



### Why do women choose breast reduction surgery?

1. Large and heavy breasts can significantly impair a woman's ability to carry out normal everyday work and leisure activities.
2. Large breast size may make it impossible to find clothing that fits well.
3. Large breasts are more difficult to measure accurately and can be very difficult to find the ideal supportive brassiere for. Plus size bras are often difficult to locate, in scarce supply, expensive and there is often limited choice of styles and colours.
4. Many women with large breasts consider themselves to be cosmetically unattractive and have a poor body image and reduced self esteem. This may be exacerbated by negative comments and past experiences.
5. Large and heavy breasts may cause significant neck and back problems leading to worsening posture and worsening pain as time goes on.
6. Large and heavy breast may also cause permanent bra strap indentations and skin problems over the shoulders
7. Large and heavy breast often lead to sweat related skin conditions like dermatitis, rashes and infections in the skin creases underneath them.
8. Large and heavy breasts may be a significant cause of mastalgia or lead to a worsening of hormonal related breast pain.
9. If one breast is significantly larger than the other, the asymmetry may lead to the significant practical problems of bra and clothing choices as well as the cosmetic problems.
10. Some women for their own other reasons would prefer to have smaller breasts to address their own feelings about their body's proportions.

### What breast reduction will not prevent?

1. Hormonal related breast pain – because breast tissue is responsive to hormonal changes, after breast reduction surgery the breast tissue will still be subject to the same hormonal environment. Reduction may however improve the symptoms by reducing the weight of the breasts.
2. Breast cancer – whilst there is some evidence that reducing breast size may decrease the risk of breast cancer it should be remembered that all women have at least a 1:10 life time risk of breast cancer regardless of the size of their breasts.
3. Although an aching back or stooping shoulders may be improved by surgery, any degenerative neck and back damage cannot be reversed. Less breast weight and a better posture may slow down the progression of any future deterioration but this cannot be guaranteed.

### How do I get referred for breast reduction?

Any patient who is unhappy with her breast size and shape may be referred by her General practitioner (GP) to a specialist Oncoplastic Breast Surgeon or Plastic Surgeon for an opinion regarding her suitability for breast reduction surgery. Unfortunately breast reduction surgery is still not widely available on the NHS, except in rare circumstances and in certain areas. Most reductions at present must still be privately funded.

A Specialist Oncoplastic Breast Surgeon with a General Surgical background has a clinical workload relating *almost entirely to women with breast disorders*, and will be able to carry out a comprehensive assessment of your breast health including your individual risk of developing a serious breast problem. In addition to standard breast reduction procedures, most Oncoplastic Breast surgeons carry out reduction surgery as part of the complete package of care for women undergoing reconstructive surgery after cancer, or to correct congenital and developmental breast disorders. You should be able to easily check the qualifications and credentials of your surgeon and it is important to ask he/she whether their usual work involves surgery to the breast and about their specific experience with breast reduction procedures. You should also check that the surgeon is a member of a relevant specialty organisation. This includes the Association of Breast Surgeons of the British Association of Surgical Oncology (ABS of BASO) or the British Association of Plastic, Reconstructive & Aesthetic Surgeons (BAPRAS).



## The Theory

The breast should be considered in two separate components, the **glandular tissue** and nipple (making up the breast volume) and the skin that covers the gland (the skin **envelope**).

## Reduction

In a breast reduction or **reduction mammoplasty**, some of the glandular tissue is removed taking care to maintain a healthy nipple. The skin envelope is also reduced so that when it recovers the reduced breast tissue an optimal breast shape is produced.

## Up-lift

In a breast up-lift or **mastopexy**, the skin envelope is reduced and then ‘redraped’ over the natural breast. The glandular tissue is left untouched, but the nipple position is higher than before leading to an improved and more youthful breast shape.

## Scars and Techniques

There are several different techniques for reducing the breast and therefore different types of scars.

