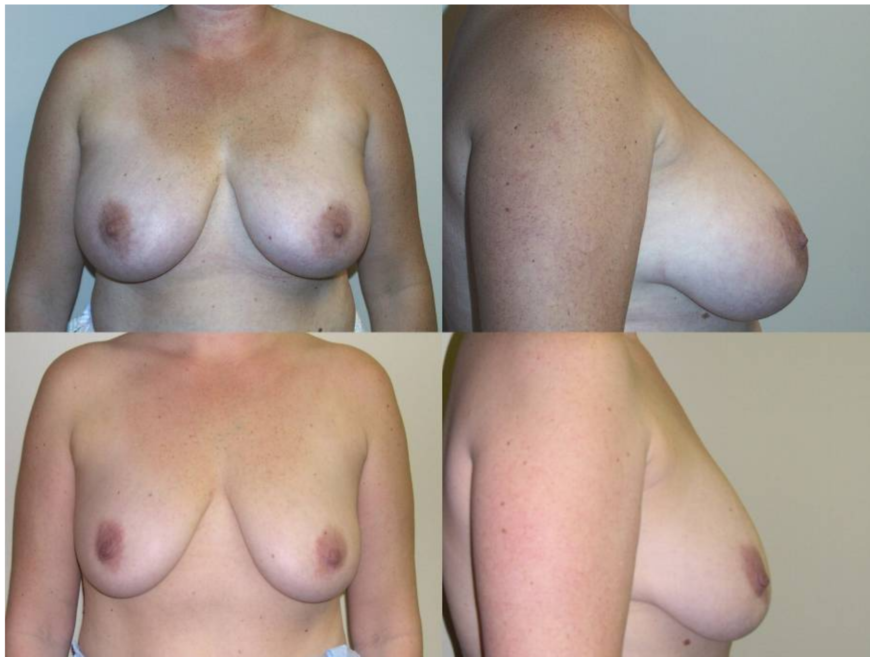


One of the problems with breast reduction surgery is that the breasts sometimes "bottom out" over time. You can see that the skin has stretched out in this side view of the same patient. All the weight of the breast is on the skin below the nipple. It is this skin that stretches with time and gravity – not the skin above the nipple. This makes the nipple look a bit high.

3. **Liposuction-only:**

Liposuction-only for breast reduction works best in the older patient when the breasts are more fatty and less glandular. But usually the nipples are low in the older patient and liposuction without skin removal ends up with a sagging breast. We would love to be able to offer liposuction-only for teenagers, but it is often unsuccessful. If the teenager is close to her ideal body weight, the breasts are mainly glandular with very little fat.

I will perform breast reduction using liposuction-only in a patient who has high nipples (otherwise the breasts look too saggy) and who is over 30. Sometimes liposuction-only doesn't work and patients need to be prepared to go ahead with the vertical technique if the liposuction fails.



This patient underwent breast reduction by liposuction-only. You can see that the surgery was "successful" but she lost fullness and projection. She came back later and asked for an "uplift". This was then performed using the vertical technique.

The advantage of liposuction-only is that there is minimal scarring and less likelihood of damaging nerves for sensation and less likelihood of damaging ducts for breast feeding. There are also fewer complications in that wound healing problems and potential loss of circulation to the nipple are significantly reduced. However, breast reduction by liposuction-only does not work in all patients and does not give as good a cosmetic result as far as shape is concerned. What is important to one patient is not important to another patient. If I believe that liposuction-only is a possibility, I will discuss it with you – but

the final decision will be yours. I will definitely discuss the pros and cons with each patient.

The following is a summary of the various techniques:

1. Anchor technique:

1. More scarring
2. Less likely to need revision
3. Less projection
4. Sags more with time

2. Vertical technique:

1. Less scarring
2. 5% revision rate
3. Better projection
4. More stable with time.

3. Liposuction-only:

1. "No" scars
2. Less lift
3. Less projection
4. Fewer risks
    - Nipple circulation
    - Nipple sensation
    - Breast feeding

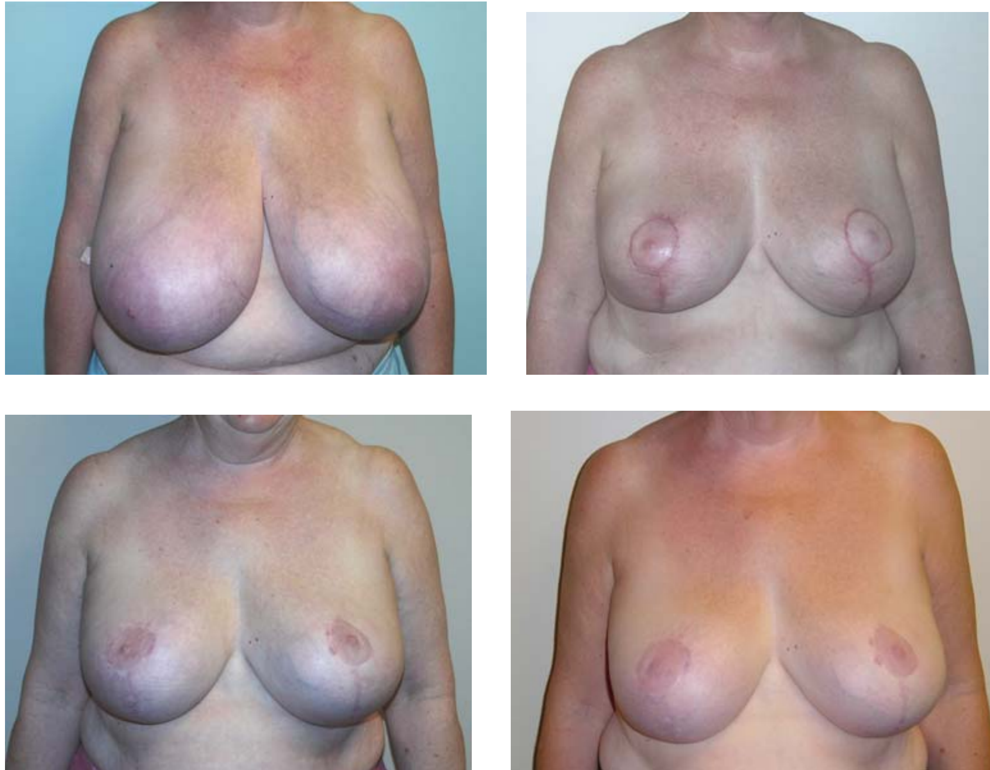
The need for revision varies with each technique. We always allow the shape to settle for a full year before deciding whether a revision is indicated. With the vertical technique, patients worry about the pucker that persists just above the fold at the bottom of the vertical scar. This pucker settles with time: 95% of patients worry about it, and only 5% of patients need to have it corrected – and not until a full year has passed. Revisions are less likely with the anchor technique – not so much because they aren't indicated, but because we have very little to offer to correct the puckers (the technical name for these puckers is actually "dog-ears").

