CHAPTER 7

Reconstruction

better options than ever before

Most women who have mastectomies, particularly in younger age groups, choose to undergo reconstruction. While it is not required by any means, reconstruction has been shown to greatly improve quality of life, self-image, and overall well-being for many women who have mastectomies. Reconstruction is rarely needed or performed after a lumpectomy.

Reconstructive surgery is usually performed in stages, with the first stage happening at the same time as the mastectomy surgery, when the breast is removed. This means that when a woman wakes up from surgery, she has some semblance of a reconstructed breast and does not have to look at a flat chest wall. Usually the rest of the stages of reconstruction happen weeks to months later, depending on whether additional treatment is needed; for example, if chemotherapy is given after surgery, the second stage of reconstruction would wait until after chemotherapy has been completed. If you decide not to have reconstruction at the time of your mastectomy and then change your mind after surgery is done, reconstruction usually can be performed at a later time, but there are advantages to doing it at the same time as the mastectomy. For one,

if you do reconstruction later, you would need an extra operation that could have been combined with your breast surgery. For another, in some cases other treatments you receive—specifically radiation, which is given after mastectomy in cases of advanced breast cancer—can make reconstruction more challenging afterward and limit your options (for more on this, see chapter 10 and below). So if you are considering reconstruction, having it at the same time as your breast surgery is usually the best way to go.

There are situations where your breast surgeon may actually recommend *against* reconstruction. One is in rare cases of very advanced breast cancer, such as inflammatory breast cancer. While complications related to reconstruction are not common, they do happen, and in cases of more advanced disease, your surgeon may be concerned that *any* complication could delay cancer treatment that is critically needed right away. Another involves women who have other major health issues; the surgeon may feel that the additional hours of surgery needed to perform reconstruction would be too risky. In these cases, focusing only on the goal of curing the cancer may be the best plan.

Reconstruction is usually performed by a plastic surgeon working closely with the breast surgeon to achieve the best combined result for both cancer cure and aesthetics. When you opt for reconstruction at the same time as your mastectomy your plastic surgeon and breast surgeon have to work together, and thus both have to be affiliated with the institution or facility where your surgery will be performed. So usually your breast surgeon will refer you to a plastic surgeon that he or she works with regularly. Most breast surgeons do work with more than one plastic surgeon, so you can ask your breast surgeon about the different options for referral, and you may even want to consult with more than one. (Also see chapter 4 on putting together your team.) You will meet with the plastic surgeon for a consultation prior to surgery, and during that visit you will be examined and options for reconstruction for you will be discussed. Many plastic surgeons will show you pictures of their previous work as examples of results they have achieved, but remember, each patient is

different, and her results will depend on many contributing factors, including body type, overall health, and other factors related to her particular case. Once you have met your plastic surgeon and decided on your surgery team, the two doctors' offices will usually work together to coordinate a surgery date for you.

In this day and age, reconstructive options are more varied and promising and associated with better cosmetic outcomes than ever before. For each individual woman there may be different options regarding where to make the incision, choices for shape and size of the reconstructed breast, and for some the option of preserving the nipple. Your breast surgeon and plastic surgeon work together harmoniously to maximize your cosmetic outcome while making sure the cancer outcome is the best it can be.

There are two types of breast reconstruction: implant surgery and autologous tissue surgery, known as tissue reconstruction. Each approach has its own advantages and disadvantages.

Implant surgery

In general, implant surgery is the most common way of reconstructing breasts after a mastectomy. It is faster than tissue reconstruction, usually adding two to four hours to the mastectomy surgery (depending on whether the plastic surgeon is reconstructing one or two breasts). Further, the recovery time is similar to just mastectomy alone. Even on the day of surgery, a woman who has had a bilateral mastectomy with implant reconstruction can be up and around, using the bathroom by herself, and starting to drink and eat.

The downside of implant surgery is that you will usually need additional procedures. At the time of mastectomy surgery the first stage of reconstruction is performed by the plastic surgeon: a temporary device, called a tissue expander, is placed in the chest. This is not the actual permanent implant. Over the next few weeks to months after surgery, the expander is injected with saline to make it larger, thereby stretching the overlying remaining skin until the plastic surgeon feels that there is room for the permanent implant. If

you need chemotherapy after surgery, this process of expansion can usually proceed without a problem during that time. A second, smaller operation is then required to exchange the expander for the permanent implant. This can happen soon after the first surgery, perhaps a month or two later, if no additional treatment is given. But if you need chemotherapy, this second stage would wait until after treatment is completed. Finally, there's a third procedure required in order to reconstruct the nipple if that's what you choose to do. Nipple reconstruction involves raising a small mound of skin from the scar, or taking a skin graft from another part of the body (often the inner thigh) to create the shape of the nipple. Then once healing is completed, the darker color of the nipple and surrounding areola is achieved with tattooing. For women who are able to undergo nipple-sparing mastectomy, the nipple reconstruction step is not needed.