The most frequently used scar goes around the nipple (which is often reduced in size to complement the new breast size) and passes down the centre of the lower breast to an upside down “T” shape.

Other techniques may involve just a scar around the nipple and down the middle (vertical scar scar technique) or just around the nipple itself (periareolar or “round-block” technique). Your surgeon will recommend which would be the best technique for you.



### Pre-operative Evaluation

At your initial consultation, your consultant will discuss with you your reasons for seeking breast reduction and what you hope to achieve and what your expectations are of the procedure.

You will be asked to fill in a questionnaire about your general and breast health. During the consultation you will be asked about any previous medical or surgical conditions, your fitness for general anaesthesia and any medications you take or allergies that you may have. An important part of your consultation will be an assessment of your breast health and risk of developing a serious breast disease in the future. The need for routine mammography (X-Rays) or a breast ultrasound (scan) will be discussed.

Following this a full physical examination will be performed (in the presence of a nurse if requested). After a general breast examination (to confirm everything is healthy) detailed measurements of your breasts and chest wall will be taken and recorded on a special anatomical form that is kept in your notes. In particular any asymmetry of the natural breast, chest or back must be established in order to plan the best possible method to be used.

You will be asked to sign a consent form prior to this for medical photography. Medical photographs are an important part of your assessment and treatment. The images taken will not show your face and do not include any other distinguishing features. They are an essential record of your assessment and post-operative progress and are stored on a secure password protected hospital computer on a further password protected database/file.

Your surgeon should be able to demonstrate to you realistically what he/she hopes to achieve. This will involve a combination of drawing on your skin with a washable marker in front of a mirror and also taking some digital photographs. The surgeon will be able to give you an estimate of the amount of breast tissue you that will be removed and how that will relate to your new bra size.

Following the initial consultation you will be given at least a 2 week “cooling off” period during which time you can conduct further research before making a final decision.

### Smoking & Breast Reduction Surgery

It is important that you try to **completely** stop smoking within at least 6-weeks of surgery and for at least 6-weeks after surgery. The blood supply to healing tissues is reduced in smokers and severely reduced whilst smoking and for several hours afterwards. Poor blood supply may lead to tissue necrosis (death of tissue) at vulnerable sites in the operated breast, particularly the skin.

There is therefore an increased risk of delayed wound healing (particularly at the “T-junction”), serious infection, loss of breast tissue or loss of some or even the entire nipple areolar complex.

Wound healing problems can lead to a prolonged recovery period with dressings. In severe cases there may need to be major revisional or reconstructive surgery. Although these complications are rare (and can occur in non-smokers) they are 2 -3 times more likely in smokers. If you stop smoking at least 3 months before surgery, then you will greatly increase your chances of a smooth recovery and a good result. Your surgeon may not be keen to list you for surgery if you are a smoker and you should think carefully about stopping and improving your risk of a serious complication.



## The Operation

You will be admitted on the morning of surgery and a final check of any pre-operative tests or questions will be made. Pre-operative tests can include a blood test, a chest X-Ray, a tracing of your heart beat and a general medical history.

Your consultant anaesthetist will visit you and talk about putting you to sleep for the operation. You will be kept “Nil By Mouth” (nothing to eat or drink at all) for 6-hours prior to surgery. On the morning of the operation you may still take a bath or shower. Prior to surgery you will put on an operation gown and the nurse looking after you will complete a routine checklist. A premed tablet may be given to you if you wish an hour or so before the operation to relax you.

Your surgeon will see you to obtain your signature for consent and to “mark up” the breasts accurately with the measurements that you have both agreed upon in clinic. A further medical photograph is normally taken once the measurements have been marked.

Antibiotics are given during the procedure so it is important to highlight any allergies. (The antibiotics given during the procedure may make the oral contraceptive pill ineffective. Once home alternative barrier contraception should therefore be used until an uninterrupted pill cycle has been restarted.)

