

CHAPTER 19

Advanced skills for pregnancy and birth

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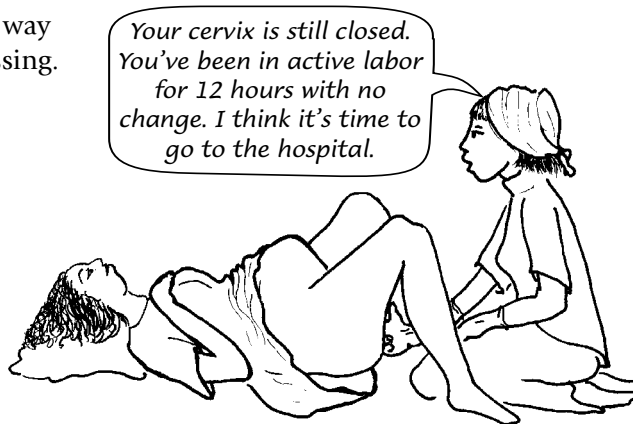
# Advanced skills for pregnancy and birth

## CHAPTER 19

### Vaginal exams during labor

A vaginal exam is useful because it is the most sure way to see how labor is progressing. An exam can show you how open a woman's cervix is and whether the baby is breech or head first.

Vaginal exams have risks, so only do one every four hours if labor is progressing, or if it will give you important information when you suspect there are problems. See page 186.



A vaginal exam can help you decide when to get medical help.



**WARNING!** Any time you do a vaginal exam, even when you have washed your hands and are wearing gloves, you risk passing harmful germs to the woman in labor.

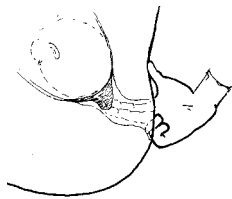
Never do a vaginal exam if the mother is bleeding from the vagina (see page 183).

## How to do a vaginal exam

It is difficult to describe how to do a vaginal exam in a book. Vaginal exams are best learned by practice. Be sure to have an experienced person teach you before you try doing one yourself.

1. Explain to the woman what you are going to do and why.
2. Have the woman rest on her back with her legs bent and open.
3. Wash your hands well with soap (see page 53). Put on sterile or very clean gloves. Then do not touch anything except the vagina.
4. Gently put 2 fingers into the mother's vagina. If she is in early labor, you will usually have to reach inside almost as far as your fingers will go to find the cervix. If the woman is in late labor, the cervix may be pushed closer to the outside by the baby's head.
5. Feel the cervix.

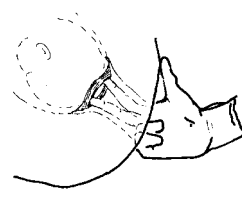
If the cervix is closed, it feels long and firm, like your nose.



As the cervix begins to open, it gets more flat.

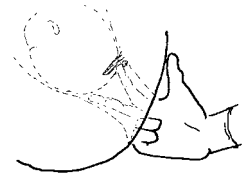


The opening cervix feels like open lips stretched over the baby's round, hard head.



The baby's head will feel hard behind the cervix. If you feel something soft behind the cervix, the baby may be breech (bottom first).

Sometimes, near the end of labor, the cervix is almost open enough but there is a little bit of cervix left on one side. It is best to wait until the cervix is gone for the mother to start pushing.



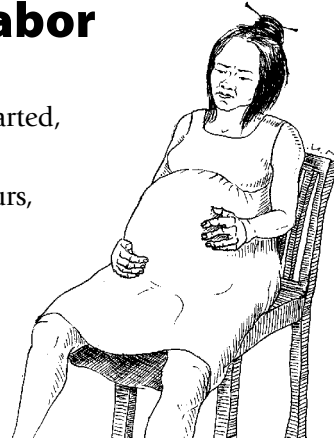
When you cannot feel the cervix at all, it is completely open. It is now safe for the mother to start pushing.



## Home methods for starting labor

You may need to encourage labor when:

- the bag of waters has broken, and labor has not started, or it has started but the birth is not near.
- the mother has been in active labor for several hours, but the birth is not near.
- the mother has been in light labor for many hours and the labor is active enough to keep her from resting, but it is not strong enough to open the cervix.



**Do not try to encourage labor if there are warning signs**, especially if the baby is in an impossible birth position, if there is unusual bleeding, or if the baby's heartbeat is slower than 100 beats a minute. **Get medical help.**

Page 191 lists some very safe home methods to start or strengthen labor. Those methods have little risk, so try them first. If those methods do not work, and you cannot get medical help, try the methods listed on the following 3 pages to strengthen labor.

### Risks of these methods

The methods here can all be used at home, but they do have risks. The greatest risk is that they may not work. **Trying to encourage labor can waste precious time** — time that could have been used traveling to a medical center to get help. If these methods do not work after an hour or 2, get medical help — even if it is very far away.

There can also be risks from the method itself. For example, some plant medicines strengthen labor but can also cause high blood pressure.



**WARNING!** Never use drugs (like oxytocin or misoprostol) to start labor at home. These drugs can cause contractions strong enough to kill the baby or the mother.

## Enemas (rectal fluids)

Enemas are used to:

- speed labor (enemas can make contractions stronger).
- wash stool out of the intestines (this may make labor less painful).
- hydrate a person who does not have enough fluids in her body.
- give medicines to a person who cannot swallow.



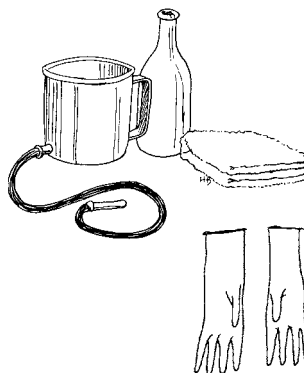
**WARNING!** The greatest danger of enemas is that a little stool will wash out of the rectum and get into the vagina. This can cause an infection after birth. To avoid causing infection, **keep everything that touches the mother's anus, or any stool, away from her vagina.**

Also, be prepared for labor to become strong very quickly.

### How to give an enema

1. Gather the tools you will need:

- a pair of clean plastic gloves
- a clean enema bag, or a container to hold water
- a clean plastic tube to put into the rectum
- a clean hose to attach the enema bag to the tube (60 centimeters, or 2 feet, is a good length)
- 500 milliliters (about a ½ liter bottle or 2 cups) of clean warm water.



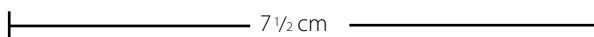
2. Wash your hands and put on clean plastic gloves.

3. Ask the woman to lie on her left side.

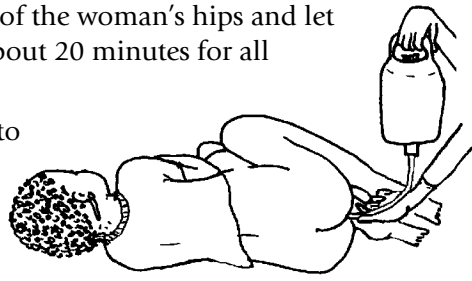
4. Let water flow down into the end of the tube and then pinch the tube closed. This lets the air out.

5. Wet the end of the tube with water or lubricant and then slide it into the rectum. Do not slide it more than 7½ centimeters (3 inches).