In some cases it's possible to have immediate reconstruction—which means going straight to permanent implants at the time of the mastectomy. These cases include women where most of the skin and nipple can be safely saved (so there is enough room for the permanent implant without the expansion process) and where the native breast is similar to what is desired so that no significant alteration in overall breast size and shape needs to be made.

Most women who have reconstruction do undergo implant reconstruction. The options for implant reconstruction have improved dramatically over the years, with different shapes and materials now available for different body types. Implants are made of saline or silicone, and both have long-standing track records for safety. Some newer types of silicone implants give them a softer, more natural feel. But implants aren't for everyone. The fact remains that implants are implants and not one's own tissue, so they may never look and feel as natural as you might have hoped. For women who require radiation after mastectomy (see chapter 10), there is also a higher chance of complications with implants, with extensive capsule formation around the implant leading to potential scarring, distortion, and discomfort. But overall most women are satisfied with their implant-based reconstruction.

Autologous tissue surgery

This second option for reconstruction involves taking tissue (fat and skin) from another part of the body where there is some extra (usually the belly, sometimes the buttock, or even the back) and using that tissue to rebuild the breast shape. One advantage of this surgery is a more natural look and shape. In general, a large amount of the patient's own breast skin can be preserved as an envelope, and the tissue from the other site is used to fill in the empty space and can be sculpted to re-create the original or desired shape.

A second advantage of this surgery is that there are no expanders placed, and therefore no second surgery to replace the expander with the implant, so that's one less procedure you will have to undergo. If your nipple was not preserved in the initial surgery, however, and you want it reconstructed, you will still have to have that follow-up procedure. When tissue is taken from the belly the operation is called DIEP flap surgery. DIEP stands for deep inferior epigastric perforator, which is the name of a blood vessel in the belly wall that serves as the main blood supply for the segment of tissue that is being moved. For women who have enough belly tissue to re-create one or both breasts, a third advantage of the tissue transfer operation is getting a simultaneous tummy tuck along with their breast cancer surgery. When tissue is taken from the back, it involves removal of a small part of the latissimus dorsi muscle, which overlies the shoulder blade, along with some fat and skin, and is thus called a latissimus dorsi flap, or lat flap for short.

The major disadvantage of autologous tissue reconstruction surgery is its length and the associated major recovery required. During surgery, the surgeon meticulously connects the blood vessels of the chest wall with the donor tissue vessels by sewing them together, one at a time, so that the donor tissue will be able to live in the new site. This is a complex and delicate process, frequently performed under a microscope; it can take anywhere from six to twelve hours, and sometimes longer. Recovery time is also affected: tissue has been taken from one site in the body and placed in another area, so you're actually healing from two procedures instead of one.

When the belly is the tissue donor site, as is usually the case, the recovery is similar to that of someone recovering from major abdominal surgery. When tissue is taken from the back, there can be some weakness of the shoulder and remaining muscle. Full recovery can take as long as six weeks, and patients are definitely not up and around immediately following surgery, as they are after reconstruction with implants.

Another tough decision: implant or tissue transfer after mastectomy?

The plastic surgeon's job is to evaluate you and your body type and to determine whether reconstruction is for you, and if so, what type of reconstruction is best. There are various reasons a plastic surgeon may advise one type of reconstruction over the other. For example, a woman who has had previous radiation to the breast may not be able to have reconstruction with an implant, since the effects of the radiation may mean that the skin cannot be easily stretched (see chapter 10 on radiation side effects). In that case, you'll likely be advised to go with a tissue transfer procedure. Conversely, a thin woman with no extra abdominal fat or a woman with abdominal scars from previous surgery may not be an appropriate candidate for tissue transfer and will be recommended for an implant.

Perhaps the most difficult part of the plastic surgeon's job is managing patient expectations. When a woman develops breast cancer and opts for mastectomy with reconstruction, she may see it as an opportunity to change the size and conformation of her breasts. For example, a thin woman with very small breasts who always wanted larger breasts can opt for a large implant, and a second implant can also be placed behind the opposite breast to create a match. But if a woman weighs 270 pounds and opts for a belly flap, this will rearrange some of the tissue and put it in more desirable places, but it won't make her 125 pounds. And neither of these women will wake up with a different overall body type.

