Treatments and side effects

breast cancer care

Breast reconstruction

personal experience professional support

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Introduction

This booklet is for women considering breast reconstruction because they have had (or need to have) part of, one or both breasts removed to treat cancer. It may also be useful for women who are considering breast reconstruction for other reasons, such as uneven breast development or after breast removal to reduce the risk of breast cancer from a significant family history. If you would like more information about family history and breast cancer please see our Breast cancer in families booklet.

Reconstruction is not commonly used in men who have a mastectomy for breast cancer because it is harder to recreate the shape of a man's breast. Also, men usually have less volume of breast tissue to replace. But it is sometimes possible to improve the appearance and symmetry of the chest with surgery, so men may want to discuss some of the techniques described in this booklet with their specialists. For more information, please see our publication **Men with breast cancer**.

Combining breast cancer surgery with plastic surgery to provide the best cancer treatment and cosmetic outcome is known as oncoplastic surgery.

A range of techniques can be used to reconstruct the breast and these change as current methods are improved. The right one for you depends on your preferences, expectations and personal circumstances. Each operation is adapted to match your individual needs and suitability for a particular technique. The outcome of surgery and the final shape will differ from person to person. This booklet will give you an understanding of breast reconstruction and the options available.

What is breast reconstruction?

Breast reconstruction is the creation of a new breast shape using surgery. It may be done after removal of a whole breast (mastectomy/bilateral [double] mastectomy) or part of the breast (segmental mastectomy, quadrantectomy or wide local excision). The new breast shape can be created using an implant and/or your own tissue from another part of the body, usually the back or lower abdomen. Reconstructed breasts don't usually have a nipple but one can be created with surgery. Otherwise prosthetic stick-on nipples can be used (see page 27 for more information).

Where one breast is being reconstructed, the aim is to create a breast that matches the remaining one in size, shape and position, and feels as soft and natural as possible. But even with the best outcome there will be differences between the two. Where both breasts are being reconstructed the aim is to recreate breasts that match and are in proportion to the woman's body shape.

A reconstructed breast will not look or feel exactly the same as the breast you have lost – it will often be a slightly different size and shape. Any differences should not be noticeable when you are clothed, even in a bra or in swimwear. When you are undressed, the differences are more obvious. You will be able to see some scarring, although this will fade over time. When not supported by a bra, a reconstructed breast may sit a little differently.

You won't get the same feeling from a reconstructed breast as before and you may have no sensation at all. A natural breast will change over time and droop as you get older. But reconstructed breasts (especially following implant-based reconstruction) will not change in the same way. So over time the differences between a

natural and reconstructed breast may become more obvious. In general women find the results acceptable and, especially when dressed, say they feel confident about the way they look.

There are usually different options available for breast reconstruction and your surgeon will explain which are likely to suit you best. You may be happier with the outcome if you can take some time to consider these options without feeling under pressure to make a decision.

Sometimes surgery on a remaining breast is suggested to help with evenness and balance. This might be done at the same time as the reconstruction. Otherwise, time may first be allowed for the original surgery to settle into position and any swelling to reduce.

Having a breast reconstruction will not increase the chances of the breast cancer coming back.

Who can have a reconstruction?

Most women who have had a whole or partial mastectomy can have breast reconstruction, either at the same time as their initial surgery for cancer (immediate reconstruction) or months, even years, later (delayed reconstruction).

National guidance says that the choice of immediate breast reconstruction should be discussed with all patients advised to have a mastectomy. Also, all appropriate breast reconstruction options should be offered and discussed, even if they are not available locally.

Some people are advised not to have a breast reconstruction because of other existing medical conditions that might increase the risk of problems and complications following surgery. If it is likely that you will need radiotherapy this often influences the choice and timing of breast reconstruction. Radiotherapy can increase the risk of hard scar tissue forming around an implant (capsular contracture, see page 33) and affect a reconstruction that uses your own tissue, making the breast feel firmer and reducing its size. Because of these factors, if radiotherapy is a likely treatment you may be advised to delay reconstruction for up to 12 months.

If you are advised against reconstruction your surgeon should explain why. You might then find another surgical opinion helpful.

You should be given the chance to discuss reconstruction before having breast cancer surgery. Speak to your specialist team, who will be able to explain your options to you or may refer you elsewhere if they are not able to offer breast reconstruction where you are being treated.

Breast-conserving surgery

Oncoplastic surgery techniques during/after breast-conserving surgery are increasingly being used.

Breast-conserving surgery is usually referred to as wide local excision or lumpectomy, and is the removal of the cancer with a margin (border) of normal breast tissue around it. The aim is to remove the cancer and maintain shape and symmetry if there is likely to be a noticeable indentation in the breast after surgery. Most women will not need this type of surgery after having only part of their breast removed. Your surgeon can advise you further.

Reasons for having reconstruction

Surgery for breast cancer is likely to affect how you look and feel in some way. Some women find it harder than others to come to terms with losing one or both of their breasts.

After having a mastectomy, women can be concerned about the shape of their bodies and the look of their breast area under clothes. While some women prefer to wear an external breast form (prosthesis) inside their bra to restore their shape, others prefer not to. Everyone is different, and what matters is that you chose what suits you best. There is no right or wrong way to react and every woman should be given the choice to have surgery to restore her breast shape if she wants it. Reconstruction can be an important part of treatment that helps emotional recovery and wellbeing.

Like many women, you may choose breast reconstruction because your breasts are an important part of your body image, self-esteem and sexuality. How your partner feels may also play a part.

If you are not in a relationship at the time of your breast cancer surgery, you may be concerned about the prospect of meeting someone new. Breast reconstruction may help you feel more at ease when forming new relationships and allow you to decide whether and when you want to talk about your breast cancer.

For more information about relationships you may find our booklet **Sexuality, intimacy and breast cancer** helpful.

Your breast surgeon

Types of surgeon

Whether treated by the NHS or privately, your reconstruction will usually be carried out by a specialist oncoplastic breast surgeon (a breast cancer surgeon trained in plastic surgery techniques) or a plastic surgeon trained in breast reconstruction. Oncoplastic breast surgeons perform the majority of breast reconstructions, but increasingly they work together with plastic surgeons specialising in breast reconstruction. This team approach widens the range of reconstruction options available to patients.

Some reconstruction operations need surgeons who are trained in microvascular surgery (operating on tiny blood vessels), and you may have to be referred to a specialist some distance from your home. You may find it helpful to discuss breast reconstruction with more than one specialist, particularly if your surgeon is only able to offer limited options. If so, your GP or surgeon may be able to recommend someone else in your area.

