BREAST RECONSTRUCTION CONSULTATION

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DISCLAIMER

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WHAT IS A MASTECTOMY?

The breast surgeon removes the entire breast

- Removes all the glandular and fatty tissue inside the breast
- May remove breast skin
- May remove the nipple and areola (skin-sparing mastectomy) *or* may keep the nipple (nipple-sparing mastectomy)

TWO WAYS TO MAKE A NEW BREAST (CALLED RECONSTRUCTION)

1. Breast implant(s)
2. Your own tissues (called a *flap* procedure)

GOALS

Everybody wants to have breast reconstruction done in one operation, with minimal down time and little follow up. Unfortunately, this is almost never the case. For almost all women, breast reconstruction is a *PROCESS*, not a single procedure.

OPTIONS FOR BREAST RECONSTRUCTION

1. No reconstruction
   - Wear external prosthesis under your bra
2. Using a product off the shelf, not a part of you
   - Breast implant
3. Using your own tissues
   - *Flap* procedure

IMPLANT RECONSTRUCTION

- Some of the time, especially if skin is removed as part of the mastectomy, a permanent breast implant cannot be put in the breast right at the time of mastectomy because it could put too much pressure on the breast skin and risk wound healing problems. Instead, a temporary spacer, called a ***tissue expander***, is placed in the breast, usually on top of the pectoralis muscle. This tissue expander has a built-in port which allows your plastic surgeon to add water (saline solution) or remove saline. Usually, some saline is added at the time of the mastectomy. The rest of the saline is added later, in the office, with just a little needle stick to inject more saline. In this fashion, the skin is stretched (or expanded) over time, to create a good pocket in the breast for the final implant.

ACELLULAR DERMAL MATRIX (ADM) ALLOGRAFT

- When Dr. Hubert uses a tissue expander or implant for breast reconstruction, he also uses one or two pieces of human cadaver skin (called an acellular dermal matrix, or ADM) allograft as an internal bra, to help support the correct position of the tissue expander and to allow a greater initial saline fill during surgery. This ADM is processed to remove all of the cells from the tissue donor, and it comes in a sterile package. Eventually your own body grows into this sheet of tissue, replacing it with your own cells, and it becomes part of you. It is on the inside, however, and it is unlikely you will ever see it.

STAGE 2 SURGERY

- The tissue expander eventually feels rather hard, some patients describe it as a “rock” sitting on your chest. The next stage is another surgery, as an outpatient under general anesthesia, to remove the tissue expander and place the permanent soft implant.

IMPLANT TYPES

- Permanent breast implants all share the same silicone rubber outer shell. The inside of the implant is the major difference. They can be filled either with silicone gel or with saline solution (water). Each type has pros and cons. Dr. Hubert uses silicone gel filled implants in the majority of his breast reconstruction patients. He will discuss which type he recommends for you. This decision generally does not need to be made until just before the surgery for placement of the final implant. So if you are planning a tissue expander first, the final implant decision can be postponed until the second stage surgery.

SILICONE GEL IMPLANT SAFETY

- During the 1980s and 1990s, there were many lawsuits against manufacturers of silicone gel implants and a lot of media attention in the news. The US Food and Drug Administration (FDA), therefore, restricted use of silicone gel implants, and additional studies were done to examine their safety. ***The results show that there has never been any evidence that silicone gel breast implants cause any significant disease whatsoever.*** So the bottom line is that they are extremely safe and effective, to the absolute best of our knowledge.

WHAT IF MY IMPLANT BREAKS?

- Breast implant shells are very strong, and they do not rupture easily. Most of the time when they do, it just happens, sometimes at a fold in the device. But it is very rare for trauma to cause an implant to break.
- Saline implant rupture: your body re-absorbs the saline solution, and it is very obvious that the implant has broken, because one side is flat and the other isn't.
- Silicone implant rupture: it is not always obvious, because the silicone gel generally just stays right in the pocket of the breast. Again, it is not a health danger. However, the U.S. FDA recommends that you get an MRI or an ultrasound starting 5-6 years after the implant is placed, and then every 2-3 years after that, just to check if it has ruptured.