Do not put in more tube than this:



6. Hold the bag of water about the level of the woman's hips and let the water flow in slowly. It will take about 20 minutes for all of the water to flow in.
7. Remove the tube and ask the woman to hold the water inside as long as she can. When she passes stool or lets the water out, contractions will usually get stronger and closer together. The longer she holds the water in, the better it will work.



**Note:** If you are giving her rectal fluids to prevent dehydration (not to strengthen labor), it is especially important for her to hold the fluid. If the woman is in shock, you can give her a second bag of fluid 1 hour after the first.

## Castor oil drink

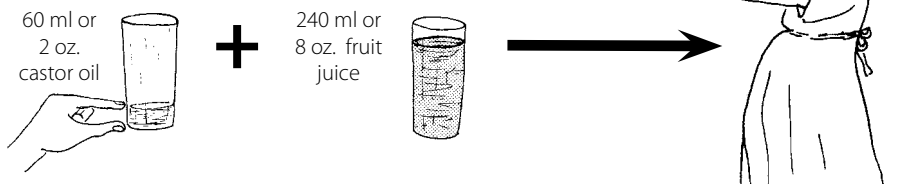
A drink of castor oil and fruit juice can sometimes start or strengthen labor. If castor oil is going to start a labor, it should work within 4 hours.

**Castor oil causes stomach cramps and diarrhea (watery stool). Sometimes it also causes vomiting.** Having diarrhea during labor increases the chance of infection because a little stool can easily get into the vagina. The contractions together with stomach cramps can make labor feel too fast or overwhelming for the woman.

Always warn women that castor oil tastes very bad and will make them feel very uncomfortable. Remind them to wipe from front to back after passing stool.

### To use castor oil

Mix about 60 milliliters (2 ounces) of castor oil in a cup (240 milliliters or 8 ounces) of fruit juice. Lemon or orange juice work especially well. Do not give more than 1 glass.



The mother should drink the whole glass down.

## Plant medicines

Many traditional midwives and healers use plant medicines to start or strengthen labor. There may be plants in your area that work well. Some plant medicines do not work very well but are not harmful. Others can be dangerous.

Watch the effects of plant medicines carefully. Ask other healers about the useful and harmful effects of plant medicines in your community. Do not use a plant medicine that may be dangerous.



All plant medicines have these problems:

- It is difficult to control the dose. The same plant grown in different areas or in different soil, or picked in different seasons, will have different strengths.
- Any medicine given by mouth during labor may be difficult for the body to use. The stomach does not work well during labor.

Each plant may have its own risks. Some common risks among plants that strengthen labor are:

- high blood pressure
- contractions that are too strong
- allergic reactions



# Injections



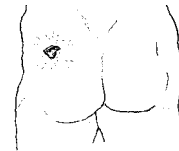
It is more dangerous to inject a medicine than to take it by mouth. But sometimes, especially in emergencies, injections are the most effective way to give a medicine. **Give injections only when absolutely necessary**, and learn to give them before you need to.

Injections are given much too often. In many places, when someone feels sick, the first thing they do is get an injection — sometimes of vitamins, sometimes of antibiotics or some other drug. These types of injections rarely do anything to heal the sickness. They are often an unnecessary expense, and can be dangerous.



## **WARNING!** Injections can be dangerous:

- The place an injection is given can become infected and can cause an abscess.
- Some injected medicines can cause strong allergic reactions.
- Injections with unsterile needles can spread disease — like hepatitis or HIV.
- Anyone who gives an injection has a small risk of accidentally sticking the needle in herself after giving an injection. If this happens, she is at risk of catching diseases like hepatitis or HIV.
- Injections to speed up labor can harm the baby and mother. Never use an injection to speed up labor.



Sterilize your needle before you use it — or it can cause an abscess.

## **Here are some times when an injection is helpful or necessary:**

- severe bleeding after birth. Injecting oxytocin can stop bleeding.
- convulsions or pre-eclampsia during labor and birth. Giving magnesium sulfate can prevent a convulsion.
- infections of the mother after birth. Injecting antibiotic medicines can quickly stop the infection.
- sewing tears after birth. Injecting pain medicine makes sewing hurt less.

—● **Remember:** Never give an injection if medicine by mouth will work just as well.

## **Allergy**

Remember that some medicines can cause serious allergic reactions. See page 469 to learn more about allergic reactions and how to treat them.



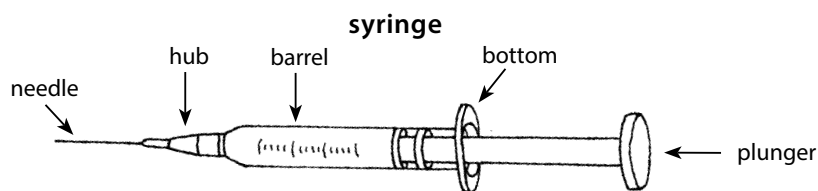
## How to give an injection

### Prepare the syringe and needle

There are 2 kinds of syringes: reusable and disposable. The reusable ones must be taken apart, cleaned, and sterilized before each use (see page 66). The disposable kind come in sterile packages. If the sterile package is dry and unbroken, the syringe and needle can be used directly out of the package. They do not need to be sterilized first.

Sometimes you can use a disposable syringe and needle several times, but **you must sterilize them before each use.**

In this book, we use this picture with any medicine that should be injected.



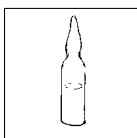
There are also disposable syringes that cannot be reused. Sometimes these syringes come with a dose of medicine already inside. These may be called **autodisable syringes.**



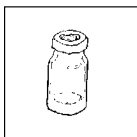
**WARNING!** After a syringe and needle have been sterilized, never touch the needle with your fingers or let anything else touch the needle. If you do, it will not be sterile anymore. Only touch the outside of the barrel or the plunger.

### Draw up the medicine

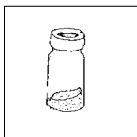
Injectable medicines come in 3 forms:



In a small bottle called an **ampule**. You must break off the top of an ampule to get the medicine.



As a **liquid in a small bottle with a lid**. You push the needle through a soft spot in the lid to get the medicine.

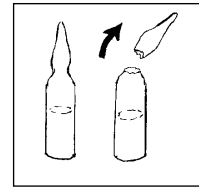


As a **powder in a bottle with a lid**. You must add sterile water to these medicines.

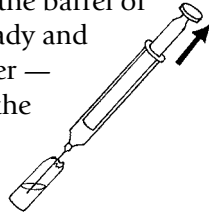
An ampule usually contains the right amount of medicine for 1 dose. Bottles usually contain enough for several doses. The barrel of the syringe has markings to show how much medicine you have drawn up.

**If the medicine comes in an ampule:**

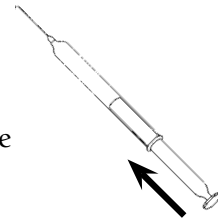
1. Wipe the ampule clean with a cloth or some alcohol. Then wrap a clean cloth around the top and break it off.



2. Put the needle into the ampule. Be careful that the needle does not touch the outside of the ampule. Hold the barrel of the syringe steady and pull the plunger — this will draw the medicine into the syringe.