Finding a surgeon

You can find some information on the internet about which surgeons perform breast reconstruction surgery in which hospitals, although the information is not always complete or accurate. The Dr Foster Health website and the British Association of Plastic, Reconstructive and Aesthetic Surgeons give lists of surgeons and hospitals with plastic surgery units. See the ‘Further support’ section on page 38 for details. Your GP, surgeon or breast care nurse may be able to recommend a hospital or particular surgeon for you. If you don’t have access to the internet you can contact the Breast Cancer Care Helpline for more information on **0808 800 6000**.

Deciding to have a reconstruction

Your surgeon will want you to go into the operation with a full understanding of what is going to happen and realistic expectations of how your reconstructed breast will look. Don’t go ahead until you feel you’ve got all the facts and have received answers to all your questions. You may find it helpful to write down any questions you want to ask and to take notes during consultations. Taking someone with you can help you to remember what has been discussed and give you extra support.

You can ask to see photographs of breast reconstructions that the surgeon has done. Your breast care nurse may also be able to arrange for you to talk to a patient who has had this type of surgery. Breast Cancer Care can put you in touch with one of our trained volunteers if you would like to talk to someone who has had breast reconstruction. Call our Helpline or visit our website for more details.

If you choose private healthcare for your breast cancer treatment, most health insurance plans cover the full cost of breast reconstruction. It is important to contact your health insurance company for further details to be sure what is covered on your policy.

Delayed reconstruction

You can have a reconstruction months, or even years, after your breast surgery, so you have plenty of time to make a decision if you opt for a delayed operation. During this time you may adapt to your mastectomy and feel that you no longer want to go through further surgery; it is fine to change your mind.

Women who want reconstruction at a later date after completing treatment for breast cancer can still have their operation free on the NHS. However, in some areas there may be a long wait.

Types of reconstruction

There are two main types of breast reconstruction:

- reconstruction using only a breast implant
- reconstruction using your own tissue (a tissue flap) with or without an implant. This tissue can be taken from a number of places in the body, although the most common sites are the back or the lower part of the abdomen.

You may have a number of choices available to you, although one type of operation may be the most suitable for you depending on your shape and build, general health, your expectations and whether you are having or have had radiotherapy treatment to the breast. You can see animations of the main reconstruction techniques on our website **www.breastcancercare.org.uk**

Reconstruction after a mastectomy

The following pages describe the most common reconstruction techniques used for women undergoing a mastectomy or bilateral (double) mastectomy.

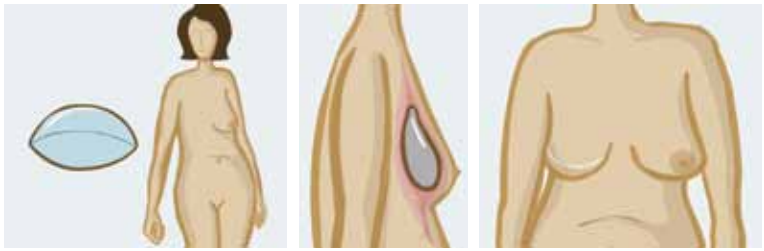
Reconstruction using an implant

Breasts reconstructed using an implant tend to be more round and firm, and to move less naturally than those using your own tissue. Where one breast is being reconstructed, the newly formed breast will droop less with age and may look higher than the other breast.

Implant reconstruction is especially useful for younger women with small and firm breasts, and it avoids the need for more extensive surgery using tissue from another part of the body. At some point you may need more surgery to the reconstructed breast, or to the other breast, for a better match.

There are variations of this method of reconstruction (see below) and surgeons are developing new ways of improving the cosmetic result. Your surgeon will be able to advise you on the best option for you.

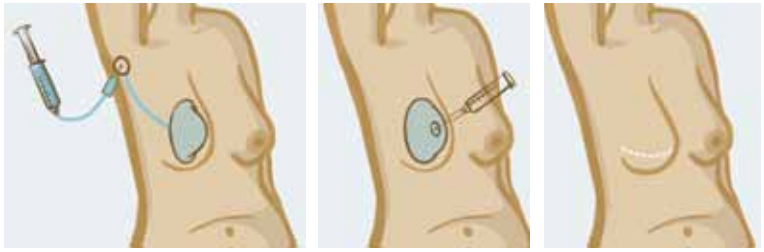
Reconstruction using a fixed implant



If the breast cancer can be removed without taking away too much skin, and the remaining breast is not too large and doesn't have a significant droop, an implant may be inserted under the chest muscle to replace the removed breast tissue. Inserting the implant under the chest muscle helps to keep the implant in the right place and hide its outline.

Using a breast implant alone is the simplest type of reconstruction operation and the recovery time is usually quicker than for other reconstruction procedures. It is most often done as an immediate reconstruction operation.

Reconstruction using a tissue expander implant



Implant reconstruction using a tissue expander usually involves two operations but can sometimes be achieved with one. The two-stage operation involves first placing an inflatable implant behind the chest muscle – this helps keep the implant in the right place and hide its outline. The implant is slowly inflated by your surgeon or nurse during outpatient appointments every one or two weeks. This slowly stretches the muscle and overlying

skin. The number of appointments needed varies from person to person.

A saline (salt water) solution is injected into a small injection port just under the skin. This is located either in the expander so that the solution can be injected directly or is connected to the expander by a short tube.

When expander implants are being filled, you will feel a stretching sensation and tightness within the breast. It can be uncomfortable for a day or two after each inflation, but it should not be painful. The expander is generally inflated until the new breast is slightly larger than the other breast and then left for a few weeks so the skin stretches. Some of the fluid is then removed through the port so that the new breast droops slightly, with the aim of mirroring the other breast.

A further small operation is needed to remove the expander and port, and replace it with a permanent implant, which will be your final breast shape.

The other option is to use a permanent expander implant from the start. As before, the expander is gradually inflated over several weeks and left slightly over-inflated for a further few weeks to allow the skin to stretch. When you and your surgeon are happy with the shape and size of the breast, any excess fluid is removed to try to match the reconstructed breast with your other breast. The port is taken out under local anaesthetic leaving the expander implant in place.

Implant reconstruction with tissue expansion can be particularly useful if you don't have enough skin left on your chest comfortably to cover and support an implant, especially if you are having delayed reconstruction.