In order to remove the puckers that develop with the anchor technique under the arm (this is extra skin) the scar would need at times to extend all the way around the back. This is especially true with all techniques in patients who have a significant amount of excess skin (as in patients who have experienced a large weight loss). Sometimes a good correction just cannot be achieved.

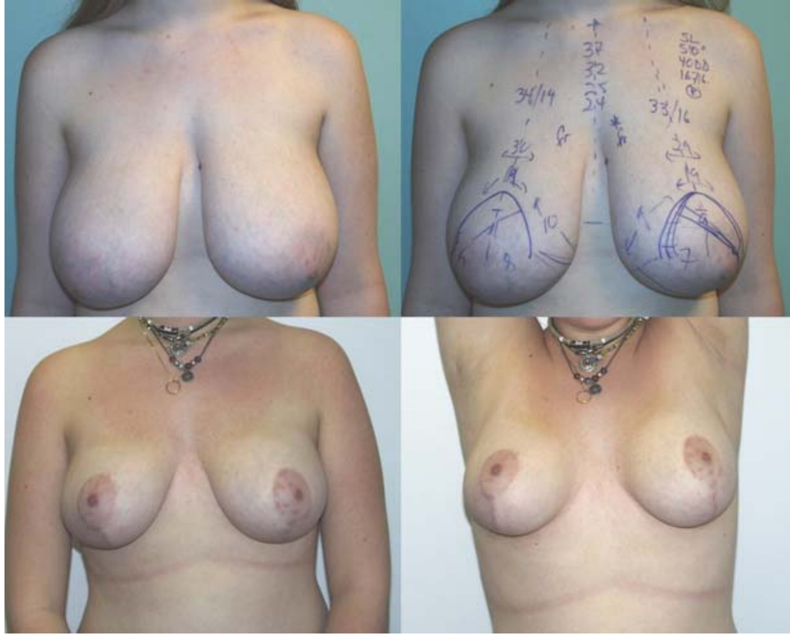
PROBLEMS ASSOCIATED WITH BREAST REDUCTION SURGERY:

1. SCARRING:

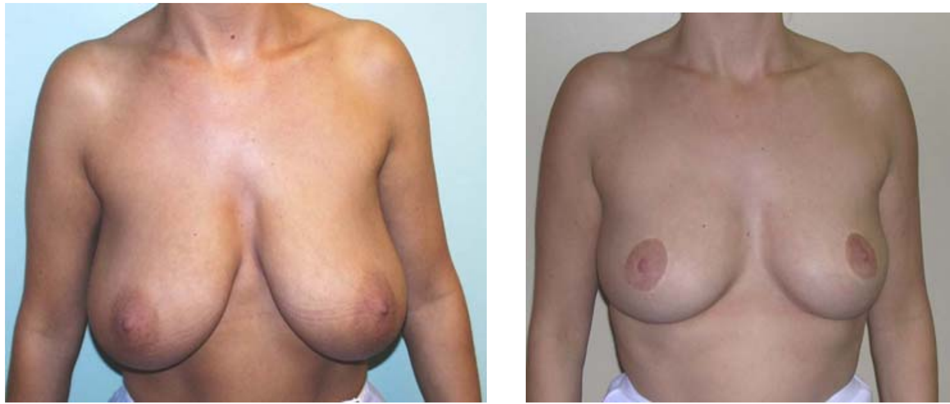
This has been detailed above in the descriptions of the different techniques. Scarring varies with the individual and there is very little that we can do to either prevent or treat scarring. If problems develop with wound healing or infection, the scarring may be more conspicuous.



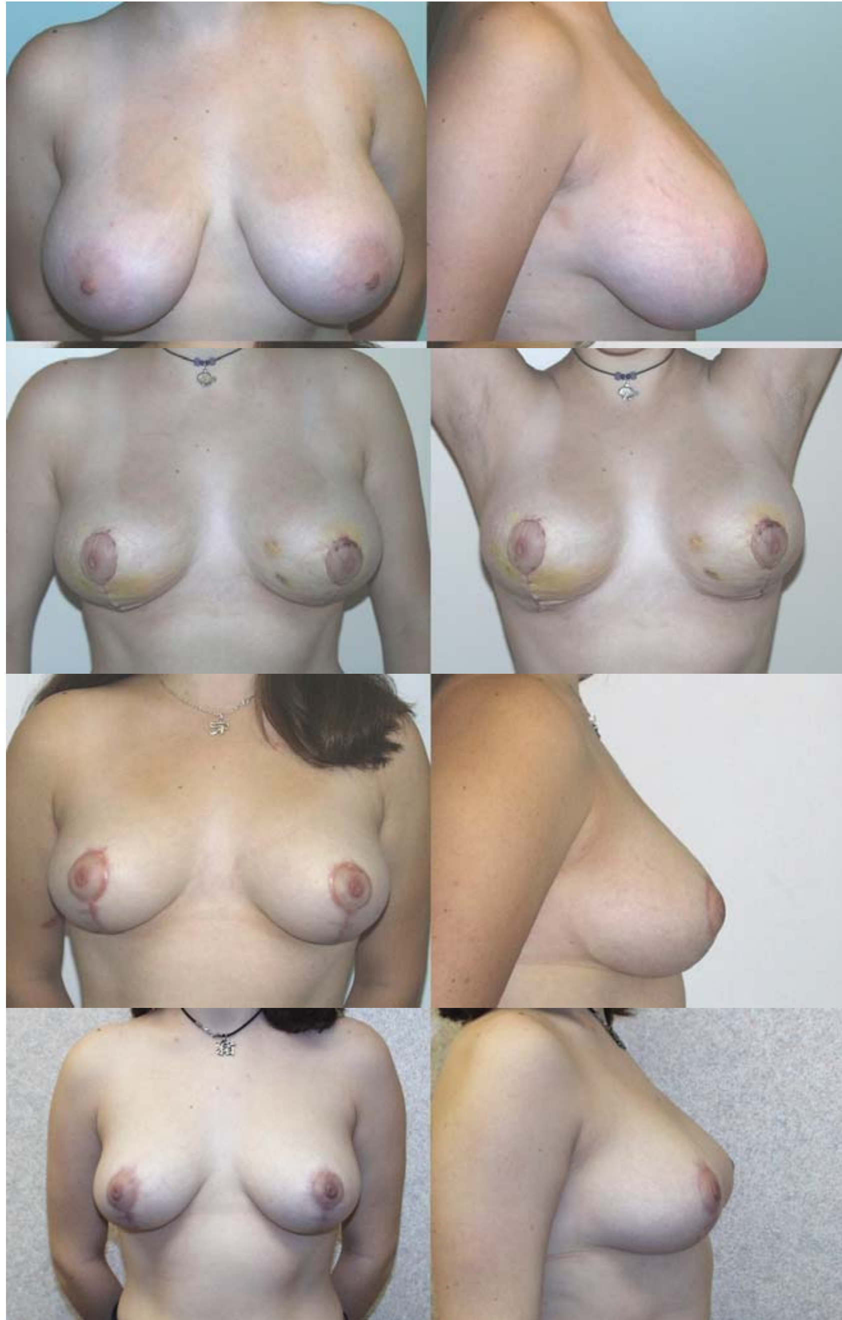
The above patient is shown before surgery, at 2 months after surgery, at 3 years after surgery and at 4 years after surgery. You can see that the scars have improved even between the 3rd and 4th year postoperatively.