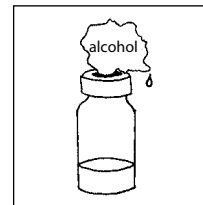


3. Hold the syringe with the needle pointing up. Gently tap the barrel of the syringe until all the air bubbles rise to the top. Then push the plunger in just a little to get the air out.

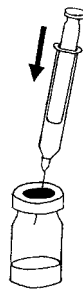


**If the medicine comes as a liquid in a bottle:**

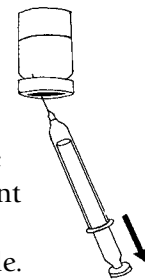
1. Clean the rubber top of the bottle with a sterile gauze or cloth that has been soaked in alcohol. This keeps dirt off the needle and out of the medicine.



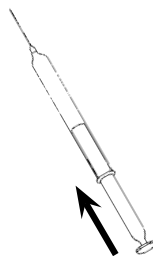
2. Pull the plunger back to fill the syringe with air. Then push the syringe through the top of the bottle, and inject the air into the bottle.



3. Turn the bottle upside down. Be sure the tip of the needle points into the medicine inside the bottle and not into the air. Hold the barrel of the syringe still and slowly pull the plunger until the correct amount of medicine enters the syringe. Pull the syringe out of the bottle.

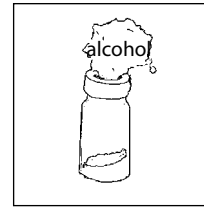


4. Hold the syringe with the needle pointing up. Gently tap the barrel of the syringe until all the air bubbles rise to the top. Push the plunger in just a little to get the air out.



**If the medicine comes as a powder in a bottle:**

1. Clean the rubber top of the bottle with a sterile gauze or cloth that has been soaked in alcohol.

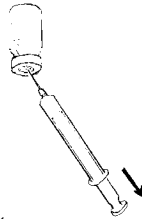


2. Draw up the correct amount of sterile water to dilute the medicine. You can sterilize water by boiling it for 20 minutes — then let it cool before you use it.

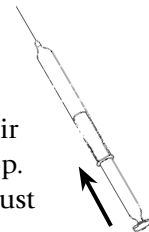
3. Inject the sterile water into the bottle with the powdered medicine inside. With the needle still inside, gently shake the bottle to mix the powder and water completely.



4. Turn the bottle upside down. Be sure the tip of the needle is in the medicine — not the air. Hold the barrel of the syringe still and slowly pull the plunger until the correct amount of medicine enters the syringe. Pull the syringe out of the bottle.



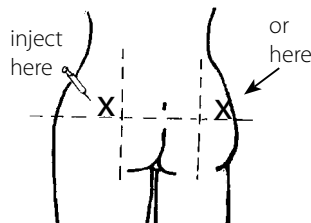
5. Hold the syringe with the needle pointing up. Gently tap the barrel of the syringe until all the air bubbles rise to the top. Push the plunger in just a little to get the air out.



***Inject safely***

Inject an adult in the buttock or thigh.

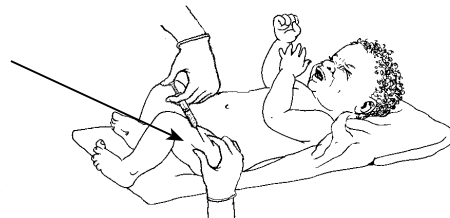
Imagine that each buttock is divided into 4 parts. Inject into the upper outer part.



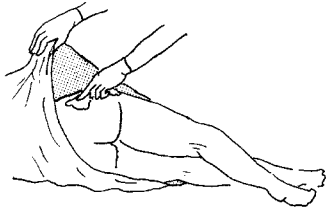
Or inject into the long muscle on the front of the thigh.



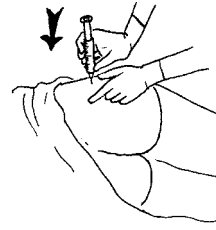
Inject a baby only in the large muscle on the front of the thigh — never in the buttock or anywhere else. Pinch the muscle loosely between your thumb and finger so you don't hit the bone.



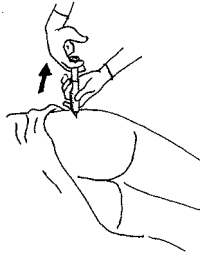
1. Clean the skin with soap and water or with alcohol. Let it dry.



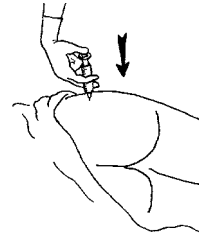
2. Put the needle all the way in. Move quickly and smoothly as you insert the needle and it will not hurt much. Do not move the needle once it is in.



3. Pull the plunger of the syringe out just a little. If any blood comes into the syringe, you have gone into a vein. Take the needle out and try again.



4. If no blood enters the syringe, slowly but steadily push the plunger in to inject the medicine into the muscle.



5. Pull out the syringe.

6. Immediately put the used syringe somewhere where it cannot stick anyone.

If you are using a disposable syringe, you should have a box or can close by where you can safely get rid of the needle (see page 68).

If you will use the syringe again, you should drop it in a bucket of bleach, or bleach mixed with water, and then sterilize it (see page 66).



**Note:** Before you inject a person, practice injecting plain water into a fruit or soft vegetable to get experience using a syringe.



**WARNING!** Used needles are dangerous. They may carry serious diseases like hepatitis or HIV.

- Do not try to put a cap back onto a dirty needle — you might stick a needle into your own skin and pass harmful germs from the needle into your blood.
- Never throw a needle in the trash or leave it where other people might stick themselves.
- If you reuse a needle, always sterilize it first.

## How to give fluid through a vein (intravenous solution, or IV)

If a woman loses a lot of blood during childbirth, or after a complicated miscarriage or abortion, she needs fluids fast in order to save her life. Take her to a medical center as soon as possible. On the way, you can start an intravenous (IV) drip to give her fluids through her veins. If she is awake and can drink fluids, let her do so, but you can also give her an IV.

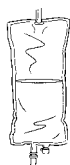


**Note:** Learning to give an IV takes practice. It is not something that can be learned just from a book. Watch someone experienced, and then have someone experienced watch you as you give IVs the first few times.

### How to give an IV

1. Wash your hands well with soap and clean water. Put on clean gloves.
2. Gather all the supplies you will need:

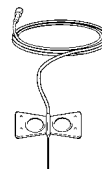
**a bag or bottle of sterile IV fluids**  
You may use normal saline, lactated ringers, or Hartmann's solution.



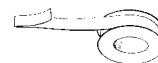
**sterile plastic tubing**  
(Some IV solution bags come with a tube already attached.)



**a sterile IV (butterfly) needle**



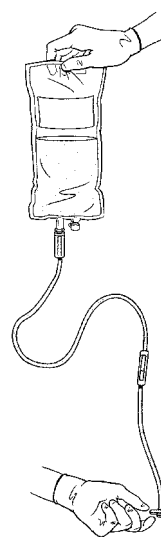
**tape**  
to hold the IV in place



**soap and clean water, or alcohol, to clean the skin**



3. Open the sterile package of tubing. Attach the tubing to the bottle or bag, but do not touch the part of the tube that attaches to the bag — it must stay sterile.
4. Hang up the bag of solution. It should be high enough so that the solution can run down through the tube. You can hang it from a hook on the wall, or, in an emergency, someone can hold the bag.
5. Let the fluid run down through the tube to get rid of any air in the tube. Tie the tube off at the end so that it does not drip and waste the solution. Some tubes come with a clip to close the tube.