Skin is very elastic and has a surprising ability to stretch but tissue expansion is not usually suitable for women who have had or are due to have radiotherapy treatment, which will affect the elasticity and quality of the skin. In some cases surgeons may be able to insert a tissue expander implant (see page 14) immediately after

a mastectomy to create and preserve a 'cavity', with the implant being inflated once radiotherapy has finished. This process aims to reduce the risk of capsular contracture (see page 33).

Reconstruction using an implant and a tissue matrix

A newer technique used with implant reconstruction employs a material derived from pig or cow skin that has been treated, processed and preserved so it can safely be left in the human body. This surgical mesh (called an acellular tissue matrix) looks like very thin white leather and provides a 'hammock' that cradles the breast implant, helping to create a natural droop, shape and contour. The mesh is attached to the pectoralis muscle in the chest making a cavity in which the implant can be placed. This method can be used to achieve a one-stage implant reconstruction with mastectomy. Sometimes tissue expansion is still needed. The technique is not available everywhere in the UK.

What scarring should I expect?

Scars will vary following reconstructions using implants, but will often be horizontal across the newly formed breast. With immediate reconstructions the implant may be placed through an incision around the areola (the darker area of skin around the nipple) and will leave different scarring. You can ask your surgeon about the position and length of the scar before the surgery takes place.

What are implants made of?

Breast implants have an outer shell made from silicone elastomer (similar to rubber). The shell is filled with silicone gel or saline. The surface of implants may be smooth but are usually textured.

Silicone gel

Most implants used for reconstruction surgery contain silicone gel and these tend to look more natural than saline implants. The gel

may be firm and feel more jelly-like or may be softer and feel more fluid-like depending on the type of implant used.

Saline

Saline is an alternative to silicone gel. The outer shell of the implant is still made of silicone. These implants contain a liquid rather than a gel so are more likely to wrinkle under the skin and can sometimes leak. Any leaks are absorbed by the body and are not harmful, but as the saline leaks out, the breast gradually gets smaller and in time the implant has to be replaced. Saline implants are also heavier, which may restrict the size that can be used. For these reasons this type of implant is not commonly used.

Expander implants

This type of implant uses both silicone gel and saline. The outer shell is made of silicone and the inner shell is an expander implant with an adjustable saline filler. It is used in both immediate and delayed reconstructions.

Are silicone implants safe?

Recently there has been concern over the safety of some breast implants. Experts regularly examine evidence for the safety of silicone gel implants. Implants used in Europe should stick to specific safety standards and surgeons in the UK continue to recommend them to women considering breast reconstruction surgery.

Modern silicone gel implants are expected to last longer than 10 to 15 years, and there is no need to replace them after this time if there are no problems. The Medicines and Healthcare Regulatory Agency (MHRA) has a publication called *Breast Implants: Information for women considering implants*, which you may find useful. For details and further information see 'Further information' at the back of this booklet.

Once inserted, implants are very difficult to damage. You can continue with all your normal activities including travelling by plane and taking part in sports.

Reconstruction using your own tissue (tissue flap)

Another commonly used reconstruction technique uses flaps of your own tissue (with or without an implant), including the skin, usually taken from your back or lower abdomen, or from the thigh or buttock. This is then reshaped to form the new breast. Because the skin used is taken from another area of the body, it may be a slightly different shade or texture to the rest of the breast. This method is particularly suitable for creating moderate to large-sized breasts that have a natural droop.

It is commonly used in delayed reconstruction when women can't have tissue expansion because they've had radiotherapy. Flaps without implants may also be used for immediate reconstructions for women who are going to have radiotherapy treatment.

This type of surgery involves a longer operation and more recovery time than an implant-only reconstruction. But you will be less likely to need further surgery in the future than with reconstruction using implants alone. A reconstructed breast using tissue instead of an implant may also provide a better match with your other breast in the long term. This is because tissue reacts to gravity, aging and weight change more naturally.

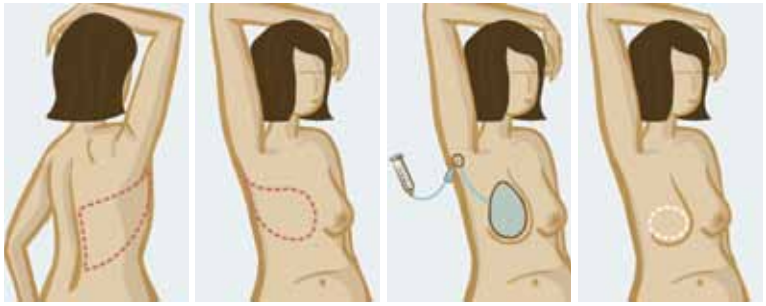
There are two ways in which surgery involving a tissue flap may be done:

- **pedicled flap** – the flap remains attached at one end to its blood vessels
- **free flap** – the flap is completely detached from the body along with its blood vessels and re-attached in the position of the reconstructed breast.

There are variations of these methods (see the following sections) and, as with implant-based reconstruction, surgeons

are developing new ways of improving the cosmetic result. Your surgeon will advise on the best option for you.

Back (latissimus dorsi) flap (LD flap)



This procedure uses the latissimus dorsi muscle – a large muscle that lies in the back just below the shoulder blade. The skin, fat and muscle are removed from the back but the blood vessels of the flap remain attached to the body at the end nearest the armpit (pedicled flap).

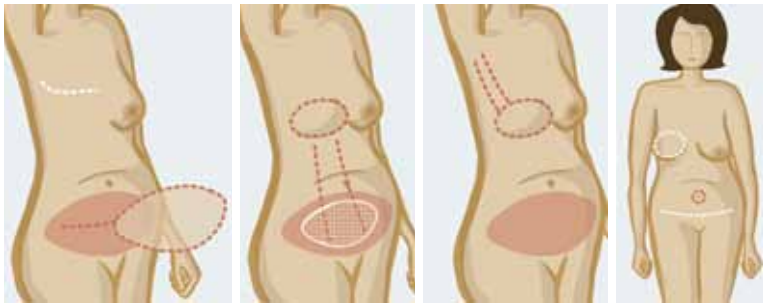
The flap is then turned and carefully threaded through a cut made below the armpit and is brought round to the front of the body to lie over the chest wall and form the new breast (or part of the breast if being used in breast-conserving surgery). Some of the skin on the flap is used to form the new skin of the reconstructed breast while the muscle and the fat are used to form the volume of the breast. It is usually necessary to use an implant under the flap after a mastectomy to help create a breast that is a similar size to the other one.