This patient is shown before surgery at 16 months after surgery.



This patient developed good scars. She is shown 4 years after surgery.



This patient did not develop good scars. She is shown before surgery, at one week after surgery, at one year after surgery and then at 4 years after surgery. The scars continue to improve after one year, but they are still obvious.

2. SENSATION:

Sensation can be decreased to both the nipple and areola as well as the breast skin itself. Most patients have some return of sensation, but this is unpredictable. 85% of patients eventually recover normal to near-normal sensation in the nipples. But that means that 15% of patients lose some – rarely all – sensation. There is nothing that I can do to either predict who will maintain sensation and there is nothing that I can do in surgery to make sure that you are in the 85% group.

Most patients have numbness in both the nipples and the breast skin right after surgery. If you have sensation immediately, it is a good sign, but it may be somewhat uncomfortable. As the sensation returns, you may get sudden, sharp, shooting pains, or you may experience tingling, hypersensitivity and discomfort. Even clothes touching the nipples can be annoying. This will settle with time, but in the meantime you can use anti-inflammatories such as ibuprofen (not until at least 2 days after surgery though). It can take up to a year or more for the sensation to return. Some patients say that their sensation is actually better after surgery.

3. BREAST FEEDING:

Breast reduction surgery can interfere with the ability to breast feed. We usually tell patients that there is a 50/50 chance of being able to breast feed after surgery. There are some interesting statistics that show that it may actually be the fact that the breasts are large rather than the surgery itself that causes the problem.

There is a plastic surgeon in Puerto Rico who studied patients who had breast reduction surgery and then had a child versus patients who came for the breast reduction consultation, decided not to go ahead with the surgery and then had a child. Of the patients who had the surgery, 65% were able to breast feed and 24% of those had to supplement. Of the patients who had large breasts but did not undergo the surgery, 61% were able to breast feed and 22% of those had to supplement. In other words, the statistics appear to be very similar.

There is nothing I can do to predict who might or might not be able to breast feed, and there is nothing that I can do at surgery to try to maintain breast feeding ability. You should still think of it as a 50/50 chance – if it is very important to you, then you may be better to wait until after having your children before considering breast reduction surgery.

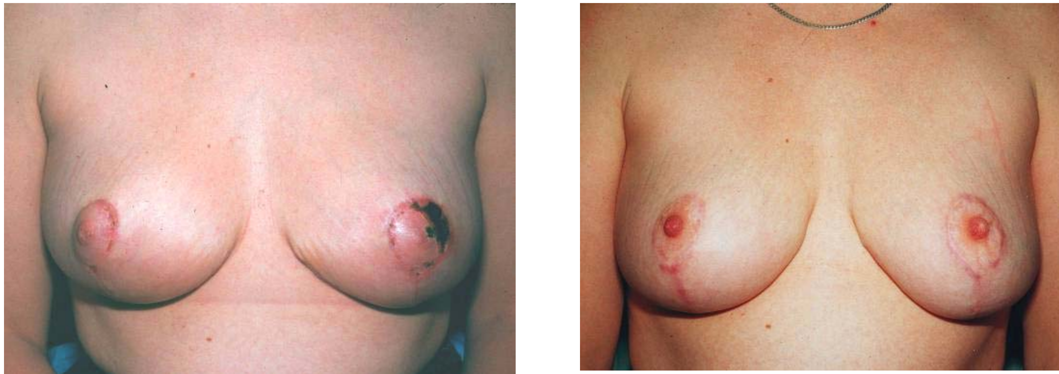
POTENTIAL COMPLICATIONS:

All surgery has the potential for complications to occur. These can vary from minor complications that are often relatively common to major complications that are relatively rare. You need to seriously consider these because no surgery is risk-free.

Complications that are usually relatively easy to treat would be wound healing problems, infection, fluid collection and excess bleeding. Patients are all placed on antibiotics at the time of surgery. It is rare that patients need to be taken back for surgery because of excess bleeding, but this can occur – especially when patients take herbs or anti-inflammatories before surgery.

Breast reduction surgery is a blood-supply reducing operation. When the breast tissue is removed and when the nipple is moved to a higher position, many of the nerves, blood vessels and ducts are cut or removed. It is for this reason that all patients should stop smoking at least 4 weeks before surgery – because nicotine reduces blood supply. Smoking can make tissue with an already compromised circulation become dead or "necrotic". But this can happen even in non-smokers. I wish that I could tell you that nipple loss doesn't happen – but it has, it does, and it will – but rarely.

Sometimes the loss of circulation only affects a small part of the areola (as in the following photograph).



In this case, we just let the scab fall off, the area heal. This took about 2 – 3 months. You can see that the scar where the "necrosis" occurred is a couple of months behind the rest of the scar.

Other, more serious, complications can also occur. Blood clots can form in the veins of the leg (deep vein thrombosis) and the blood clot can then break off and travel to the lungs. If it is a large enough clot, this can be fatal. You may have heard of this problem called the "economy class syndrome" because it can occur when someone is on a long flight and does not get up and move. Obviously this complication is very rare and we try

to prevent it by putting intermittent compression devices on your legs while you are under anesthetic. We also try to get you up walking as soon as possible after surgery and we encourage you to wiggle your toes and move your legs while you are in bed. There is a reason why the nurses push you to get up early!

Other, more common, problems are cosmetic. The breast shape may not be what you desired. Your breasts may not be symmetrical. One breast may be bigger than the other and one may have a different shape. These differences occur naturally. If you have some of these problems, we wait for a full year to let things settle down. These differences can cause patients undue concern in the first weeks and months after surgery – but you must be patient and not worry – they usually settle down on their own. If not, then you and I will discuss a possible revision to correct the problem. Remember, however, that 95% of patients worry and I only need to correct 5% - and not until a full year has passed.