6. Tie a piece of cloth or a rubber tourniquet around the woman's upper arm. This will make the veins in her lower arm fill up with blood and be easier to find.
7. Look at her lower arm to find the largest vein you can see.
8. If you cannot find a large enough vein in her lower arm, re-tie the cloth or tourniquet in the middle of her lower arm and look for a vein in the back of her hand, or just above her thumb at the wrist.
9. When you have picked a vein, clean the skin with soap and clean water or with alcohol.
10. Hold the vein steady between the first finger and thumb of one hand. Hold the needle in the other hand and carefully insert it into the vein. Do not try to go very deep or very far inside the vein. When the needle is inside the vein, a little blood should appear in the hub of the needle.



Lay the needle almost against the skin and slide it into the vein.

11. Take the tourniquet off the woman's arm.
12. Untie the tube of fluid and attach it to the needle.
13. Quickly start the flow of the fluid. There should be a flow control on the IV tube. Let the fluid run in as fast as possible until you have replaced about 2 times the amount of blood that the woman lost. If you think she lost 5 cups of blood, she should get 10 cups of IV fluid. After you have replaced the fluid, continue to give the woman 150 cc every hour until she does not need the fluid anymore.
14. To keep the needle in place, use tape to hold the tube on the woman's arm.



**WARNING!** Do not delay getting medical help. Inserting an IV can take a long time, especially when you are first learning. Trying to insert an IV before transporting someone to medical help can waste time — this is dangerous. When a woman is bleeding heavily, it is more important to get medical help fast than to insert an IV.

To remove an IV, take off the tape, press a sterile or clean cloth against the place where the needle inserts into the skin, and then quickly remove the needle. Keep pressure on the spot for a few minutes to prevent bleeding.

## Catheters (a tube to help urine come out)

If a woman does not urinate — or urinate enough — for several hours, her bladder may become too full. A full bladder can stop the womb from contracting well. This can slow or stop a labor. After a birth, a full bladder can cause a woman to bleed heavily.

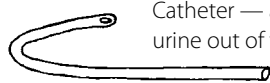


When the bladder is overfull, it may bulge from the lower belly. Do not let the bladder get this full!

There are many ways to help a woman urinate:

- Let her listen to the sound of running water.
- Ask her to squat.
- Ask her to sit in clean warm water and urinate into it.
- Have her pour clean warm water over her genitals.

If the woman has tried each method but none of them has worked, you may need to use a catheter to let the urine out.



Catheter — a tube that lets urine out of the bladder.

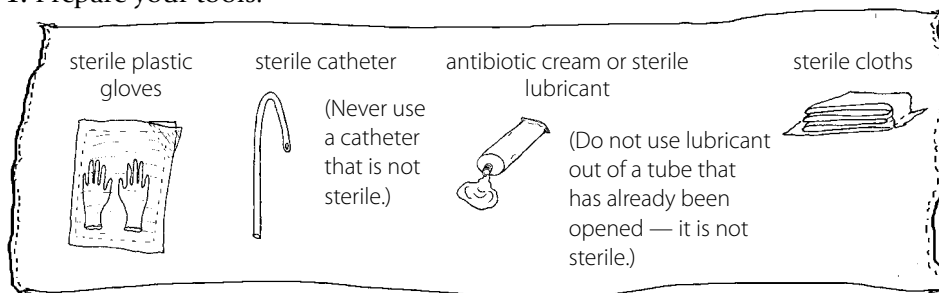
To use a catheter, you slide a sterile tube through a woman's urethra (the hole the urine comes out of) into her bladder.



**WARNING!** Use a catheter only when it is truly necessary, when you have been trained to do so safely, and when you have a sterile catheter. Putting anything in the bladder puts the woman at risk of infection. It can also be very uncomfortable or painful.

### How to insert a catheter

1. Prepare your tools:



You will also need a bowl or bucket and a good source of light.

If the catheter is in a sterile package, open the package, but do not touch the catheter. Open a package of sterile lubricant, but **do not touch the lubricant or the catheter.**

Squeeze some lubricant out onto the end of the catheter.

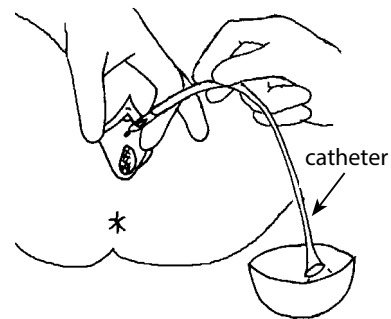
2. Wash the mother's belly, thighs, and genitals well with disinfectant soap and boiled water that has been cooled.
3. Put sterile or very clean cloths under the mother.
4. Wash your hands well for at least 3 minutes (see page 53). Put on sterile gloves. Keep one hand sterile — it should only touch the catheter, nothing else.



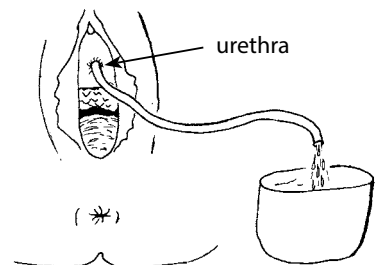
5. Have a helper shine the light on the woman's genitals so you can clearly see what you are doing.
6. Hold the inner lips of the woman's vulva apart with one gloved hand, so that you can see her urethra (it may be hard to see).

7. With the other hand, slowly and gently put the catheter into the woman's urethra.

Usually the catheter goes straight in. But if the baby's head is in the vagina, you may need to point the catheter up at first, so it can get over and past the head. If the catheter stops moving in, roll it gently between your fingers, but do not force it. Forcing it might injure the mother.



8. When the tip of the catheter gets to the mother's bladder, urine will start to drip or flow out the other end. You should have a bowl or bucket ready to catch it.



9. Take the catheter out when the urine stops.

Ask the mother to drink plenty of liquids during the next few days so that she urinates often. This will help clean any germs out of her bladder. Tell the mother to watch for signs of infection (see page 128) for the next few weeks.



## Episiotomy

An episiotomy means cutting the opening of the vagina to make it larger for the baby to come through. Episiotomies are rarely needed and are done much too often. Always explain to the mother what you will do and get her permission.

An episiotomy may be necessary when:

- the baby is already in the vagina and must be born quickly because of a medical emergency.
- the vagina cannot stretch open for the baby due to scarring or other injuries. If the mother has had genital cutting, heavy scars may prevent the baby passing through the vagina. If you know how, you can cut the scar (see page 367). If you do not know how to cut this scar, you may need to do an episiotomy.