In other words, be realistic in your expectations. Breast reconstruction has been shown to improve quality of life, self-image, and overall well-being for many women who have a mastectomy, but it is not a total body overhaul. In addition, it's best to be skeptical if the plastic surgeon's promises for physical transformation seem far-fetched or unrealistic.

A WORD TO THE WISE

Planning your surgery is best done with a team approach in which a plastic surgeon and breast surgeon who work well together strategize to achieve the best outcome for you. This involves up-front discussion of many different factors about your case (implant versus tissue, preservation versus losing the nipple, and even where to place the incision and how big it might be). What many people don't realize is that oftentimes achieving the best *cosmetic* result may potentially compromise achieving the best *cancer* result, and these two priorities can be in direct conflict. For example, an extremely small incision may give you a more desirable cosmetic outcome with a smaller, less noticeable scar, but a smaller incision may also make it more difficult for the surgeon to thoroughly remove all the breast tissue (which is of course the whole point of the mastectomy in the first place). Similarly, for some women, making an incision under the breast, at its very bottom, may make it difficult to reach and remove all the tissue at the very top of the breast. Instead a small central incision might be the best approach. Only your breast and plastic surgeons can look at your case, your cancer, and your particular anatomy and build and help develop the best plan. So make sure you have an experienced team that will work together to get the best *overall* outcome for you, taking into account both cure and cosmetics. Good signs to look for when making your decision about your surgical team are

1. High volume. Do the breast surgeon and the plastic surgeon each do at least fifty to one hundred breast operations per year? Many high-volume breast and plastic surgeons in big centers do hundreds more, but this is the minimum: averaging at least one to two per week.
2. A track record of working together.
3. Surgeons who work out of a top-notch institution, especially an academic medical or cancer center.
4. Knowing others who have had good results and a good experience with this team. And be wary of a team that overpromises or overemphasizes cosmetic results while downplaying the importance of the cancer operation.

Oncoplastic surgery

Oncoplastic surgery, which has been buzzed about in the last few years, simply means combining breast cancer surgery (the "onco" part) with reconstruction (the "plastic" part) to achieve the best possible combined result from the point of view of both cancer treatment and aesthetics. The term "oncoplastic surgery" can simply mean having reconstruction after a mastectomy. The term can also be applied to lumpectomy surgery when decision making about the incision and its orientation optimizes aesthetics, or when rearrangement of the remaining breast tissue is considered after a particularly large lumpectomy in order to fill in any gap or deficit. The truth is, most of us have been doing this all along, even before the actual phrase "oncoplastic" came into use. My advice is not to get too caught up in the hype, but there are some breast surgeons who favor this approach.

Reconstruction and insurance

Many women are concerned about payment for reconstruction—how will they afford it? They know that aesthetic plastic surgery such as face-lifts and breast augmentation can cost thousands of dollars. Thankfully, financial constraints should not be a factor if you do wish to have reconstructive surgery for breast cancer. The Women's Health and Cancer Rights Act (WHCRA), a law passed in 1998, requires all group insurance policies to cover plastic surgery related to reconstruction for breast cancer. Therefore, *all* women who are having a mastectomy should be offered reconstruction as part of their treatment. The law also specifically includes coverage of reconstruction of the other breast to give a more symmetrical appearance. Medicare and Medicaid cover breast reconstruction as well, so there should be no significant financial barriers for the vast majority of women.

Despite the passage of this law in 1998 and its promise of near universal coverage, however, there are still disturbing disparities. Studies have shown that lower-income women and women with lower levels of education are receiving reconstruction after mastectomy at much lower rates than higher-income women or women with higher levels of education. The women in the group who are not receiving reconstruction may simply not be aware of their options, or that the law guarantees them coverage. To start to rectify this situation, another law passed in New York State in 2010 requires hospitals and their doctors to inform breast cancer patients of the availability and coverage for reconstruction before they undergo surgery. If reconstruction services are not available at the site of treatment, patients must be informed of options elsewhere and be allowed to transfer their care to a facility that does provide reconstructive services. Other states have since followed suit, enacting similar laws mandating the provision of education and information regarding reconstruction. My hope is that the Breast Cancer Patient Education Act, introduced to Congress in 2013, will make this requirement national.

THE TAKEAWAY

- Reconstruction is an excellent option for most women who have mastectomy, and it *is* covered by insurance.
- Your team, breast surgeon and plastic surgeon working together, will help you determine the best plan for your individual case.