SIZE:

I will ask you to bring photographs to the hospital or surgical facility the day of your surgery. We use these pictures to help plan your breast size and shape (the best magazines to purchase are "Perfect 10" and "Playboy Lingerie"). You can go online to sites such as breastimplantinfo.com and perfect10.com and download some photographs from there. I have lots of pictures in both places if you do not want to bring any in. I cannot promise you a certain size (and especially not a certain shape).

In fact, patients will ask me after surgery what size they are – and I still don't know. Bra sizes can be of some use in the discussion, but you need to be aware of how different bra sizes are (and of course it depends on how much you force into your bra, what clip you do it up on, and what style you buy). There is no "right" size – but the best way to figure out your "chest" size is to do what they do at Victoria's Secret – they put a measuring tape around your chest underneath your armpits. Remember that a 36B is the same cup size as a 34C – which is the same cup size as a 38A. A "C' is a very different cup size in a 32 compared to a 40.

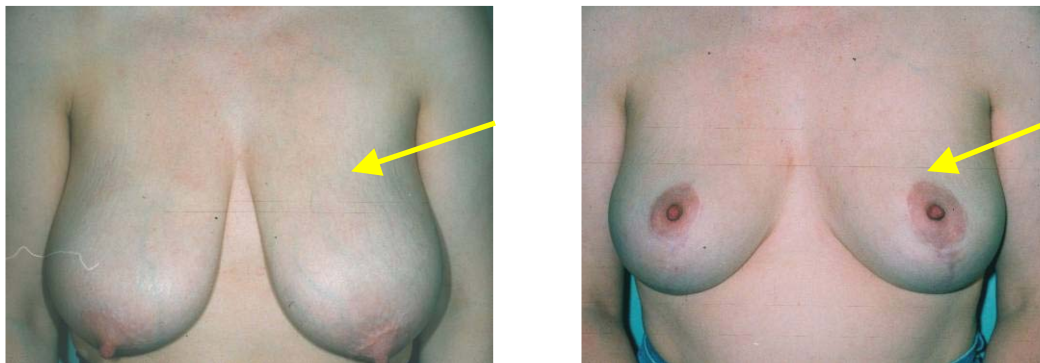
Patients also need to have realistic expectations. I cannot give someone a 34 B if they start out at a 42DD. Even though I routinely do liposuction for shaping, I cannot change the size of your chest wall. One bra cup is about 180cc (a kitchen cup is about 250cc). My average breast reduction is between 500 and 600 cc ("gms" and "ccs" are almost equivalent – one pound is 454 gm).

If I disappoint patients, it is because I don't make the breasts small enough. I would like to – but I am restricted by blood supply and shape issues. The "pedicle" of tissue that carries the blood supply to the nipple is at least a "B" cup and I still need to leave tissue around the breast for shaping. The larger the breast, the harder it is to make it very small. Most patients will still end up with a "C" or "D" cup. I find it very helpful to know what you want as far as size is concerned, but I cannot promise any specific size.

SHAPE:

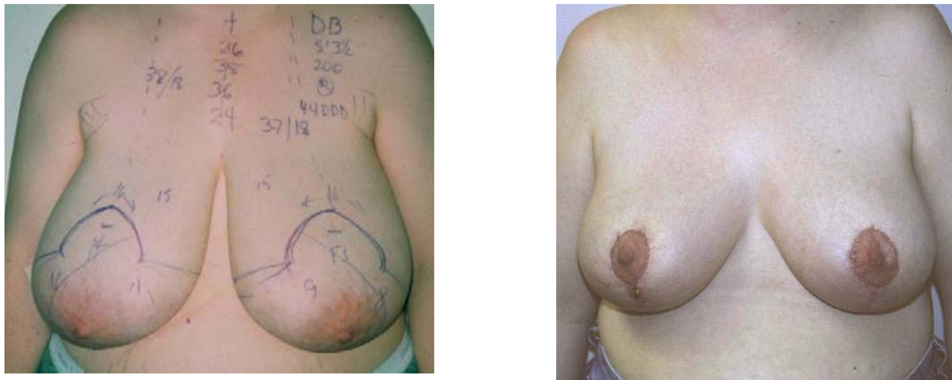
Shape is actually more difficult. The shape that you end up with is determined by the shape that you start with.

Some patients want a full upper portion to the breast – but this is only possible if they had fullness there to start with. If a patient has a "ski-jump" shape to the upper pole of the breast, this will not be improved with breast surgery. Unfortunately, we have not been successful at moving the heavy inferior breast tissue into the upper pole of the breast. The only way to fill up the upper pole is with a breast implant – and that doesn't make much sense when we are doing the surgery to reduce breast size.



This patient had a breast reduction using the vertical technique. Her scars are good, but I could not give her any more upper pole fullness (yellow arrow) than she had before surgery.

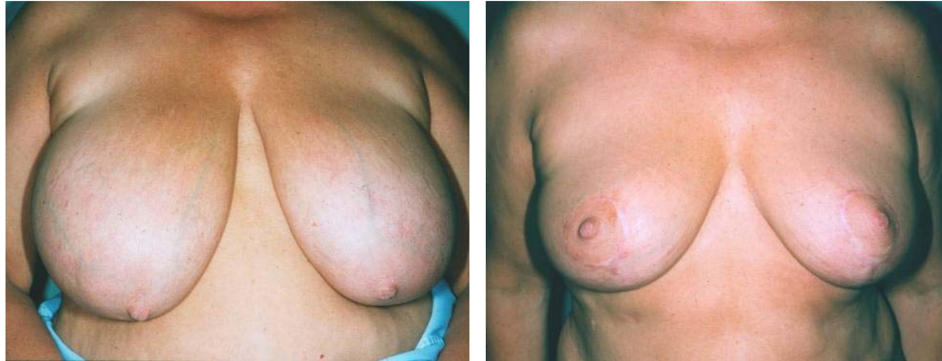
Some patients wish that their breasts were higher on the chest wall – but this position cannot be changed. The level at which the brassiere underwire sits will not change. Occasionally that level will rise slightly, but not significantly, with breast reduction surgery.



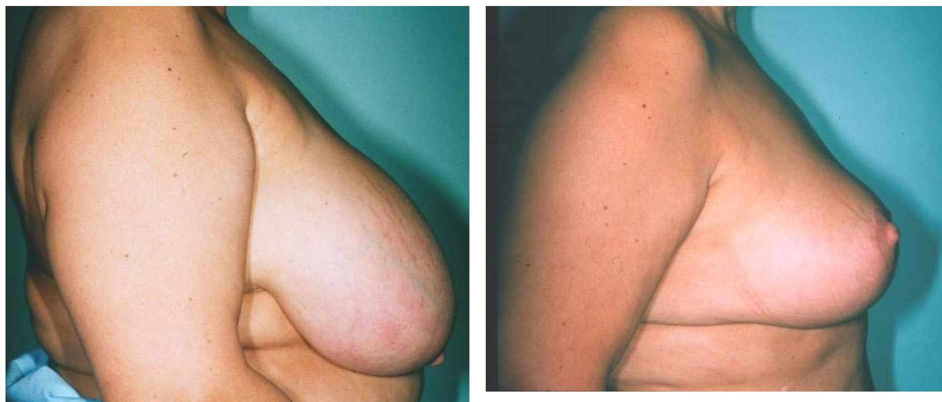
The above patient told me that she wished that I had placed her nipples higher – but if I had, they would be showing above the brassiere line. The problem wasn't nipple position

– it was the fact that the breasts were low on the chest wall – and that is something that I cannot change.