DIRECT-TO-IMPLANT (DTI) RECONSTRUCTION

- Some patients may be able to go “direct to implant.” This skips the tissue expander, and places a permanent implant at the time of the mastectomy. The ADM allograft is also used to hold the implant in position. But a woman must also have enough skin. The chance of needing more surgery for revisions is higher for this technique. Dr. Hubert may use this option if a woman already has cosmetic breast implants (so the breast pocket has already been created), and a new, larger implant is placed at the time of the mastectomy once all of the breast tissue has been removed as well. Or another situation when direct to implant reconstruction might be used is for small to medium-sized breasts that have a normal nipple position (minimal to no sagging of the breast).

RISKS OF IMPLANTS

- The main risks associated with breast implants include, but are not limited to:
  - Rippling (wrinkles that you can see)
  - Infection
  - Leakage (rupture)
  - Malposition
  - Capsular contracture (scar tissue around the implant)
  - Fluid collections

BIA-ALCL & BIA-SCC

- There are two extremely rare conditions of cancers located in the capsule scar tissue around implants, called Breast Implant Associated ALCL and SCC. They may take years to develop and usually start as abnormal swelling. They tend not to be aggressive and are easily treatable if detected early, when the swelling starts. Because they are so rare, we don't know what causes these conditions. They seem to be associated with implants that have a texture to the outside shell. Dr. Hubert therefore only uses smooth implants and tissue expanders. Again, because they are so extremely rare, there are not any firm recommendations regarding implants.

WHAT TO EXPECT AFTER MASTECTOMY/ TISSUE EXPANDER SURGERY

- Surgery is about 60 - 75 minutes per side
- At least one surgical drain per side
- Outpatient surgery (go home the same day) is common, some patients stay 1 night in the hospital
- Wearing a surgical bra day and night for 2 - 3 weeks after surgery
- Out of work typically 2 - 4 weeks
- No exercise or strenuous activity for at least 4 weeks

USING YOUR OWN TISSUE (FLAP SURGERY)

- Options:
  - DIEP flap (from your lower abdomen) – the most popular
  - Latissimus flap (from your back)
  - Other flaps - uncommon
    - PAP or TUG flaps (from your inner thigh)
    - SGAP flap (from your upper buttock)

WHAT IS A DIEP FLAP

- DIEP (pronounced “deep”) stands for deep inferior epigastric perforator, the blood vessel that runs through the flap
- It uses the skin and fat between your belly button and lower abdominal fold to make one or two new breasts. Unlike the older TRAM flap, the DIEP flap leaves the muscle and fascia (the strength layer) in your abdominal wall, so that your risk for hernia or a bulge in the tummy is much, much lower. Also, since the muscle is still in its correct location in your abdomen, your strength is not reduced like it might be with a TRAM flap.

HOW IS A DIEP FLAP PERFORMED?

- The tissue of the DIEP flap from the lower abdomen is actually completely removed from your body, along with the blood vessels (at least one artery and one vein) that supply the tissue, and it is transplanted into your chest by sewing together the tiny, 2-3 millimeter wide blood vessels, under the microscope. To reach the blood vessels in your chest, Dr. Hubert removes a short piece of cartilage from one rib per side to get to the blood vessels that run underneath the ribs.

WHAT TO EXPECT IN THE HOSPITAL

- Surgery is longer than for tissue expanders, about 6 hours for one side, or 8-10 hours for two.
- The connections of the tiny blood vessels are very important. If they develop a blood clot, it could result in losing the entire flap of tissue. The risk is highest in the first two days. Because of that, a special laser monitor is taped onto the flap and measures the blood flow. The nurses check it once an hour for the first two days in the intensive care unit (ICU). Dr. Hubert also follows the laser monitor in real time with an app on his smartphone, even when he is not in the hospital. If there is a problem, sometimes it requires a trip back to the operating room to try to fix it and save the flap.
- Total hospital stay is usually about 3 days.
- You will have one surgical drain per breast and two in the tummy.
- Out of work about 4-6 weeks.
- No exercise or strenuous activity for about 6 weeks.

BENEFITS OF DIEP FLAP SURGERY

- It is your own tissue! DIEP flaps tend to have a more natural sag than an implant.
- It brings in healthy, non-radiated tissue to make a new breast if you had previous radiation that led to complications.
- Permanent result: no need to worry about implants going forward.