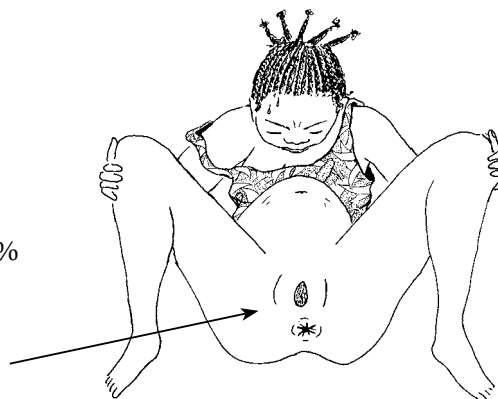
### **WARNING!** Cutting an episiotomy has many risks:

- The cut can become infected.
- The cut can go through a blood vessel and cause heavy bleeding.
- The cut can be very painful for the mother after the birth. This can make it harder for her to care for her baby.
- Even a small cut can continue to tear. In the worst case, it can tear through the rectum (anus).
- You can accidentally cut the baby.

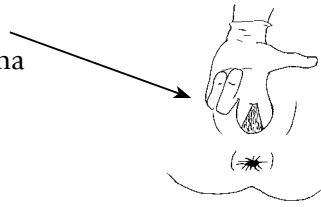
Episiotomies do not heal more easily than tears. Only do an episiotomy to save the life or health of a baby or mother.

### How to do an episiotomy

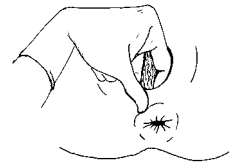
1. Wash your hands well (see page 53) and put on sterile gloves.
2. Use povidone iodine to clean the skin between the vagina and the anus.
3. Give local anesthesia using 10 ml of 1% lidocaine.
4. Wait until the vagina is bulging open and you can see the baby's head pushing out.



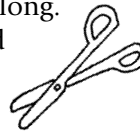
5. Put your fingers into the vagina like this. Your fingers will hold the skin of the vagina away from the baby.



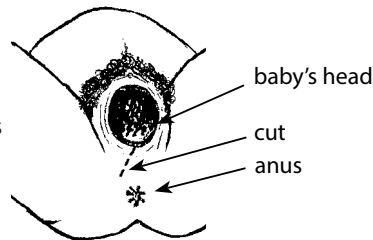
6. Feel with your thumb to find the rectal sphincter (the round muscle around the anus). **Never cut through the rectal sphincter.**



7. Use a pair of sterile scissors to make a cut in the skin about 2.5 centimeters (1 inch) long. It is best to use scissors that are rounded on the end so you will not poke the mother or cut the baby.



A mediolateral cut starts at the bottom center of the vagina and points toward the right or left. These cuts are best because they are less likely to tear into the anus.



8. Feel the cut with your fingers. Cut it larger only if you have to. It is better to make one cut than several small cuts. Remember, do not cut into the muscle around the anus.



9. Press on the cut with a sterile cloth to slow the bleeding.

10. After the birth, sew the cut tissue together. See the next few pages on sewing tears and episiotomies.

## Sewing a tear or an episiotomy

Most tears can be prevented if the mother is in good general health. During pregnancy she should eat well, get plenty of rest, and do squeezing exercises regularly (see page 44). It may also help to slow the birth of the baby's head during labor (see page 207). But sometimes tears do happen.



Small tears will usually heal on their own. Ask the woman to rest for a couple of weeks after the birth. She should keep her legs together as much as possible, although she should move them regularly. Others should do her household work for her and help her with the new baby.

Other tears and cuts heal better if they are sewn together. It is not hard to sew them, but it is important to learn how from a skilled teacher.

### How to judge if a tear needs to be stitched

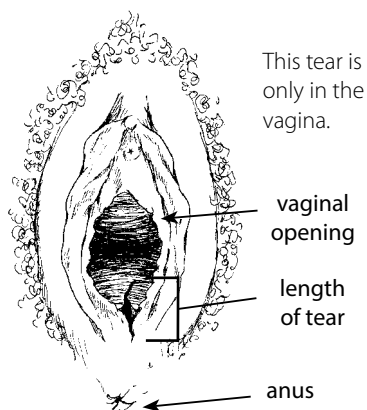
Tears are hard to see clearly. A woman's vagina is usually swollen after the birth, and blood clots can get in the way. Sometimes there is more than one tear. Take your time, and use a strong light. Someone may have to hold a flashlight for you.

1. Wash your hands well (see page 53) and then put on sterile gloves.
2. Judge **how long** the tear is and **how much of the tissue is torn**.

Look at the tear from the outside. Gently put 1 or 2 fingers into the tear to feel how deep it is. Carefully stretch the vagina to see how long the tear is.

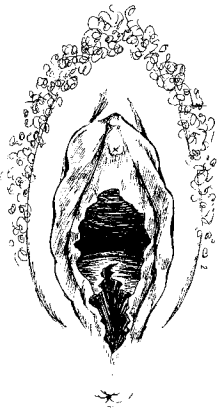
3. Decide with the mother if you need to sew the tear or not. Small tears that stop bleeding quickly do not need to be sewn. Deeper tears, or tears that will not stop bleeding, do.

#### 1st degree tear



1st degree tears do not need to be sewn.

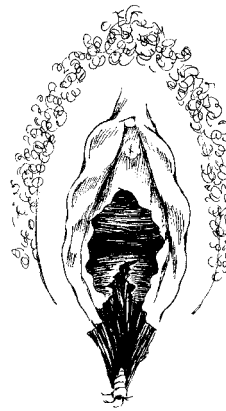
### 2nd degree tear



This tear goes into the vagina, in the perineum (the outside skin between the vagina and the anus), and in the muscle under the skin.

2nd degree tears will heal better and are less likely to become infected if they are sewn, but they can heal on their own.

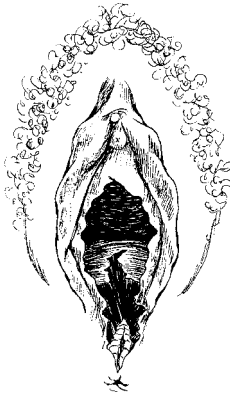
### 3rd degree tear



This tear goes into the vagina, the perineum, the muscle, and the rectal sphincter (the muscle around the anus).

3rd and 4th degree tears must be sewn. If possible, they should be sewn by someone very experienced.

### 4th degree tear



This tear goes into the vagina, the perineum, the muscle, the rectal sphincter, and into the rectum.

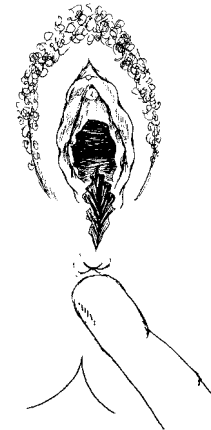
4th degree tears are very difficult to repair. **If a mother has a 4th degree tear through her rectum, get medical help right away.**

#### To test if the muscle around the anus is torn

Lightly brush the anus with a gloved finger.

If the anus tightens, the muscle is probably OK.

If the anus does not tighten, the muscle may be torn.



After you do this test, throw your glove away or sterilize it, and wash your hands well.

Sew tears as soon as you can after the birth so they will heal well. It is best for a tear to be sewn within 12 hours.