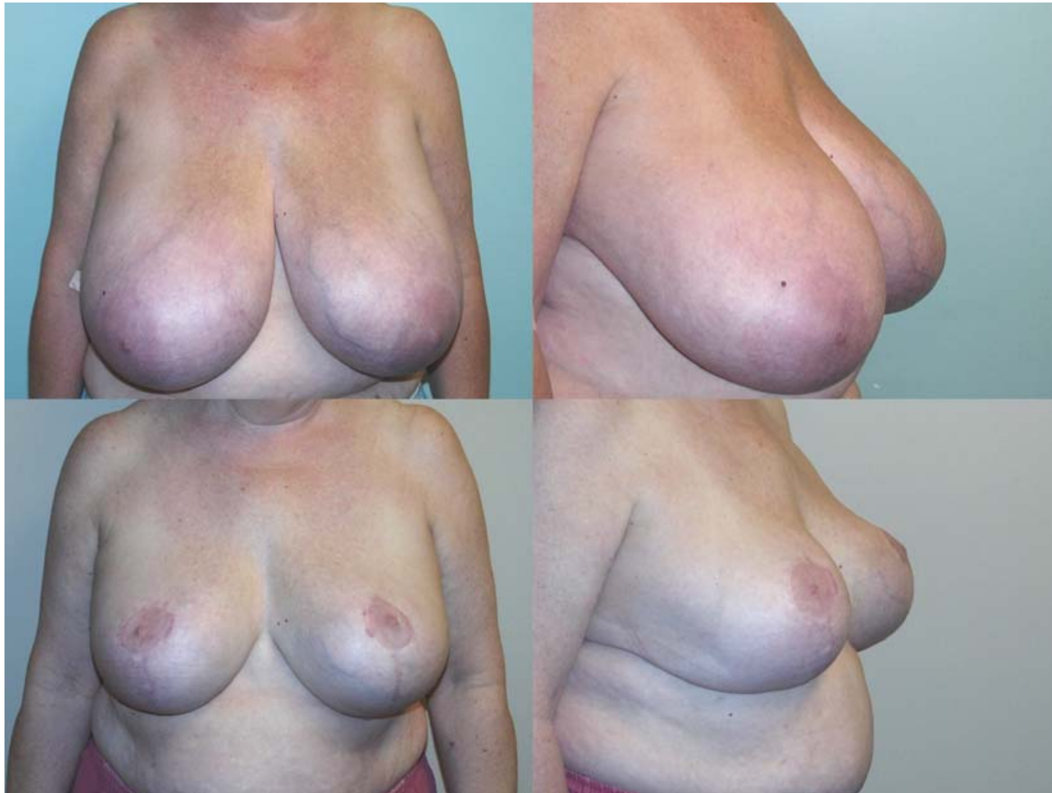
I usually make the areolas smaller to fit the new breast size, but sometimes they stretch back out to a certain degree. Also, the reactivity of the nipple and areola may be variable – which means that the shape will vary if you are cold or warm. This will settle over time, but may never be completely even. Most areolas are not perfectly round to start with and sometimes they are not perfectly round after surgery.



This patient wished that I could have improved her shape from the front view more than what was possible. She also, unfortunately, developed fairly obvious scars (this is about 7 months after surgery).



This is the same patient seen from the side. The amount of fullness in the upper pole of the breast does not change. This patient also had liposuction of the chest and abdomen. You can see that the contour is improved, but there is still a problem with excess skin. A long scar going around to the back would be needed in order to correct this extra skin. You can also see that liposuction gives a better contour – but not necessarily a "smooth" contour.



This patient was very large. Even though her postoperative result would still qualify her as a good candidate for a breast reduction, she was pleased with the size because it was so much smaller than what she had before (I removed over 1200 gm on each breast – about 3 pounds each).

As you can see from the side view, the shape is not ideal. If you compare this shape to the first patient (teenager) shown under the vertical technique, you can see how the shape that results after surgery is determined as much by the shape that was present before surgery. Heavier patients do not get as nice a result as patients who are closer to their ideal body weight.

WHO IS A GOOD CANDIDATE FOR BREAST REDUCTION?

The best candidate for breast reduction surgery is a woman who is close to her ideal body weight, who is healthy, who is a non-smoker and who has realistic expectations.

1. Age:

Age is not a contraindication to surgery – at either end of the scale. The oldest patient in my practice was in her 80's – she was healthy and just finally found the weight of her breasts too hard to bear. She recovered faster than many of the teenagers!

As far as teenagers are concerned, it really depends on the maturity of the patient – and of course how much support she has from her family. It is never an easy decision to make, but my own personal feeling is that if a 14 year old is already a DD (and close to her ideal body size) there is no good reason to wait. What happens all too frequently is that the girl hides, stops participating in sports and then gains weight – making things even worse. Although a teenager's breasts may still grow after surgery a second procedure later in life is not difficult. Some of these patients will then wait until after they have had children to have a re-reduction or a subsequent breast lift.

Breasts rarely grow after breast reduction surgery. There are a few, very rare, reports of continued breast growth. Of course, if the surgery is performed as a teenager, then some normal growth may still occur. Breasts tend to get a bit larger around menopause – this is usually due to weight gain rather than hormonal therapy.

2. Body Weight:

Heavier patients do not get as good a result. The cosmetic shaping is not as good, and these patients are more likely to develop complications. Heavier patients are also at greater risk from anesthetic complications. It is for this reason that the anesthetists have set a weight limit for surgery – this is calculated on the basis of body mass index – but on average the upper limit is about 200 pounds.

Many patients argue that it is hard to exercise with large breasts (which is very true) and that they need the surgery before they can start to get in shape. Unfortunately, human nature sometimes wins out over good intentions. I did a study of my breast reduction patients and looked at how many patients gained weight after surgery and how many lost weight. One third gained, one third stayed the same, and one third lost weight. The patients who gained weight tended to be those patients who were already heavy. It is clear that patients need to make a commitment to a more active lifestyle before they consider surgery. Breast reduction may not be the best first step in this process.