There are three layers of dissolvable stitches inside to produce the neatest scars and the safest closure. There are no stitches to be removed after your operation. Following the procedure the wounds will be dressed with white adhesive strips called steristrips and over this a waterproof dressing. A special Microfoam™ adhesive tape dressing is normally used to support the breasts and should be kept on for at least 72hrs (ideally for 1 week). All dressings are water-resistant to allow you to shower and bath in the post-operative period but you should still try to keep the dressings as dry as possible.

You will require 1-2 nights in hospital afterwards. You will have an infusion (drip) in your hand until you are able to eat and drink. There may be two drainage tubes, one in each breast if you have had bilateral (both sides) breast reduction, and one if unilateral (one side) reduction. These are usually in place for no more than 48 hours.

You will be discharged with tablet antibiotics for a further 5 days as well as some standard painkillers and anti-inflammatories.



### Returning Home

You will be encouraged to move your arms as soon as possible to prevent stiffness. However avoid raising your arms above shoulder height and avoid heavy lifting at least until you are reviewed in clinic.

A sports bra without under-wire should be worn as soon as possible after surgery and can be worn over the foam tapes. Your dressings will have done their job by 10 days. Your sports bra should be worn 24/7 for at least 4-6 weeks

You should expect your breast/breasts to be bruised and slightly swollen in the immediate post op period. Firm support will help to minimise this and any discomfort. Simple regular pain killers may also be required for the first 1-2 weeks.

You will be seen for a review clinic appointment at 10-14 days after the procedure. By then any remaining dressings will be removed. Your surgeon will check the healing process and for any signs of infection. Following the 6 week review appointment normal activities may be resumed safely. Remember that some of the benefits of your breast reduction will be obvious immediately but the final cosmetic result may take several months to achieve. There is a typical 3-6 month period where the breasts “settle in” and reach a steady shape and appearance. Although not strictly necessary, I have found that my patients feel reassured to have an annual check up thereafter.

Keeping the scars taped with a thin strip of low allergy tape such as Micropore™, for 3-9 months can help reduce stretching of the scar whilst it matures, and hence help to keep it as imperceptible as possible. If you have a tendency to form thickened or raised scars there are silicone gels that can be used which might be beneficial.

### General Complications

Breast reduction surgery involves a general anaesthetic and takes 2-4 hours. The usual risks of any long operation are small but you must still be aware of them. You will have sufficient opportunity to discuss these issues with your anaesthetist prior to signing your consent form.

Postoperative chest infections are uncommon but your risk is increased if you have been a recent smoker or have other lung problems. Deep breathing exercises supervised by your nurses and physiotherapist will be taught to you after your operation.

Thrombo-embolic problems (blood clots in the legs and pulmonary emboli (when they spread to the lungs) are rare but important. If there is any family or past history of blood clots please inform your surgeon. Routine Steps are taken to reduce the risks of blood clots and including heparin injections and the use of surgical compression stockings. In addition it is our practice to mobilise patients early after the operation.

Blood transfusion is very unlikely given that there is rarely sufficient blood loss during the operation or afterwards. If a haematoma develops in the immediate postoperative period then transfusion may be necessary. Sometimes it is necessary to return to theatre to remove a haematoma (<2% risk).



### Specific Complications

**Nipple sensation:** Nipple sensation can either be lost completely or there may be some small loss or indeed increased sensation. Temporary loss of sensation occurs in about 30% of cases and can take up to 12-months to improve.

**Nipple Necrosis:** There is a small possibility that despite the best techniques and delicate surgery the nipple may lose some or all of its blood supply. If it should become necrotic, the skin may become non-viable and heal by scabbing and eventual scarring with loss of pigmentation. If the nipple should not survive surgery (<2% risk) then an effective nipple reconstruction and tattoo can be performed.