An expander implant is sometimes used (particularly in a delayed reconstruction) and the expansion process starts when the tissue flap has healed, usually two or three weeks after surgery. Sometimes surgeons will offer an extended LD flap operation. This means that a larger amount of tissue is taken from the back so that a smaller implant may be used, or no implant at all. This can give a more natural look and feel to the breast.

The scar on the back is usually horizontal and hidden along the bra line, or it can be diagonal. The scar on the breast will vary depending on your shape, the size of your breast and whether you have the reconstruction done at the same time as your mastectomy or at a later date.

After fully recovering from an LD flap reconstruction, most women notice no significant weakness in the shoulder during everyday activities. Those who are very physically active, especially professional sportswomen, may notice some degree of weakness, so consider this when deciding on the method of reconstruction best for you.

TRAM (transverse rectus abdominis muscle) flap



This technique uses the large muscle that runs from the lower ribs to the pelvic bone in the groin. There are two different types of TRAM flap operation.

During surgery the flap may remain attached at one end to the original anchoring point and the original blood supply (pedicled flap) or it may be completely detached and re-attached (free flap).

In a pedicled flap, the rectus abdominis muscle, along with its overlying fat and skin and blood supply, is tunnelled under the skin of the abdomen and chest and brought out over the area where the new breast is to be made. Usually there is enough fat in the flap to make the new breast the same size as the other one without the need for an implant.

In a free flap operation the muscle, fat and skin are removed completely from the abdomen and the surgeon shapes a breast from this tissue. The blood vessels that supply the flap are re-connected to blood vessels in the region of the reconstructed breast, either under the armpit or behind the breastbone. Joining the vessels together is known as microvascular surgery.

If the flap of tissue isn't getting a good blood supply following this procedure it will die and the reconstruction will fail. In this case further surgery will be needed to remove the flap and perform the reconstruction again at a later date, if possible (see page 33).

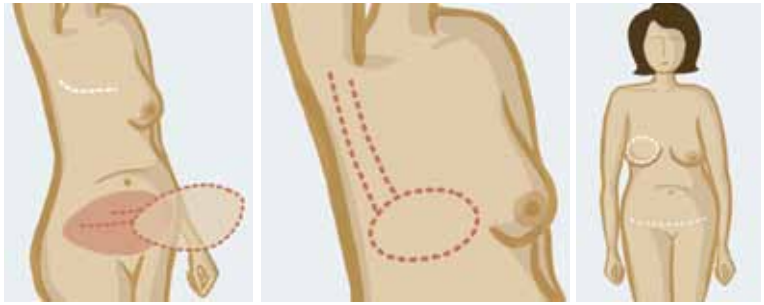
Either type of TRAM flap operation may weaken the abdominal wall, which you might notice afterwards when lifting or during sporting activities. During the operation the surgeon will put a 'mesh' into the abdomen to help strengthen the muscles and to try to avoid a hernia (a bulge or protrusion where the wall of the abdomen has been weakened).

The free flap TRAM is a longer and more complex procedure, with a greater risk of complications than the pedicled flap. A longer recovery time might be needed. The LD flap and both TRAM flap operations have similar cosmetic results. However TRAM flap procedures generally produce a more natural, softer feeling breast that is likely to age better and adapt to any weight changes as no implant is used.

You will need to be in good overall health to have either type of TRAM flap procedure. You will need to be a non-smoker, have no existing scars on your abdomen (except sometimes a caesarean scar) and have enough fat in the lower abdominal area. If you are very overweight you may be advised to lose weight before being offered this type of surgery. This is to reduce your risk of complications from the anaesthetic and the surgery.

Both types of TRAM flap leave a scar across the width of the abdomen, usually just below the bikini line. The scar on the reconstructed breast will be circular or oval and vary in size from person to person. The belly button (umbilicus) is repositioned during this type of surgery, leaving a circular scar around it.

DIEP (deep inferior epigastric perforator) flap



The DIEP flap is becoming more common. This procedure uses a free flap of skin and fat, but no muscle, to form the new breast shape. The flap is taken from the lower abdomen along with the deep inferior epigastric artery and veins.

It is transferred to the chest and shaped into a breast while the artery and veins are connected to blood vessels in the armpit or chest wall using a specialised technique involving microvascular surgery (in a similar way to the free TRAM flap). If the flap of tissue doesn't have a good blood supply it will die and the reconstruction will fail (see page 33).

The advantage of this type of reconstruction is that no muscle has to be removed so the strength of the abdomen is not affected. This means there is very little chance of developing a hernia and no mesh needs to be used. Like the pedicled and free TRAM flaps, the DIEP flap is major surgery involving a long and complex operation, and you will need to be in good overall health to go through it. The recovery time is usually similar to a TRAM flap operation. You should be a non-smoker, have no existing scars on your abdomen and have enough fatty tissue in your lower abdominal area.

Again, if you are very overweight you may be advised to lose weight before being offered this type of surgery. There will be scarring on the breast, which is usually oval, and on the abdomen – usually below the bikini line stretching from hip to hip, similar to after a TRAM flap operation.

SIEA (super inferior epigastric artery flap)

This is similar to the DIEP flap as it uses only skin and fat from the lower abdomen and no muscle, but the vessels taken are superficial (nearer the surface) rather than the deep vessels used in the DIEP flap. The operation, complications and recovery time are like those described on page 22.

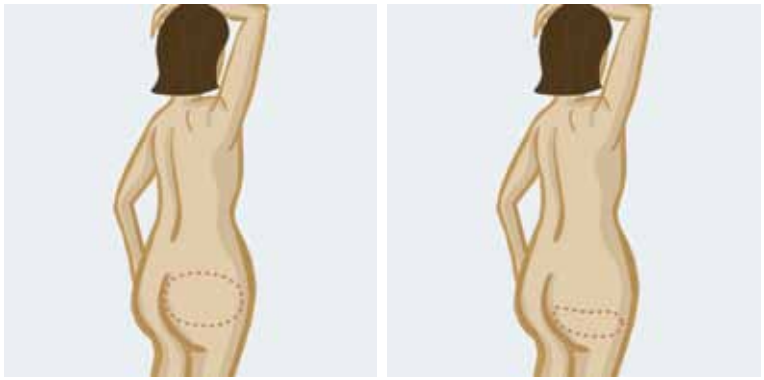
Other free flap reconstructions

There are some newer reconstruction techniques using flaps from other areas of the body. The following types of free flap reconstruction use tissue from the buttocks or thighs.