I have no more magic than anyone else when it comes to losing weight. But I can tell you that the patients who have had the most success in losing weight are those patients who have exercised. Diets don't work – except in the short term. When patients starve themselves, they lower their metabolic rate – the body is saving up and will make the maximum use out of every calorie taken in. On the other hand, patients who exercise will raise their metabolic rate and losing weight becomes much easier.

Losing weight is "simple". It comes down to a balance between calories taken in and calories burnt off. The rate limiting factor is the metabolic rate – and we need to exercise to increase it. Denial doesn't work for many of us. We fail, we feel guilty and we "reward" ourselves with more food. It is important to understand and accept that it is the "calories out" that will lead to success in losing weight.

Some patients ask to be allowed to book surgery so that they can give themselves an incentive to lose weight. Unfortunately, human nature sometimes wins out over good intentions and this almost always backfires. Almost every patient who has tried this has ended up gaining weight instead. I have therefore instructed the staff not to book surgery until the patient has achieved an acceptable weight.

3. Health:

It is not that we don't operate on patients who have medical problems such as diabetes, asthma, and high blood pressure. But we do want any medical issues to be under good control.

The nurses will review your medical history with the anesthetist. They will then determine if you need any extra tests or assessments performed. For example, if you just have some mild asthma with exercise, then they will just give you some medication before surgery. On the other hand, if you have had more serious problems, you may need to undergo lung function tests and your medications may need to be adjusted.

Some patients resent the fact that we send them for preoperative testing. But it is important to me to make sure that we have every "t" crossed and every "i" dotted. Safety is a priority.

4. Smoking:

Patients do not understand (or want to understand) how much smoking increases the risk of complications – both from an anesthetic standpoint but also from a healing standpoint. Just because you might have had "no problems" in the past does not mean that you actually were not at increased risk.

The relationship between smoking and loss of blood supply is so clear that all patients need to realize that smoking increases the likelihood of having problems.

5. **Realistic expectations:**

This has been covered already in the discussions about size and shape, but it is worth repeating. If I disappoint patients, it is because I often cannot make their breasts as small as they would like.

I am also limited when it comes to shape – the shape of the final result is determined to a significant degree by the shape that a patient has to begin with.

BREAST CANCER AND BREAST REDUCTION SURGERY:

Patients often ask if there is any relationship between breast reduction surgery and the development of breast cancer.

There are actually three studies that have come from Ontario and Scandinavia that have shown that there is an actual reduction in the risk of developing breast cancer in those patients who have had breast reduction surgery. Obviously this doesn't mean that patients should consider breast reduction surgery as a means to reducing their chance of developing breast cancer, but it does mean that patients can be reassured that their risk is not increased.

Many patients think that they do not have a risk of developing breast cancer because there is no history of breast cancer in the family. Family history is actually not that important – our biggest risk is just being female. The standard risk is one in seven to ten women will develop breast cancer over their lifetime. Family history (and this is on the mother's side) might increase the risk from one in ten to one in eight or nine. Much will depend on genetics – how do you know if neither you nor your mother has any sisters? It is a very confusing area to understand what the statistics actually mean.

All the breast tissue that is removed at surgery is sent to the pathology laboratory. They will then look at a representative section under the microscope. Usually they just report normal breast tissue. Occasionally they will describe the cells as being "active". We do not know exactly what this means, but it may mean that your risk of developing breast cancer in your lifetime is slightly increased. We call all patients and let them know what their "pathology" shows. If we tell you that your cells are active, it does not mean that you should worry – it just is a push to remind you to be conscientious about following up with breast self examination, physician examination, and mammography. No one thing for screening is "perfect", but using all three modalities can be helpful.

MAMMOGRAPHY:

I ask for all patients over 40 to have a mammogram before breast reduction surgery. I do ask that you make sure that you have the mammogram performed well before your surgery date so that anything can be investigated and treated. Please ask the radiologists to send me a copy of the results (this still often does not happen). It is important for you to check with your family doctor to make sure that the results have been reported (they sometimes get lost) and that there are no areas of concern.

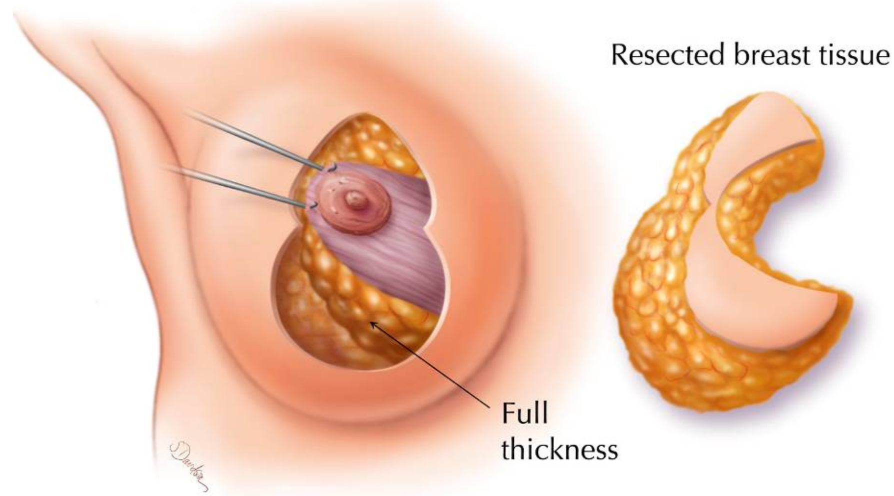
The advice around routine mammography is very confusing. It depends whether you read an American or a Canadian publication. The Americans say that you should have a mammogram every year after age 40. But the Canadians believe that following this advice will lead to far too many unnecessary biopsies. Our rules are a mammogram every two years after age 50 – unless you have a significant family history.

As far as getting a mammogram after surgery – wait at least 6 months – and then just follow your normal routine. That first mammogram may be confusing – and they may call you back for extra views. Don't worry – this new mammogram will serve as your new baseline. Mammograms work best when they can compare them to previous ones – which is why you should always go to the same place each time.

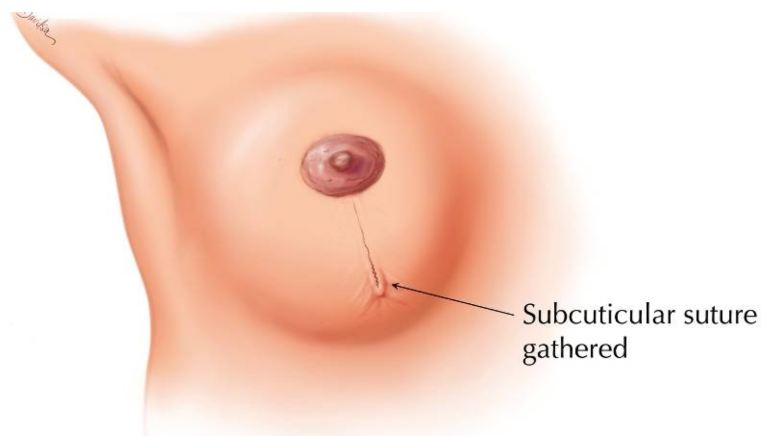
If you develop a lump after surgery – come and see me. I can tell you whether the lump is just a normal consequence of the surgery (which is what it usually is) or whether something else needs to be done. Don't let anyone suggest a mammogram until I have seen you.