**Skin Necrosis:** Occasionally the blood supply to the skin of the reduced breast is inadequate. This is more common in smokers as discussed earlier. The involved skin becomes purple in colour, may become necrotic and form a black scab and lead to wider stretched scars. The commonest place for this to occur is at the the “T” junction which may be affected to a greater or lesser degree in 10% of patients. In almost all this is very minor and simply requires a dressing to be worn for a few weeks. Even if “T junction” scarring is wider than the rest of the scars in most patients it is well hidden under the breast. Scar refashioning at 6-12 months is possible if scarring remains unacceptable but this rarely required (<2%).

**Infection:** Despite the routine administration of antibiotics during the procedure infections do occur (<2%). Any signs of spreading redness, heat, unpleasant discharge from the wound corners or a raised temperature should be reported as soon as possible. The ward or your GP should be able to quickly organise an early appointment with the consultant if necessary.

**Scarring:** If you do get an infection, the scars can become a little thicker and the eventual scar may not be acceptable. Even without infection some women develop thick unsightly scars due to a condition called “keloid and hypertrophic scarring.” If you have had problems with such scars before then you should discuss this with your surgeon. Wound taping and special dressings may help reduce this.

At the ends of the horizontal scar there can be a slightly raised area of tissue, often called a “dog-ear”. These are caused by residual excess tissue that has not been excised. Sometimes, even with the best planning and marking, they are unavoidable, particularly if the incision lengths are limited by the constraints of the chest wall dimensions. Additional minor surgery can be performed 6-12 months later if these areas have not settled down and remain troublesome.

**Skin Sensation:** In addition to alteration in the nipple sensation it is normal for the breast skin sensation to change with areas of numbness or tingling. It is also normal to have occasional sharp or tingling feelings/sensations in the breasts for several months after this surgery. This is part of the normal healing process.

**Haematoma (Bruising):** Bruising may cause the breast to become a little discoloured and this may spread downwards on to the abdomen. The body will absorb this bruising over a few weeks but if you are worried your surgeon should be able to reassure you.. Rarely an operation is required to drain a haematoma in the immediate postoperative period as discussed earlier.



**Fat necrosis:** Breast tissue is relatively fragile and as part of the surgical ‘sculpting process’ may become bruised inside. Fat necrosis is the term used to describe the scarring and remodelling process that fatty breast tissue can undergo. It occasionally results in lumpy areas or ridges within an area of the breast. Usually all that is required is reassurance, but any new lump in the breast must be carefully assessed and may require assessment or biopsy by your breast surgeon to allay all concerns. The condition is benign and does not carry any risk of cancer.

### Subsequent Breast Health Issues

Any new lump in the breast, whether it has been reduced or not, requires full examination and investigation by a specialist breast surgeon. As long as the specialist is aware of the previous surgical techniques used then appropriate assessment and effective treatment can still be carried out. It is actually thought to be easier to feel changes in a smaller more manageable breast than a large pendulous breast.

Mammography in the reduced breast may also be more comfortable for the patient. A patient should inform her mammographer that she has had reduction surgery. Mammographic detection of abnormalities is not significantly affected by previous reduction surgery, although internal scarring of the gland may be evident. Fat necrosis (see above) may also be evident on mammography even if not palpable. Occasionally if the images are not diagnostic then further tests or biopsies may be required for full reassurance.

**Prior to surgery, if the woman is of a more mature age or there are any significant risk factors for serious breast disease then mammography may be performed as a screening investigation.**

### Finally.....

The level of satisfaction from breast reduction surgery is very high and few patients regret their decision to proceed. You should remember however that your breasts will continue to alter as your natural breast tissues change. Breast texture naturally softens with age and old surgical internal scars may become firmer by comparison and therefore more apparent. If your weight alters, then your breast shape and size will alter accordingly. In particular, with excessive weight gain your breasts may “re-grow” even up to their pre-reduction former size.

### Note:

*This information is for general guidance only and represents the views and opinions of Mr Iain M Brown Consultant Oncoplastic Breast Surgeon. It should in no way be regarded as either definitive or representing the views of any other surgeon, doctor or institution.*