These techniques are mainly used for women who are not suitable for any of the other types of reconstruction. They may be appropriate for women who are too slim for tissue to be taken from their abdomen or who have scarring from previous surgery to their abdominal or back area. Only a few surgeons in the UK offer these techniques and you may need to travel to another centre if you need this type of surgery.

As with all types of flap reconstruction, these techniques are generally not suitable for women who have diabetes, are heavy smokers or are very overweight.

SGAP (super gluteal artery perforator flap) and IGAP (inferior gluteal artery perforator flap)



The free SGAP and IGAP use only fat and skin taken from the upper or lower buttock to create a new breast. Microvascular surgery is needed to join the blood vessels. Where tissue has been removed from the buttocks, there will be a scar and an indentation.

TMG (transverse myocutaneus gracilis flap) or TUG (transverse upper gracilis)

The tissue removed in this procedure is taken from the upper inner thigh and consists of skin, fat and a small strip of muscle. Microvascular surgery is needed to join the blood vessels. The scar is placed in the fold of the groin and runs to the fold of the buttock area.

Reconstruction after breast-conserving surgery

There are two ways of trying to maintain shape and replace the volume of the tissue lost from removing the cancer during breast-conserving surgery.

Volume displacement

Volume displacement involves moving some of the remaining breast tissue around to reshape the breast and fill out the area where the cancer has been removed. This surgical procedure is sometimes called a therapeutic mammoplasty. If this technique is used, you are likely to need surgery to your other breast to reduce its volume and restore symmetry.

Volume replacement

Replacing lost volume in the breast with tissue from elsewhere, usually from your back (called a latissimus dorsi flap), is known as volume replacement. This is less commonly used than volume displacement. There is more information about latissimus dorsi flap on page 19.

You may need radiotherapy after either of the procedures above.

Nipple reconstruction

Occasionally your own nipple can be preserved safely but mastectomy usually means removal of the whole breast including the nipple and areola. It is possible to have the nipple reconstructed and this may be done at the same time as the breast surgery but more commonly a few months after the reconstruction to give the new breast time to settle into its permanent position.

A reconstructed nipple can improve the appearance of your new breast, but it won't feel the same as a natural nipple. It has none of the nerves that allow it to rise (become erect) or flatten in response to touch or temperature.

There are several ways of reconstructing a nipple, so you may want to discuss different options with your surgeon. The skin of the new breast is usually used to make the nipple. This involves folding the skin to create a nipple shape. Sometimes part of the nipple from the other breast can be used. However good the initial result, the reconstructed nipple may flatten over time and resemble your other nipple less closely.

For the nipple and areola area to look as realistic as possible, the skin needs to match the shade of the natural nipple and areola. A reasonable match can usually be achieved by colouring the skin using micropigmentation, which is similar to tattooing. This is usually done several weeks later once the surgery has had time to settle and heal. Sometimes it needs to be repeated to give a better result. The colour will fade over time but should last for a few years.

Where reconstruction is being done at the same time as the breast surgery, occasionally the nipple from the breast that is being removed can be relocated on to the reconstructed breast. This is only possible if the surgeon is as sure as they can be that there are no cancerous cells in the nipple or the tissue behind it.

Giving your new breast a nipple can be another stage in creating a breast that looks as natural as possible. On the other hand, you may choose not to have nipple reconstruction. Or you may decide to use stick-on nipples. These can be custom-made, sometimes by the hospital, to match your natural nipple and areola, or they can be bought quite cheaply, ready-made.

Lipomodelling

This is a fairly new procedure in breast surgery and not widely used in the UK. It may be used to correct noticeable indentations after breast-conserving surgery. It may also be used for various reasons after breast reconstruction such as increasing the size of the breast or adjusting its shape.

The technique uses fat taken by liposuction from one part of the body (usually the abdomen or thigh), processing it to remove unwanted tissue then injecting the fat cells into the breast. It may be done under a local or general anaesthetic and may need to be repeated several times to achieve the correct shape. Your surgeon will explain the possible side effects, such as bruising in the area where the fat is taken.

Surgery to your other breast

Surgeons always try to create a new breast that matches your natural breast as far as possible. If it is difficult to get the size, shape or position that matches your natural breast, you may want to discuss the option of having an operation on your remaining breast to improve symmetry. This may mean making the remaining breast a little smaller or larger, lifting it or moving the nipple. These procedures will all leave some scarring, which will fade with time.

Any surgery to the natural breast is generally done in a separate operation to give the reconstructed breast time to settle. If you have your reconstruction done privately it is worth checking that any surgery to your other breast is covered under your insurance plan; if it isn't you may have to pay extra.

Breast reduction

Sometimes it may be necessary to remove tissue and skin from the natural breast to make it smaller and more in balance with the reconstructed breast. The nipple and areola usually need relocating to be more central on the breast. Breast reduction usually leaves some scarring around the areola, down the central part of the breast and along its underside. This is not noticeable when wearing a bra. There may be less feeling and sensation in the breast and you may not be able to breastfeed in future.

Breast enlargement (augmentation)

Sometimes the reconstructed breast is larger than your natural breast, especially if you have had an implant. You can have an implant placed either under the breast tissue or behind the chest wall muscle of your natural breast to make both breasts more balanced. Scarring is usually in the fold beneath the breast or around the areola.

The feeling in the nipple and skin can change after breast enlargement and you may find the nipple is less or more sensitive for a few months after the operation. When implants are used, mammograms (breast x-rays) will still be needed in the future (see page 36 for more information). Breast enlargement does not usually prevent you from breastfeeding in the future.

Breast uplift (mastopexy)

Breast uplift is an operation to raise, reshape and firm the breast, which improves any natural drooping. A strip of skin is taken from under the remaining breast or around the nipple to tighten and lift the skin over the breast. You may have similar scarring to that found after breast reduction, but this can vary. You should still be able to breastfeed.

Recovering from breast reconstruction

Your operation will be carried out under general anaesthetic. It may take anything from one to two hours to put an implant under your chest muscle, three to six hours for a pedicled LD or TRAM flap reconstruction and five to ten hours for a free flap reconstruction.

When you wake up you will find dressings on your newly reconstructed breast and, if you have had flap surgery, on the area where the flap has been removed. You will probably have drainage tubes coming out of the wounds to get rid of any excess blood or fluid and you may start a course of antibiotics to reduce the chance of infection. Initially your reconstructed breast will look very different to your natural breast.