If you cannot sew within 12 hours, and the woman has a 1st or 2nd degree tear, do not sew it. Clean the cut well and tell the woman to rest as much as she can for 2 weeks. If she has a 3rd or 4th degree tear, it must be sewn or that part of her body may be injured permanently. She may not be able to control her need to pass stool. If possible, take the mother to a medical center.



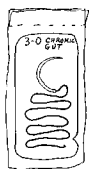
**WARNING!** You may not have the skills to sew every tear yourself. If a tear seems very complicated or deep, if you do not have sterile tools to sew with, or if you do not have experience with this kind of tear, get medical help.

## Tools for sewing tears



Chromic gut or *Vicryl* sutures are best because they dissolve and do not have to be removed. You must use this kind of suture for stitches under the skin.

If there is no chromic gut or *Vicryl* suture available, you can use plain cotton thread that has been boiled. But since you will need to take the stitches out later, make only 1 layer of stitches on the skin.



Use size 000 sutures for inside the vagina, and size 00 for sewing muscle. If you have only 1 of these sizes, you can use it for all the sutures.

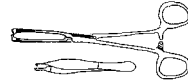
It is easiest to sew with a curved needle. Some sutures come with the needle already attached.

**If possible, you should also have:**

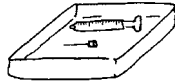
needle holder to grip the needle



forceps or toothed tweezers to hold muscle while you sew



sterile needle and syringe for giving anesthetic



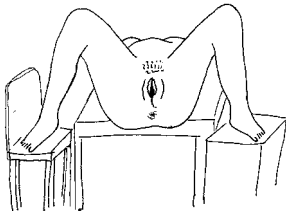
local anesthetic (medicine to make the area around the tear numb)



**Note:** See page 59 to learn how to sterilize your tools.

**Getting ready to sew a tear**

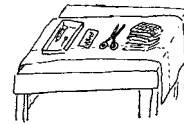
Ask the mother to lie on her back with her legs bent and open.



Wash your hands (see page 53). Put on sterile gloves.



Set your sterile tools on a sterile cloth.



Put a sterile cloth under the mother's bottom.



Gently wash the tear with warm boiled water and disinfectant or mild soap.



Ask a helper to shine a light on the tear.



## Numb the torn area

If you sew a tear immediately after birth, the woman's genitals may still be numb, and you may not have to use an anesthetic. But if possible, you should numb the cut before you sew it.

Before you give the anesthetic, ask the mother if she has ever had this medicine. Do not give the medicine if she has ever had any reaction to an anesthetic (like itching, rashes, or trouble breathing).



### To numb the genitals before sewing

- inject up to 10 ml of 1% lidocaine without epinephrine in the torn tissue
- or*
- inject up to 20 ml of 0.5% lidocaine without epinephrine in the torn tissue
- or*
- spray topical lidocaine onto the skin and into the torn tissue

Lidocaine is a common local anesthetic. It is sometimes called lignocaine. There may be other local anesthetics in your area. Be sure these do not contain epinephrine.

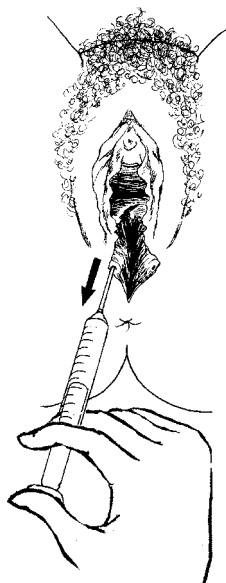
Before you inject an anesthetic, look carefully at the shape of the tear. Think about what pieces of tissue must be sewn together. This is important because the tear will swell and change shape after you inject the medicine.

1. Slide the needle under the skin, just inside one side of the tear.
2. Pull the plunger back just a little. If any blood comes into the syringe, pull it out and try inserting it again.
3. Slowly inject medicine and at the same time, slowly pull the needle out.

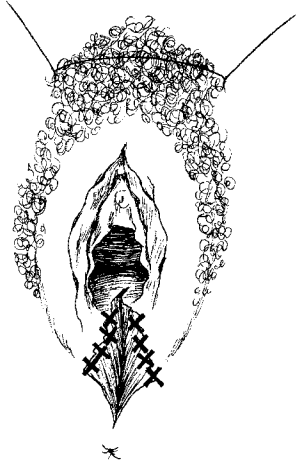
This will inject a line of medicine under the skin instead of injecting it all in one place. The tissue will swell a little.

Inject medicine on the other side in the same way.

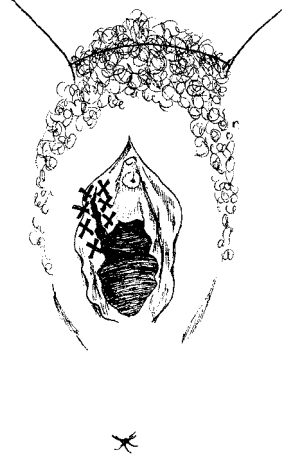
Inject about 4 ml into each side of the tear. Do not inject more than 10 ml all together.



Another way to inject the medicine is to put several small doses along the sides of the tear. Inject a dose just under the skin at each **x** spot.



If the tear is in the lips of the genitals, you can inject little doses of medicine around it.



If there is still some medicine left in the syringe, set it down on your sterile cloth. You may need to use a little more medicine later.

### **General rules for sewing tears**

- Do not sew until after the placenta has come out, and you are sure the mother and baby are healthy.
- Wear gloves and use sterile tools.
- Sew tears inside the vagina before tears of the skin.
- Think about what parts should be sewn to each other, and where to put each stitch, before you put the stitch in.
- Use as few stitches as you can — just enough to hold the tear together.
- Do not sew blood clots or hairs into the tear. This can cause infection.
- To be sure the womb is small and hard, have a helper check it from time to time as you sew. Do not forget to watch the mother's overall health.
- Know your limits. If a tear looks too deep or complicated, get medical help.

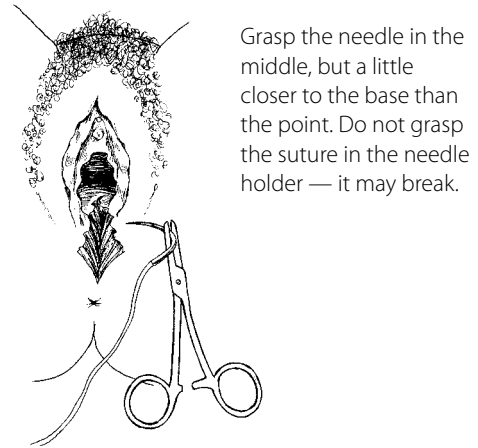
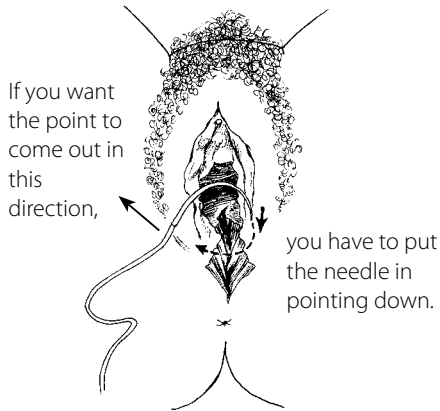
Sewing well takes practice. To learn how, try tearing a piece of meat and sewing it closed.