HOW IS THE SURGERY PERFORMED?

Breast reduction surgery is performed under a full general anesthetic. Many patients cannot understand how the surgery is performed and some drawings can help:



You can see that the "pedicle" that carries the nipple and areola has had much of its blood supply, sensation, and ductal tissue removed as the reduction is performed.



Closing the vertical skin incision results in a pucker at the lower end. This pucker will settle with time – and waiting for this to happen is preferable to having a long unsightly scar from side to side along the fold.

WHERE IS THE SURGERY PERFORMED?

I perform breast reduction surgery both at the Mineral Springs Hospital in Banff and also in my own surgical facility in my office in Cascade Plaza in Banff.

Breast reduction surgery is often performed as day surgery – but, because most of my patients come from out-of-town, I prefer that they stay overnight. If the patients have surgery at the hospital, they will be supervised overnight by the nurses. Patients will still need someone available to drive them home the next day.

If the patients have surgery in my office surgical facility, they may stay overnight in the apartment I provide in the same building – but patients need to have someone (a caregiver) stay with them. I do not provide overnight nursing care. That said, some patients will still decide to go home the day of the surgery – but they still need a caregiver with them at all times for the first 24 hours after surgery.

All patients have both my home phone number and my cell phone number. I prefer that patients call either the office (during the day) or me (in the evenings and on weekends) if they have any concerns. I like to see patients at some time in the first month (depending on how they are recovering) and then at 3 months, 6 months, one year – and every year after that. We will help you organize the first postoperative visit but we leave it up to each patient to call the office and arrange any subsequent visits to fit your schedule.

My staff and I go into Calgary once a month to see patients in follow-up (not new patients). These are quick visits, but they save patients a drive up to Banff. Patients are welcome to come to Banff any time if they have concerns or if they have more to discuss than that which can be handled in a short visit.

Some patients ask about having other procedures, such as abdominoplasty (tummy tuck), blepharoplasty (eyelid surgery) or liposuction (on areas other than the breast) performed at the same time. Usually one other procedure can be performed at the same time, but this is something that you need to ask about.

PREOPERATIVE PREPARATION:

Patients need to be healthy and in good physical shape. The other thing that is very important is that patients must stop taking all preparations which can increase the risk of bleeding. This is unlikely to need a blood transfusion, but excess bleeding can occur. This can delay recovery, cause wound healing problems and may lead to the use of drains or re-operation.

We will give you a list of products to avoid. This includes aspirin, anti-inflammatories and herbs such as gingko. Tylenol is fine. So is codeine. But drugs such as ibuprofen, advil, motrin, naprosyn, ponstan, etc are a real problem. One single aspirin 10 days before surgery can cause excess bleeding. Any other drug which causes "thinning" of the blood must be stopped: coumadin, plavix, heparin etc.

Many people do not realize that herbal preparations are drugs. The reason that people like taking them is because they do have some effect. But they don't realize that they also have side effects – and one of these is excess bleeding. My problem is that I don't know what herbal preparations contain – or what has been added – so it is important to stop taking ALL preparations – including vitamins and herbal teas.

Vitamin E, omega 3 fatty acids, garlic pills, ginseng, and grape seeds, have all been shown to increase bleeding.

Some other preparations can cause other problems. Anesthetists may cancel surgery if patients are on St. John's wort or echinicea. They can interfere with the anesthetic agents.

POSTOPERATIVE RECOVERY:

Breast reduction surgery is not very painful. The areas where liposuction has been performed can be more of a problem – sore and bruised. These areas become hard and lumpy and can take weeks to settle. Most patients take some pain medication – but only for a few days. Some patients take no medication at all. Patients start with medications such as Tylenol with codeine – and after 2 full days they can switch to an anti-inflammatory such as ibuprofen.

Patients wake up with a surgical brassiere in place. There is gauze over the incisions and some blood can seep into the gauze. This is removed the next morning and patients may then have a shower and wash directly over the area. The incisions are covered with paper tape – just pat the tape dry and let it take three weeks to peel off.

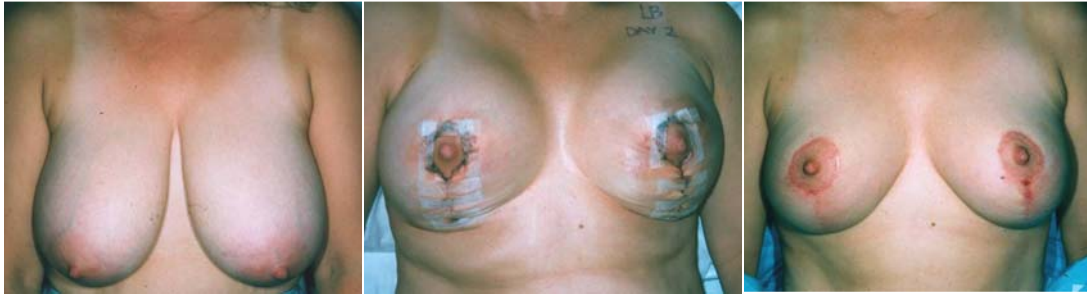
Most patients wear the brassiere for about two weeks – night and day. After that, the best choice is a sports type bra or a lycra camisole top. Patients need to look for a band that comes down on the chest wall so that it does not dig into the lower part of the breast. It may take a few months before an underwire is comfortable. Patients should feel free to go without a brassiere completely if they wish.