You will probably feel sore anywhere your surgeon has been operating and you will be given pain relief to help with this. There are many types of pain relief and different ways of giving them. If you are still in pain after having your medication, tell the staff taking care of you.

Your recovery time will depend very much on which type of reconstruction you have had. After an implant operation you will probably be out of bed within a few hours and may be able to go home the next day. If you have had more extensive surgery it will take a little longer for you to be up and about, and you may stay in hospital for several days.

You may be given advice and information from a physiotherapist on breathing correctly and how to go about everyday tasks such as getting in and out of bed and walking – particularly if you have had abdominal surgery.

You are likely to feel tired following any kind of surgery and you won't be able to do as much as you are used to for up to several weeks. When you get home you will need to take things easy for a while. Again, how quickly you recover will depend on whether you had implant or flap surgery. You will be advised how best to look after your wounds and about stretching, bending, lifting and driving during the healing process.

Resuming your normal daily activities will depend on which type of surgery you have had. Gradually reintroducing them is generally the best way to approach things. Check with your surgeon or breast care nurse if you aren't sure. Listen to your body and stop if you feel you may be over-exerting yourself.

It is best not to drive (or do heavy housework or lifting) while your wounds are healing. If you are considering driving, think whether you would be comfortable enough to wear a seatbelt and able to do an emergency stop if necessary.

You will be given some exercises to keep your arms and shoulders mobile. These vary according to the operation you have had and your surgeon's recommendations. Your breast care nurse or surgeon will also tell you what sort of bra or support garment is suitable and give advice about massaging the area to keep the skin supple and in good condition. This advice will vary from person to person.

The newly reconstructed breast takes a while to settle and resemble a natural breast. It is normal for it to be bruised and swollen for quite a while and the scars will take time to heal. Be patient, but if you are concerned about any part of your recovery talk to your breast care nurse or specialist team.

Whether and when to return to work is a personal decision that may take into account not only how you are feeling physically and emotionally but also your financial position. It is law that an employer must make reasonable adjustments to help you at work if you have a breast cancer diagnosis.

Possible problems following surgery

Immediate problems

Infection

If you have a raised temperature and/or notice any redness, excess swelling or heat in the breast or in the site where tissue has been removed, tell your GP, breast care nurse or specialist straight away as these might be signs of an infection. Treating an infection is easiest and most effective if caught early, so be sure to report any changes. Occasionally an infection develops around an implant that doesn't respond to treatment with antibiotics. In this case, the implant may have to be removed to allow the infection to settle completely. Another implant can be put in at a later date.

Build-up of fluid/blood

Any drainage tubes put into your wounds during surgery in order to get rid of excess fluid are usually removed a few days after the operation. However, a collection of fluid (seroma) or blood (haematoma) may continue to build up around the wound sites. These will normally be re-absorbed naturally over time, but larger amounts may need to be drawn off (aspirated) with a needle and syringe by your surgeon or breast care nurse. Sometimes a seroma may refill after it has been aspirated and you may need to have this repeated, sometimes several times, before it goes away completely. If you have an implant, the doctor or nurse may use ultrasound (high frequency sound waves that produce an image) to help guide them. This procedure can be done as an outpatient so you will not have to stay in hospital.

Pain and discomfort

You may continue to feel sore and stiff for several weeks after surgery, but this should gradually disappear. You can carry on taking pain relief during this period. Your wound may also itch as it heals. This is natural but try not to scratch it.

After immediate reconstruction surgery, the arm or hand on the side of your operation may tingle or feel numb as a result of the minor nerves under your arm being damaged during the removal of the lymph nodes. For further information about lymph node removal please see our **Treating breast cancer** booklet. The tingling should disappear after a while, although in rare cases you may continue to experience numbness for some months.

If you have had an abdominal flap operation you will probably feel uncomfortable when you bend over, cough or sneeze for a few weeks after surgery. Take things gently and support your wound with your hands if you need to.

Tissue failure

With flap methods of reconstruction, there is a risk that the flap, or part of the flap, will die if it doesn't have a good enough blood supply. This is rare, but if it happens you may need another operation to remove the affected tissue. Your surgeon will then talk to you about your options for further reconstruction.

Longer-term problems

Capsular contracture

In the first year or so after an implant operation, tough fibrous tissue builds up around the implant to form a 'capsule'. This happens because the body sees the implant as a foreign object and wants to isolate it. In most cases this capsule stays soft and supple but sometimes it tightens around the implant, making the breast feel hard and sometimes painful. This is known as capsular contracture. Radiotherapy can cause capsular contracture, which is why women having this treatment are not usually recommended to have reconstruction using an implant.

Fortunately, capsular contracture is now less common. This might be because implants have a textured outer surface that reduces the amount of scar tissue that forms around the implant. There are different degrees of capsular contracture and in mild cases no treatment is necessary. Occasionally the contracture is severe enough to make the breast feel hard and look misshapen. In these cases the capsule will need to be surgically removed and the implant replaced.

Leakage and rupture

Silicone implants are expected to last at least 10 to 15 years, and even then are unlikely to need replacing. If they wear out, the silicone gel may leak into the fibrous capsule. In a very few cases silicone gel may get into the breast, forming a lump. If this can be felt or a scan shows a ruptured implant, the implant may have to be removed and replaced. Modern casings are stronger and the risk of leaks and rupture is small. If you do notice any deflation of your reconstructed breast, or if it becomes misshapen, uncomfortable or swollen, tell your surgeon or breast care nurse.

Creasing and wrinkling

There can be noticeable skin creasing or wrinkling over the implant. It is most common in people who are slim and have saline implants. It is usually less obvious when wearing a bra. If it becomes very noticeable the implant may need to be replaced.

Unevenness

It will take several months for your new breast to settle down and for scars to fade. Only then can you judge whether you are satisfied with the look and feel of your new breast and how well it matches your other breast. If you are unhappy with the size or shape of the breast or the positioning of the nipple there are things that can be done. You may want to consider further surgery to the reconstructed breast or to your other breast to give you a better match and symmetry. It is not unusual for it to take several separate surgical procedures before breast reconstruction is complete, including the nipple/areola reconstruction and

surgery to the other breast. Before you make any decision, discuss your options with your surgeon or breast care nurse.