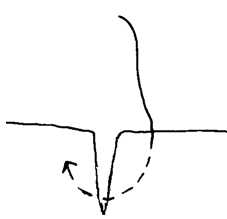
### How to sew tears

Use a curved needle this way:

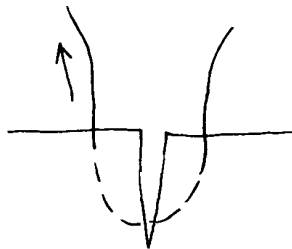
If possible, use a needle holder.



There are a few different types of stitches you can use. Do the stitch you are trained to do and feel the most comfortable using. A simple and strong stitch is called the interrupted stitch. An interrupted stitch is simply a single stitch that is knotted with a 4-layer knot, then both sides of the suture are cut.



Put the needle in one side of the cut or tear, about  $\frac{1}{2}$  centimeter from the edge of the tear.



Bring the needle up on the other side of the tear,  $\frac{1}{2}$  centimeter from the edge.



Make a 4-layer knot (see page 364).

Match the sides of the tear carefully. Try to put the skin back where it was before the birth. This can be difficult with a complicated tear and swollen tissue.

The torn edges of the tear should line up closely.



The suture should come through just above the bottom of the tear. If the stitch is too shallow, the space under the stitch can fill with blood or pus and get infected. If the stitch is too deep, it can pierce the rectum. This can cause serious infection.



This stitch is done right.

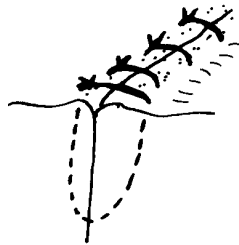


This stitch is **too shallow**. Blood and pus will collect here.

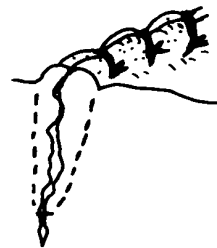


This stitch is **too deep**. It goes into the rectum where the stool is.

Make each stitch tight enough to bring the sides of the tear together snugly. Do not make them too tight — that can cause pain or infection.



The edges should line up closely.



They should **not** bunch the skin.

### Tie your stitches securely

(In these drawings we show one side of the suture in black and one in white so the parts of the knot will be easier to see. Real suture can be any color, but will all be the same color.)



Tie 4-layer knots so they will be secure. Do not use more than 4 layers or the knot will be too bulky. To tie your stitches with 4-layer knots:

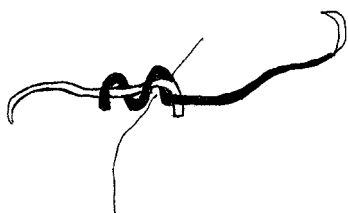
1. Lay the needle end of the suture over the other end and then wrap it under and pull it through to tighten.
2. For the second layer, lay the needle end back over the other end, wrap it under, and pull it through.
3. Do this 2 more times, each time laying the needle end over the other end, wrapping it under and pulling it through.



4. Cut the ends about ½ centimeter long.

This will make a strong knot that will not come untied.

Some people use an extra wrap on the first layer like this:



Wrap the needle end over, under, then over and under again.

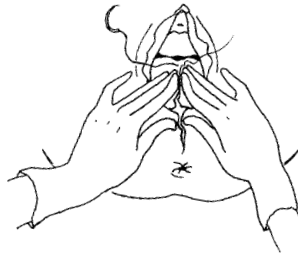
This can help the first layer stay tight while you tie the next layer.

## A step-by-step way to sew a tear or episiotomy

1. If you have it, put sterile gauze in the vagina above the tear. It helps to stop blood from leaking and getting in your way. **Remove the gauze when you are finished sewing.**
2. The inside of the vagina is made of a kind of tissue called vaginal mucosa. Under the mucosa is muscle which is more red and tough. It is important to sew mucosa to mucosa, and muscle to muscle.
3. Using chromic gut or *Vicryl* suture, put the first stitch above the inside tip of the tear in the vagina and tie a 4-layer square knot. Clip the stitch with sterile scissors.

4. Continue to make interrupted stitches as shown, through the length of the vagina.

From time to time, push all the pieces of the tear together to make sure things are going together nicely.



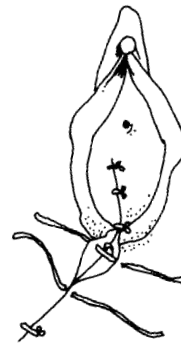
5. If the tear goes into the muscle, use interrupted stitches to sew the inner muscle layer together.

Use as few stitches as possible, just enough to hold it together. Usually 2 or 3 will do. With each interrupted stitch, tie a 4-layer knot and clip the ends with sterile scissors.



6. Now close the skin of the perineum over the muscle, using the same type of interrupted stitches and 4-layer knots.

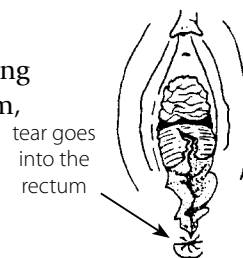
Clip the ends with sterile scissors. Be sure the stitches that close the muscle are covered by the skin.



7. Before you finish, gently put a finger into the mother's rectum to be sure that no stitches went all the way through. If you feel a stitch in the rectum, you must take her stitches out and do them over again! Be careful not to get any stool on her wound.
8. Throw away (or sterilize) your gloves and wash your hands well.

## Sewing the rectal sphincter

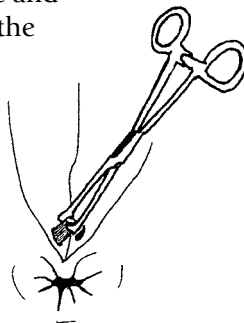
If a woman's rectal sphincter tears, she is at risk of never being able to hold her stool in again. This is a very serious problem, and it is very important that her sphincter is sewn well. If possible, take the woman to a medical center or have someone very experienced sew this kind of tear.



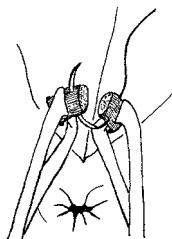
**WARNING!** Before you sew a torn rectal sphincter, check to see if the wall of the rectum itself has torn. **Do not try to repair the wall of the rectum yourself. Get medical help right away.**

1. The sphincter muscle is inside a thin casing of tissue called fascia. The muscle and fascia may withdraw a little into the woman's body.

Using a sterile forceps, clamp, or tweezers, pull one end of the muscle and fascia a little so you can see them. Use a second pair of forceps to pull the other end of the muscle so it sticks out a little too.



2. Use size 00 chromic gut or *Vicryl* suture for sewing the sphincter muscle. Pull the 2 sides of the sphincter close together. Insert the needle through the fascia and muscle on one side and pull it out through the other side.



3. Use 3 or 4 interrupted stitches to hold the muscle and fascia together.

4. After the muscle is together, sew the rest of the tear.



## Caring for a woman after female genital cutting (circumcision)

In some communities — mostly in Africa, but also in Asia, the Middle East, and countries where people from these regions have migrated — girls and young women are cut on their genitals. Like many cultural practices, it is a way that girls' bodies are changed to be beautiful, acceptable, or clean. It is seen as a passage to womanhood.