RISKS OF DIEP FLAP SURGERY

- Longer surgery
- Longer hospital stay and recovery
- Flap loss (the whole flap could die if its blood vessels get clotted)
- Donor site in the abdomen:
  - Scar from hip to hip
  - Possible wound healing problems
  - Possible bulge or hernia which could require more surgery at some point.

WHAT ROLE DOES RADIATION PLAY?

- If you need radiation therapy to the breast after your mastectomy, this can certainly affect your breast reconstruction. Radiation kills cancer cells, but it also damages healthy cells, and some of this damage is permanent. Radiation tends to make the skin tougher, less elastic, and darker. It increases risk for implant infection and capsular contracture. If a DIEP flap gets radiated, the skin and the fat are affected, and it can shrink a lot.

IF WE KNOW RADIATION IS DEFINITELY NEEDED…

- If you will need radiation, often the best option is to place tissue expanders at the time of the mastectomy and go through the radiation treatment with the expanders, in order to hold the position and shape of the breast. Then after radiation, remove the tissue expanders, but instead of replacing with permanent implants, replace them with DIEP flaps (which is healthy and non-radiated fat and skin). Unfortunately, we don't always know if you will need radiation until a week after the mastectomy, once the final pathology on the mastectomy specimen is complete. So sometimes we just have to make our best educated decision about what procedure is best for you, with the information we have.

WHAT ROLE DOES CHEMOTHERAPY PLAY?

- Some patients require chemotherapy, either before or after your mastectomy. Chemotherapy increases your risk of an infection, which might require implant or tissue expander removal. As long as you don’t get an infection, it does not significantly affect your breast reconstruction result.

NIPPLE RECONSTRUCTION

- If your nipple is removed with the mastectomy, don't worry, we can make a new one. This involves a short, outpatient surgery, often with just sedation (not general anesthesia), with minimal recovery. The procedure uses the skin on the breast, folds it on itself, and once stitched together, a new nipple is made. Dr. Hubert does not use a skin graft for nipple reconstruction. Once it is healed, you can get a tattoo of the nipple and surrounding area to recreate the areola (also covered by insurance).
- Once the nipple is made, it cannot be easily moved. So this is usually the last step in the process, once a stable breast mound has been created, either with an implant or a flap. Of course, nobody needs a nipple, it is totally up to you. Some women may decide to skip this last step.

OTHER FLAPS: LATISSIMUS FLAP

- This flap uses skin, fat, and muscle (your latissimus dorsi muscle) from your back. For many women, there is not enough bulk from this flap, so an implant or even a tissue expander and then implant must be used with the flap. Because of this, Dr. Hubert usually reserves this operation as a backup plan, if another option has failed, for whatever reason. Your back muscles will be a little weaker as a result of this operation. Some women can have a fluid collection form in their back where the muscle is taken from.

OTHER FLAPS: TUG, PAP, & SGAP FLAPS

- Some women are not candidates for a DIEP flap, usually due to prior abdominal surgery. TUG and PAP flaps use the skin and fatty tissue of the inner thighs. SGAP flaps use the upper buttock. All of them require microsurgery to transplant these tissues. The blood vessels tend to be short, and the shapes often don't look very good. Because of that, Dr. Hubert no longer performs these procedures. If one of these flaps is your best option, you may be referred to another center.

REVISION SURGERY

- With most breast reconstruction, revision surgery is VERY common. This might be to tweak the position of the implant, add additional fatty tissue to the breast, remove extra skin on the side of the breast, or reposition the nipple, for example. Revisions are often done as outpatient surgeries, with easier recovery and less down time than the bigger initial surgery. Revision surgery is almost always covered by insurance.

FAT GRAFTING

- When we need to add more volume to a flap, or around an implant, Dr. Hubert can often take it from somewhere else in your body. Liposuction takes out living fatty cells from areas such as your belly, flanks, or thighs. It is then spun through a device that removes the extra fluid and dead cells, and the living cells are then reinjected into your breasts to improve the size or shape. This is done as an outpatient without too much down time post-operatively. Your body may re-absorb some of the fat that is transferred, so fat grafting might be performed more than one time.

CONCLUSION

- This covers the basics of breast reconstruction. You are now ready for Dr. Hubert to meet you, review your history, do an examination, review the options, and help you come up with your individualized surgical plan.