Abdominal hernia

A hernia can develop following a TRAM flap operation because the abdominal wall is weakened when the muscle is removed. To reduce the chances of this happening, a thin sheet of surgical mesh will be used to strengthen the abdominal wall. Hernias usually become noticeable as a bulge somewhere in the abdomen and they can cause pain when lifting or standing for long periods of time. If you develop a hernia it can be repaired with a fairly simple operation.

Being breast aware

It is important still to be breast aware after reconstruction surgery. Once your breast has settled down, get to know the way it looks and feels. If you have had an implant-based reconstruction, look out for hardness or tightness, which may indicate capsular contracture, or wrinkling of the implant.

After any type of breast reconstruction you should look out for changes in the breast; these include:

- a change in appearance or shape
- a lump or lumpy area in the breast or armpit
- a change in skin texture or swelling in the upper arm.

If you notice any changes in either of your breasts you should tell a member of your specialist team or your GP. If there is any concern that your cancer has come back your specialist will arrange further tests. Having a breast reconstruction should not affect the ability of you or your surgeon to detect a recurrence of your cancer.

For more information about being breast aware, you may find our booklet **Your breasts, your health throughout your life** helpful. You will still be offered regular mammograms on your natural remaining breast, and to check any remaining tissue in your reconstructed breast if only part of your breast tissue was removed. If you have had an implant in your natural breast to match the reconstructed breast for size, it may be that not all of your breast will show up in a mammogram. So tell the radiographer in advance so that the best method of screening can be used.

Follow up after treatment for breast cancer varies from hospital to hospital. You may be invited back to the hospital for follow up appointments to check how you are recovering physically and emotionally. The time between appointments will vary in each

hospital and for each person depending on their individual situation. Some people are given a choice of being followed up by their GP or a mixture of both hospital and GP appointments. Some hospitals provide a system where people have access to a clinic appointment to be seen by a specialist only if or when they have a worry or concern. Others arrange regular telephone follow-up appointments.

You should be given a name and contact number to ring (this will usually be for a breast care nurse) if you have concerns or symptoms that mean you might need to be seen by your specialist team. You should also be given information about future mammograms. You can see your GP between appointments.

Our booklet **Your follow-up after breast cancer: what's next?** discusses what happens at the end of treatment and looks at some of the common concerns as well as explaining the various options you may have for follow-up appointments.

Having a breast reconstruction will not increase the chances of your cancer coming back.

For many women, appearance can have a big impact on the way they feel about themselves. Any visible changes to your body resulting from breast cancer and its treatment can have a lasting impact on the way you feel. For some, having a breast reconstruction may help improve their self esteem and confidence.

Further support

Breast Cancer Care

From diagnosis, throughout treatment and beyond, our services are here every step of the way. Here is an overview of all the services we offer to people living with and beyond breast cancer.

Helpline

Our free, confidential Helpline is here for anyone who has questions about breast cancer or breast health. Your call will be answered by one of our nurses or trained staff members with experience of breast cancer. Whatever your concern, you can be confident we will understand the issues you might be facing, and that the information you receive is clear and up to date. We will also let you know where else you can go for further support.

Ask the Nurse

If you find it difficult to talk about breast cancer, we can answer your questions by email instead. Our Ask the Nurse service is available on the website – complete a short form that includes your question and we'll get back to you with a confidential, personal response.

Website

We know how important it is to understand as much as possible about your breast cancer. Our website is here round the clock giving you instant access to information when you need it. As well as clinical information, you'll find real life experiences and a daily newsblog on stories about breast cancer in the media. It's also home to the largest online breast cancer community in the UK, so you can share your questions or concerns with other people in a similar situation.

Our map of breast cancer services is an interactive tool, designed to help you find breast cancer services in your local area wherever you live in the UK. Visit **www.breastcancercare.org.uk/map**

Discussion Forums

Through our Discussion Forums you can exchange tips on coping with the side effects of treatment, ask questions, share experiences and talk through concerns online. Our dedicated areas for popular topics should make it easy for you to find the information you're looking for. The Discussion Forums are easy to use and professionally hosted. If you're feeling anxious or just need to hear from someone else who's been there, they offer a way to gain support and reassurance from others in a similar situation to you.

Live Chat

We host weekly Live Chat sessions on our website, offering you a private space to discuss your concerns with others – getting instant responses to messages and talking about issues that are important to you. Each session is professionally facilitated and there's a specialist nurse on hand to answer questions.

One-to-One Support

Our One-to-One Support service can put you in touch with someone who knows what you're going through. Just tell us what you'd like to talk about (the shock of your diagnosis, understanding treatment options or how you feel after finishing treatment, for example), and we can find someone who's right for you. Our experienced volunteers give you the chance to talk openly away from family and friends.

Information Sessions and Courses

We run Moving Forward Information Sessions and Courses for people living with and beyond breast cancer. These cover a range of topics including adjusting and adapting after a breast cancer diagnosis, exercise and keeping well, and managing the long term side effects of treatment.

Lingerie Evenings

For more confidence when choosing a bra after surgery, come along to a Lingerie Evening. Join other women who have had breast cancer for a practical guide to what to look for in a bra, an opportunity to be fitted and a chance to see how the lingerie looks on volunteer models who have all had breast cancer themselves.

Headstrong

We can help you prepare for the possibility of losing your hair due to cancer treatment. We'll talk through how to look after your hair and scalp and show you how to make the most of alternatives to wigs, so you leave feeling confident that you've found something that works for you.

Information Resources

We produce free Information Resources for anyone affected by breast cancer, including factsheets, booklets and DVDs. They are here to answer your questions, help you make informed decisions and ensure you know what to expect. All of our information is written and reviewed regularly by healthcare professionals and people affected by breast cancer, so you can trust the information is up to date, clear and accurate. You can order our publications from our website or our Helpline. They are also available to download as PDFs online at **www.breastcancercare.org.uk**

Specialist support

We offer specific, tailored support for younger women through our Younger Women's Forums and for people with a secondary diagnosis through our Living with Secondary Breast Cancer events.

Other organisations

Cancer organisations

Macmillan Cancer Support
89 Albert Embankment
London SE1 7UQ

General enquiries: **020 7840 7840**
Helpline: **0808 808 0000**
Website: **www.macmillan.org.uk**
Textphone: **0808 808 0121 or Text Relay**

Macmillan Cancer Support provides practical, medical, emotional and financial support to people living with cancer and their carers and families. It also funds expert health and social care professionals such as nurses, doctors and benefits advisers.

