Chest Reconstruction

A summary for primary care providers

SHERBOURNE Health Centre

Rainbow Health Ontario
A Program of Sherbourne Health Centre

This summary provides information to facilitate discussion of transition-related surgery between primary care providers and patients. It is not exhaustive and does not replace the informed consent process between surgeon and patient.

DESCRIPTION*

- Bilateral mastectomy and chest contouring
- Removes breast tissue and sculpts remaining tissue into a shape typically considered more masculine

In this document:

- "**Nipple**" is the central raised portion of pigmented tissue
- "**Areola**" is the circular shaped pigmented tissue immediately surrounding the nipple
- "**Nipple-areola complex**" (NAC) is the entire tissue complex including both nipple and areola

INTENDED RESULTS

- ✓ **Reduces gender dysphoria by aligning anatomy with gender identity**
- ✓ **Flatter chest profile**
- ✓ **Often eliminates need for binding**

SIDE EFFECTS

- ○ **Irreversible**
- ○ **Decreases ability to lactate/chest feed**
- ○ **Numbness of nipples/areola/chest - higher risk with double incision/bilateral mastectomy**
- ○ **Scarring: Small scars around areola in keyhole and periareolar; large linear scars in double incision/bilateral mastectomy**
- ○ **May decrease ability to screen for breast cancer, since breast cancer screening tests may be less effective**

ALTERNATIVE TREATMENT OPTIONS

- Binding chest
- Wearing clothes that hide chest tissue
- Weight loss to decrease chest tissue

** Adapted from Transgender Health Information Program [Internet]. Transgender Health Information Program. [cited 2016Nov21]. Available from: http://transhealth.phsa.ca/*

SURGICAL TECHNIQUES AND OPTIONS*

There are multiple possible techniques. The type recommended by the surgeon depends on cup size, skin elasticity, and NAC size/position. Three common techniques:

1. KEYHOLE (Recommended for people with an A cup-size and lots of chest skin elasticity)

- A small incision is made along the bottom of the areola
- The NAC is left attached to the body via a pedicle (a stalk of tissue) in order to maintain sensation
- Breast tissue is removed by a liposuction needle through the incision
- The incision is closed. The NAC is usually not resized or repositioned

2. PERIAREOLAR INCISION (Recommended for people with a B or C cup size and moderate chest skin elasticity)

- An incision is made all around the outside of the areola
- The NAC is usually left attached to the body via a pedicle (stalk of tissue) to maintain sensation
- Breast tissue is removed by scalpel and/or liposuction
- The areola may be trimmed to reduce its size
- Excess skin around the areola may also be trimmed away
- The skin is pulled taut around the areola like pulling a drawstring closed
- The NAC is reattached to the skin
- The NAC may be repositioned slightly, depending on chest size and available skin
- Drains (long thin tubing) may be placed in the chest to allow blood/fluid to escape

3. DOUBLE INCISION/BILATERAL MASTECTOMY (Recommended for people with a C-cup size and reduced skin elasticity or a D-cup size)

- Large incisions are made horizontally across the chest, usually beneath the areola
- The skin is peeled back. Mammary glands and fatty tissue are removed with a scalpel
- Some fatty tissue may be liposuctioned
- Excess chest skin is trimmed
- Incisions are closed, leaving two scars below the pectoral muscle lines
- With the "free nipple graft" technique, the NAC is removed completely
- The areola is trimmed to a smaller size and NAC grafted to the chest in a higher position
- With the pedicle technique, the NAC is left partly attached (in an attempt to maintain sensation), repositioned, trimmed to a smaller size, and reattached
- Two drains (long thin tubing) are placed along each incision to allow blood/fluid to escape

SURGICAL RISKS AND COMPLICATIONS OF CHEST RECONSTRUCTION

- **Change in sensation** (loss of sensation or hypersensitivity) **in NAC and chest** (more common with free nipple graft)
- **Partial or full nipple graft failure**, ie. nipple necrosis (tissue dies and falls off) NAC may need to be replaced, reconstructed or tattooed (a rare complication)
- **Changes in colour of NAC**
- **NAC asymmetry**
- **Large scars**
  - Prominent scars with double incision
  - Can cover with chest hair, building pectoral muscles, tattoos
- **Skin contour irregularities** (skin excess, bulges, puckering)
- **Hematoma/Seroma/Abscess**