The sutures all dissolve – but they don't actually "dissolve" like sugar in water. The body attacks the sutures and sometimes they get pushed to the surface. When this happens, the area sometimes "festers" and it looks as if the incision is opening up. We NEVER re-stitch an area that has opened. Instead, we will try to remove any sutures that may be exposed – they actually make things worse. As long as the sutures have been in place for two weeks, the sutures can be removed. Patients need to realize though, that in

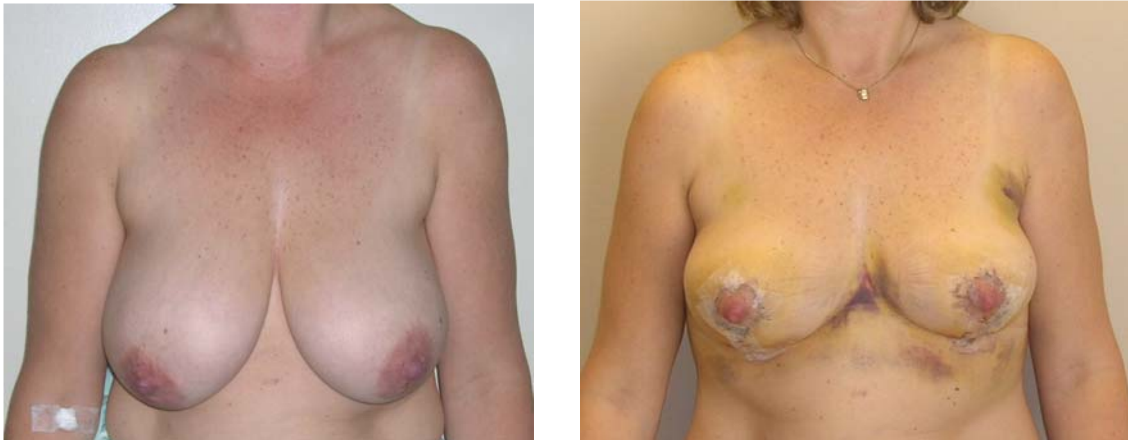
order for sutures to remain strong for two weeks – they take nine months to be "absorbed".

The breasts will not look symmetrical. They will be swollen. They will have an odd shape and will seem to be pushed up too high. There will be puckers of skin underneath and one breast may look larger than the other. All this is normal.

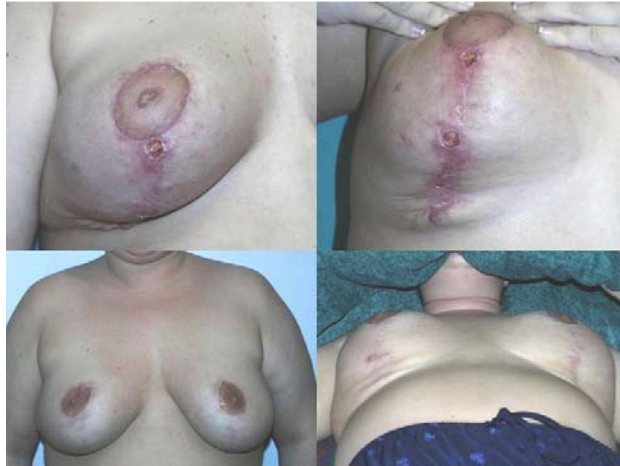
We take photographs every time we see patients (we give you copies at each subsequent visit). These photographs are helpful for you to follow how things are settling down. It is sometimes hard when you see the problem every day.



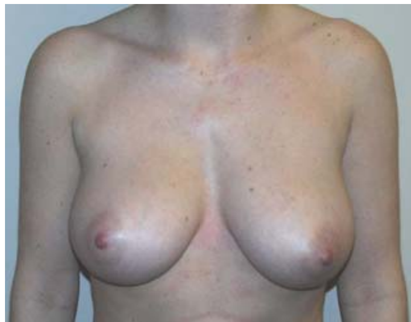
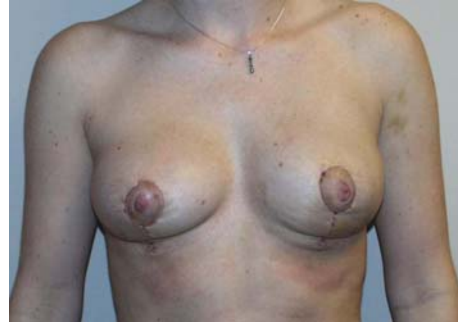
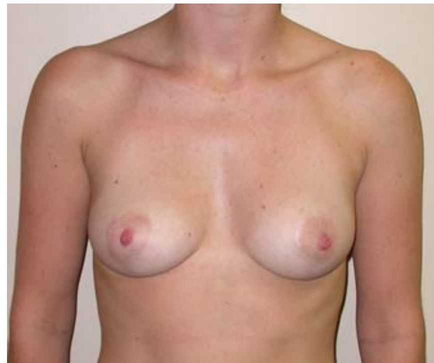
This is a patient before surgery shown in the photograph on the left above. The centre photograph shows her on the first day after surgery where the breasts look pushed up and too full underneath. The photograph on the right shows what she looked like at two weeks. The small opening under the left areola is where a suture was removed. It healed and closed overnight.



Bruising can be more extensive than what is shown in this photograph. It can extend not only in front of the armpits and in between the breasts, but it can extend down the chest wall and over the ribs. Note the paper tape over the incisions. The tape is left in place for three weeks. Patients can shower daily and then pat the tape dry with a towel.



Wound healing problems like this are rare – but these areas are never re-stitched. In fact, any exposed sutures need to be removed. The bottom right photo was in a patient before I routinely used liposuction – you can see the area of fullness that was not corrected. The result was less than satisfactory. I now perform some liposuction for shaping on all patients.

This patient developed good scars. She is seen before surgery, at 10 days after surgery and then at 18 months after surgery. The breasts are not symmetrical and there is an obvious pucker on the left side seen at 10 days after surgery. Patience is essential while waiting for the shape and scars to resolve.

VISITING SURGEONS:

I did not "invent" this vertical technique – far from it. But I did modify it – and surgeons do come and visit to see how I have changed the technique. Most patients do not mind if someone is watching while they are asleep, but these surgeons need to see what I am doing when I do the measuring and marking. This is not easy for patients – but it is important.

I do not always know ahead of time when someone is coming – so I cannot always warn patients. Just as it is essential to take photographs of patients, it is important that patients who choose to have surgery with me need to realize that they may have one or more surgeons visiting. I would like to thank all previous and future patients for being patient with this process. I know it is difficult.

RETURN TO ACTIVITIES AND WORK:

Patients are encouraged to walk the first week. They can then gradually work up to exercise with something like the stationary bicycle (because there is little upper body movement). Some patients who want more aerobic exercise will walk uphill to avoid bouncing. A sports bra (and even an additional tensor bandage) may be necessary if a patient wants to start jogging at 3 or 4 weeks. Swimming involves a lot of upper body movement and is probably the last activity to consider.

If a patient works at a desk, they can usually return to work in about 2 weeks. But patients need to restrict their after work activities – they will not have enough stamina to do it all too quickly. Lifting, reaching, and driving are not restricted (driving is only prohibited if patients are still taking narcotics).

If a patient's work involves more lifting and physical activity, three or four weeks off may be necessary. If a patient works in construction, time off may be even longer.

Patients who have small children are worried about lifting them or being hit or kicked. Lifting may hurt but it won't hurt anything. The same applies to being hit or kicked while changing diapers for example.

RESULTS:

Breasts can change with time and gravity with or without surgery. Breasts can change with pregnancy with or without surgery. Breasts can change with weight changes with or without surgery.