

## What is tissue expansion?

Tissue expansion is a process of growing more skin. The color, texture and hair-bearing qualities are normally better in expanded skin than in grafted skin.

A tissue expander is like a balloon. It is made of a flexible material called silicone. It has a tube that leads to a small dome called a port. The expander is injected with sterile saline (salt water) every week. In time, the skin over the expander will slowly stretch and grow.

The process will take a few months.

## How is it done?

- Your child will need 2 surgeries.
- In between the 2 surgeries, your child will need weekly filling of the expander.

### **The first surgery is done to insert the tissue expander.**

- The surgeon will put the expander with the injection port under your child's skin.
- Saline will be injected into the expander during the surgery. A blue-colored dye, called methylene blue may also be injected. This dye helps with the weekly filling of the expander.
- About 2 weeks after the first surgery, the weekly injections of the tissue expander will start. The first injections will be done at a clinic appointment. You may learn how to do these injections from the clinic nurses. The weekly injections can then be done at home. A nurse will talk with you by phone each week during the process. If you prefer, your child can come to clinic each week for the injection.
- The surgeon will see your child in clinic during the expansion process. The surgeon will decide how long the expansion process will take.

### **The second surgery is done after the expansion process.**

- This surgery is done to remove the expander and the area of skin needing repair.
- The new (expanded) skin is used to cover the area where the old skin was removed.

### **After each surgery:**

- Your child will be in the hospital for 1 to 2 nights. Parents may stay in the hospital with their child.
- Your child will most likely be sore for at least 24 to 48 hours. Your child may need medicine to help with the pain.
- Your child may need to limit activity depending on where the expander is in the body.



Expanders

### What supplies are needed to do injections at home?

<ul style="list-style-type: none"> <li>• Numbing cream to put on the port</li> <li>• Sterile saline bottle and syringes</li> <li>• Betadine® prep pads or swabs</li> <li>• Clean gauze pads</li> <li>• Band-Aids®</li> <li>• Nonsterile gloves</li> </ul>	<ul style="list-style-type: none"> <li>• Butterfly needles (25 gauge x <math>\frac{3}{4}</math> inch) with tubing</li> <li>• Vial access device</li> <li>• Alcohol pads</li> <li>• Needle box</li> </ul>
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### What are the steps for the weekly injections?

1. Put numbing cream on the injection port one hour before you plan to do the injection.
2. Gather all supplies on a clean work area.
3. Wash your hands with soap and water. Put on the gloves.
4. Wipe off the top of the saline bottle with an alcohol pad. Attach the vial access device to the syringe. Inject \_\_\_\_\_ cc of air into the saline bottle.
5. Withdraw \_\_\_\_\_ cc of saline into the syringe. Tap out any air bubbles.
6. Remove the syringe. Attach the butterfly needle with tubing to the syringe.
7. Push the plunger of the syringe until fluid fills the tubing and needle to the amount instructed.
8. Find the injection port of the expander, as shown to you by your child's nurse.
9. Clean the injection port with the Betadine® pad or swab.
10. Put two fingers around the injection port. Insert the butterfly needle at a 90-degree angle into center of the port until you feel the metal back of the disk. Pull back on syringe. The saline in the syringe should pull back easily. Saline will be blue in color, unless you were told otherwise.
11. **Slowly** inject \_\_\_\_\_ cc of saline into expander. **If you feel resistance, you may be at the edge of the port. Carefully pull back on the needle but do not take it out all the way.** Redirect the needle to the center of the port. In rare cases, you may have to try again with a new needle. The skin over the expander should feel firm.
12. After the saline is injected, carefully remove the needle. Throw the needle away in the needle box. Put pressure on the site with the gauze pad until any bleeding stops.
13. Put a small bandage on the site if there is any bleeding.
14. Write down the date and the amount of saline you injected on your flow sheet. Also write down how the injection went. **Call the clinic nurse each week with this information.**

### During expansion

- Your child may have some pain, especially 2 to 4 hours after injections. Pain medicine may be needed. If so, your child's surgeon will order this.
- Injections will take place weekly. Your child's surgeon will decide how long the expansion process will take.
- You and your child may feel uncomfortable about how your child looks during this process. Be sure to talk with your child's surgeon and nurse about your feelings.

**ALERT:** Call your child's doctor, nurse, or clinic if you have any concerns or if:

- You are having problems with injecting the expander.
- The expander under the skin looks like it has gotten smaller in size.
- There is redness, swelling, bleeding, or drainage near the expander or port.
- There are any open areas of skin or wounds at or near the expander or port.
- Your child has severe or constant pain.
- Your child has a fever.
- You need more supplies to do the injections.
- Your child has special health care needs not covered by this information.

**This sheet was created to help you care for your child or family member. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment and follow-up.**