POTENTIAL RISKS/COMPLICATIONS COMMON TO MOST SURGERIES

! Risks are increased with smoking, immunosuppressant drugs, clotting disorders, conditions that impair healing, BMI <18.5 or >30

- Bleeding
- DVT, PE (blood clots in legs, lungs)
- Injury to surrounding anatomical structures (organs, nerves, blood vessels)
- Hematoma (collection of blood)/ seroma (collection of fluid)
- Infection/abscess (collection of pus)
- Wound dehiscence (wound opening), delayed healing
- Nerve damage, loss of sensation, hypersensitivity, neuropathic (nerve) pain
- Chronic pain
- Scarring (can be prominent especially if history of keloid)
- Dissatisfaction with appearance/ function
- Need for revision(s)
- Post-operative regret

General Anesthetic Risks:

- Respiratory failure
- Cardiac failure/arrest
- Death
- Damaged teeth
- Aspiration pneumonia
- Nausea/vomiting

PRE- AND POST-OPERATIVE CARE

PRE-SURGICAL CARE

PRE-SURGICAL CONSIDERATIONS

- Consider referral to the Sherbourne Health Centre ARC (Acute Respite Care) if socially isolated, under-housed or homeless
- Smoking cessation is strongly recommended both pre-op and post-op to optimize wound healing and decrease risk of nipple necrosis
- Follow surgeon's advice on time periods to avoid smoking, alcohol and other substances
- History of keloid scars

Each surgical centre has a routine pre-operative process, patients should ask their surgeon what to expect.
Hospitals tend to have standard pre-operative processes which may include:

- Pre-admission visit to review health history and provide teaching (pre/post-op care)
- Anesthesia and/or medicine consult may be required, depending on health history
- Anesthesia will discuss:
  - which medications to stop and when
  - anesthetic approach and risks
  - pain control measures
- Patients should ask their surgeon if there are any additional fees that are not OHIP covered

IMMEDIATE PRE-OPERATIVE CARE

- Patients should follow the hair removal instructions recommended by their surgeon
- Some surgeons may make surgical skin markings with patients standing, sitting or lying down
- IV antibiotics may be given pre-operatively to reduce the risk of infection

POST-SURGICAL CARE

IMMEDIATE POST-OPERATIVE CARE

- Surgical drains (Jackson Pratt drain) may or may not be necessary for up to one week
- Follow surgeon's post-op instructions for drains, dressings, sutures and steri-strips
- Follow surgeon's recommendations about wearing a compression band (sometimes recommended for 1 month post-op)

INTERMEDIATE POST-OPERATIVE CARE

- Follow surgeon's recommendations on restrictions to activities
- Some general guidelines include:
  - Have a support person during the post-op period to assist with ADLs, IADLs (cleaning, laundry, groceries)
  - Limit arm movements to small, below the shoulder movements for several weeks (ie. avoid large movements to avoid tension on sutures and stretching of scars)
  - Avoid driving for 2 weeks or longer, until safely able to move arms to drive
  - Avoid straining, lifting heavy objects (max 10lbs), and exercise for 3-4 weeks
  - Reduce activities and take time off work for 3 weeks or longer (depending on type of work)
  - Gradual return to daily activities over 4-6 weeks

LONG-TERM MEDICAL CARE

- Swelling is normal for 4-6 months and will resolve over time
- Avoid exposing scars to sunlight for at least 1 yr post-op - this will minimize colour changes in the scar
- In all 3 techniques, some original breast tissue will remain, so ongoing monitoring for breast cancer is recommended; the best method is not known
- In Ontario, funding for revisions can be applied for through the Ministry of Health via completion of the Prior Approval for Funding of Sex Reassignment Surgery form

REFERENCES

1. Masculinization of the torso or Mastectomy [Internet]. GRS Montréal. [cited 2016Nov21]. Available from: http://www.grsmontreal.com/en/surgeries/woman-to-man/14-masculinization-of-the-torso-or-mastectomy.html

2. Transgender Health Information Program [Internet]. Transgender Health Information Program. [cited 2016Nov21]. Available from: http://transhealth.phsa.ca/

DISCLAIMER

The information provided here is generalized and is not medical advice. It is recommended that all patients have a pre-operative consultation with their surgeon to receive individualized information including the specific surgeon's technique, complication rates and recommendations. This is a dynamic document that is subject to change, as the knowledge of transition-related surgeries changes.

ACKNOWLEDGEMENT

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