Useful addresses

Association of Breast Surgery at BASO
Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE

Telephone: **020 7405 2234**
Email: **admin@baso.org.uk**
Website: **www.baso.org.uk**

Aims to ensure that future breast surgery practice is based on common standards of competence and performance. It does this through education, training, service improvement and provision of information.

Breast Implant Information Society (BIIS)
Highway Farm
Horsley Road
Cobham
Surrey KT11 3JZ

Telephone: **07041 471225** (calls cost 5p per minute)
Email: **info@biis.org**
Website: **www.biis.org**

The BIIS is a non-profit organisation offering independent information and advice about all aspects of breast implant surgery. It operates a telephone helpline, publishes specialised literature, and has a membership scheme and annual newsletter.

British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS)
Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE

Telephone: **020 7831 5161**
Email: **secretariat@bapras.org.uk**
Website: **www.bapras.co.uk**

Works to advance education in all aspects of plastic surgery. It also holds scientific meetings and runs training courses for surgeons. Most plastic surgeons belong to this association. Members have completed training in plastic surgery accredited by the Royal College of Surgeons. Some plastic surgeons are specialist breast reconstruction surgeons.

British Association of Aesthetic Plastic Surgeons (BAAPS)
Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE

Telephone: **020 7405 2234**
Email: **info@baaps.org.uk**
Website: **www.baaps.org.uk**

This association was established for the development of education in and the practice of aesthetic plastic surgery for the benefit of the public. Members are trained plastic surgeons and on a register maintained by the General Medical Council.

Dr Foster
12 Smithfield Street
London EC1A 9LA

Telephone: **020 7332 8800**
Email: **info@drfoster.co.uk**
Website: **www.drfosterhealth.co.uk**

Service for healthcare professionals and the public that aims to improve access to health and social care information. The website lists the names of surgeons who carry out breast reconstruction surgery; this is not a complete list but may be useful to find the nearest hospital where reconstruction is available (follow the 'Consultants' link and look at the 'Consultant Guide').

General Medical Council
Regent's Place
350 Euston Rd
London NW1 3JN

Telephone: **0845 357 8001**
Email: **webmaster@gmc-uk.org**
Website: **www.gmc-uk.org**

Holds general and specialist registers of doctors practising in the UK. The registration department can also provide free information on specific named doctors.

Medicines and Healthcare products Regulatory Agency (MHRA)
1 Nine Elms Lane
London SW8 5NQ

Telephone: **020 7084 2000**
Email: **info@mhra.gsi.gov.uk**
Website: **www.mhra.gov.uk**

Government agency responsible for ensuring that medicines and medical devices work and are acceptably safe. The leaflet *Breast Implants: Information for women considering breast implants* is available from the MHRA and was last updated in 2011. There is also up-to-date information on implant safety on its website.

NHS Choices
www.nhs.uk

NHS Choices is the UK's biggest health website and provides a comprehensive health information service. The website can help you make choices about your health, from decisions about your lifestyle, such as smoking, drinking and exercise, to finding and using NHS services in England. As well as providing general information about hospitals it also highlights which types of breast reconstruction are available where and the number of each procedure performed for some hospitals.

Further reading

Dr Susan Love's Breast Book
5th Revised edition
Susan M Love
Da Capo Press, 2010
ISBN 978-0738213590

Breast reconstruction: your choice
Dick Rainsbury and Virginia Straker
Class Publishing, 2008
ISBN 978-1859591970

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Find out more

We offer a range of services to people affected by breast cancer. From diagnosis, through treatment and beyond, our services are here every step of the way.

(SM21) (SM22) (SM23) (SM24) (SM25)

To request a free leaflet containing further information about our services, please choose from the list overleaf, complete your contact details and return to us at the **FREEPOST** address or order online at **www.breastcancercare.org.uk/publications**

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To make a donation please complete your details overleaf and return to us with your cheque/PO/CAF voucher at the **FREEPOST** address:
Breast Cancer Care, FREEPOST RRKZ-ARZY-YCKG,
5–13 Great Suffolk Street, London SE1 0NS

Or to make a donation online using a credit or debit card, please visit **www.breastcancercare.org.uk/donate-to-us**

I'd like more information

Please send me:

- ☐ Support for people recently diagnosed with breast cancer (SM21)
- ☐ Support for people having treatment for breast cancer (SM22)
- ☐ Support for people living with and beyond breast cancer (SM23)
- ☐ Support for younger women with breast cancer (SM24)
- ☐ Support for people living with secondary breast cancer (SM25)

I'd like to donate

Please accept my donation of £10 / £20 / my own choice of £ _____

☐ I enclose a cheque/PO/CAF voucher made payable to Breast Cancer Care. (Please don't post cash.)

Or to make a donation online using a credit or debit card, please visit **www.breastcancercare.org.uk/donate-to-us**

Thank you for your kind donation.

My details

Name _____

Address _____

_____

Postcode _____

Email address _____

From time to time we may wish to send you further information on our services and activities.

- ☐ Please tick if you are happy to receive emails from us
- ☐ Please tick here if you do not want to receive post from us

Breast Cancer Care will not pass your details to any other organisation or third party.

I am a (please tick):

- ☐ person who has/who has had breast cancer
- ☐ friend/relative of someone with breast cancer
- ☐ healthcare professional
- ☐ other (please state) _____

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This booklet can be downloaded from our website, **www.breastcancercare.org.uk**
It is also available in large print, Braille, audio CD or DAISY format on request by phoning **0845 092 0808**.

This booklet has been produced by Breast Cancer Care's clinical specialists and reviewed by healthcare professionals and people affected by breast cancer. If you would like a list of the sources we used to research this publication, email publications@breastcancercare.org.uk or call 0845 092 0808.

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Telephone 0845 077 1895
Email src@breastcancercare.org.uk

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Telephone 0845 077 1894
Email cym@breastcancercare.org.uk

East Midlands and the North of England
Telephone 0845 077 1893
Email nrc@breastcancercare.org.uk

Scotland and Northern Ireland
Telephone 0845 077 1892
Email sco@breastcancercare.org.uk

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Breast Cancer Care is here for anyone affected by breast cancer. We bring people together, provide information and support, and campaign for improved standards of care. We use our understanding of people's experience of breast cancer and our clinical expertise in everything we do.

Visit **www.breastcancercare.org.uk** or call our free Helpline on **0808 800 6000** (Text Relay **18001**).

Interpreters are available in any language. Calls may be monitored for training purposes. Confidentiality is maintained between callers and Breast Cancer Care.

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