Sometimes just a small cut is made. Sometimes the outer clitoris and the inner lips of the vagina are removed. Sometimes the girl's genitals are sewn partially closed. This kind of cutting has many names including circumcision, female genital mutilation, or female genital cutting (FGC).

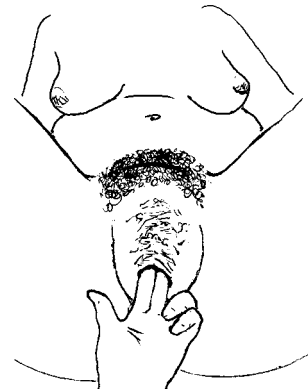


FGC has serious harmful effects on the health and well-being of the girls who are cut. In the long term, FGC can lead to urinary tract infections, emotional trauma, loss of sexual feeling or ability to have sex as an adult, and long, unproductive labors ending in the death of the baby, the mother, or both.

If a woman has had FGC and her genitals have been sewn partially closed, her genitals will need to be cut open before she can give birth.

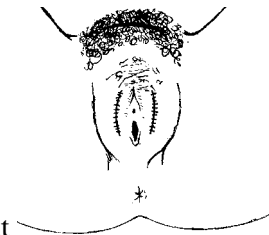
### To open a genital scar

1. Wash your hands well and put on sterile plastic gloves.
2. Put 2 fingers into the vagina and under the scar tissue.
3. Inject a local anesthetic if you have it (see page 360).
4. Use a sterile pair of scissors to cut the scar open. Open the scar enough so you can see the urethra, but no farther. These cuts can bleed heavily, so be careful not to cut far.



### To repair the cut

1. Wash your hands well and put on sterile plastic gloves.
2. Inject a local anesthetic on both sides of the scar (see page 360).
3. Loosely sew together raw surfaces with 000 chromic gut or Vicryl suture to stop any bleeding.



circumcision repaired

## Emergency care for FGC

A girl whose genitals were recently cut can have serious problems including bleeding and infection, both of which can lead to shock — which is an emergency. Girls whose bleeding cannot be stopped need medical help right away. Midwives can help these girls by stopping the bleeding, treating for shock (see page 239), and watching for signs of infection.

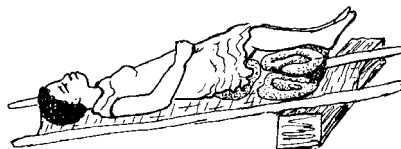
### *Bleeding and shock*

**WARNING SIGNS** of shock include one or more of the following:

- severe thirst
- pale, cold, and damp skin
- weak and fast pulse (more than 100 beats a minute)
- fast breathing (more than 20 breaths a minute)
- confusion or loss of consciousness (fainting)

### **What to do for bleeding or shock**

- Get medical help immediately.
- Press firmly on the bleeding spot right away. Use a clean, small cloth that will not soak up a lot of blood.
- Keep the girl lying down with her hips elevated while you take her to get medical help.
- Help her drink as much as she can.
- If she is unconscious and you are far from help, you may need to give her rectal fluids (see page 342) or IV fluids (see page 350) before transporting her.



### *Infection*

If a cutting tool is not sterilized before and after each use, germs on it can cause a wound infection, tetanus, HIV, or hepatitis.

#### **WARNING SIGNS**

- **wound infection:** fever, swelling in the genitals, pus or a bad smell from the wound, and pain that gets worse
- **tetanus:** tight jaw, stiff neck and body muscles, difficulty swallowing, and convulsions
- **shock:** (see the list above)
- **infection in the blood (sepsis):** fever and other signs of infection, confusion, and shock



**WARNING!** If a girl begins to show signs of tetanus, shock, or sepsis, get medical help right away.

**What to do**

- Wash the genitals with boiled, cooled water that has a little salt in it.
- If she shows signs of wound infection, give an antibiotic (see box below).
- Give modern or traditional medicines for pain.
- Watch for warning signs of tetanus, sepsis, and shock. If she has not had a tetanus vaccination (or if you do not know if she has), give one immediately (see page 415).

**To treat wound infection from female genital cutting**

- give 1 g (1000 mg) cephalexin ..... by mouth, 2 times a day for 7 to 10 days

**or**

- give 875 mg amoxicillin + 125 mg clavulanic acid ... by mouth, 2 times a day for 7 to 10 days

**Turning a breech or sideways baby**

A baby is much safer if he is born head first instead of breech (bottom first). A baby lying sideways cannot be born vaginally. If you have been trained to do so safely, there may be times when you can turn a baby so that his head is down.



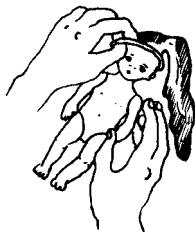
**WARNING!** Turning a baby has many serious risks. The biggest dangers are pulling the placenta off of the wall of the womb or tearing the womb. These can kill the baby and the mother.

Turning a baby can also start labor.

Only turn a baby if:

- you have been trained to do so by someone with experience.
- you can quickly get to a medical center that can perform an emergency cesarean surgery
- you are sure the baby is breech or sideways.
- the mother is within 2 to 3 weeks of her due date or has passed it.

To see the danger of turning the baby:



Try putting a small plastic doll inside a small balloon or plastic bag and filling it with water.



Then try to turn the doll.



The womb, like the balloon, can tear easily if not handled with extreme care.



## Turning a baby

The best time to turn a baby is 2 to 3 weeks before his due date. If you turn a baby earlier, he may move back to a breech or sideways position. Also, if labor starts, it will probably be safe for the baby to be born at that time.

If possible, you should have a helper when you turn a baby. This person can listen to the baby's heartbeat the whole time.



**WARNING!** If the heartbeat speeds up, or slows down and does not go back to normal, stop turning the baby. If the heartbeat stays fast or slow, turn the baby back to the position he started in. If the heartbeat still does not go back to normal, give the mother oxygen if you have it, and have her lie on her left side. If the baby's heartbeat still does not go back to normal, take her to a medical center immediately.

1. Ask the mother to urinate and then lie down on her back with her knees bent. It is important for her to relax her body as much as she can. It may help for her to take slow, deep breaths.
2. Listen to the baby's heartbeat (see page 139).
3. If the heartbeat is normal, feel the baby's position again to be sure he is breech.
4. Grasp the baby's head with one hand. Put your other hand under the baby's bottom, and push up, towards the top of the womb, to move the baby out of the pelvis.



5. Gently but firmly move the baby in the direction he is facing. If he does not move easily, try moving him in the other direction. Try to keep the baby's chin tucked into his chest.



6. Each time the baby moves — even a little — stop and listen to his heartbeat. **If the heartbeat is not normal, stop.**

7. Keep turning the baby until his head is down.



**WARNING!** Never force a baby to turn. If the baby feels stuck, or the mother is in pain, stop.

### Turning a sideways baby

Turning a sideways baby is the same as turning a breech baby. Turn the baby in the direction he is facing. If he cannot turn in that direction, you may need to turn him the other way so that he is in a breech position. Breech is not as safe as head-down for birth, but he will be able to be born vaginally this way.

If a sideways baby does not turn easily, you must stop and the baby must be born in a medical center by cesarean surgery.

