

Female Sterilization

Key Points for Providers and Clients

- **Permanent.** Intended to provide life-long, permanent, and very effective protection against pregnancy. Reversal is usually not possible.
- **Involves a physical examination and surgery.** The procedure is done by a specifically trained provider.
- **No long-term side effects.**

What Is Female Sterilization?

- Permanent contraception for women who will not want more children.
- The 2 surgical approaches most often used:
 - Minilaparotomy involves making a small incision in the abdomen. The fallopian tubes are brought to the incision to be cut or blocked.
 - Laparoscopy involves inserting a long thin tube with a lens in it into the abdomen through a small incision. This laparoscope enables the doctor to see and block or cut the fallopian tubes in the abdomen.
- Also called tubal sterilization, tubal ligation, voluntary surgical contraception, tubectomy, bi-tubal ligation, tying the tubes, minilap, and “the operation.”
- Works because the fallopian tubes are blocked or cut. Eggs released from the ovaries cannot move down the tubes, and so they do not meet sperm.

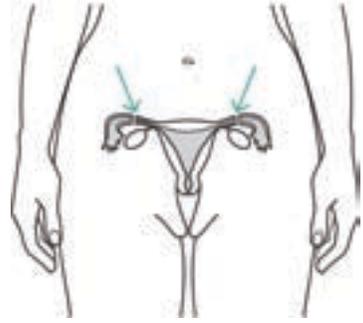
How Effective?

One of the most effective methods but carries a small risk of failure:

- Less than 1 pregnancy per 100 women over the first year after having the sterilization procedure (5 per 1,000). This means that 995 of every 1,000 women relying on female sterilization will not become pregnant.



- A small risk of pregnancy remains beyond the first year of use and until the woman reaches menopause.
 - Over 10 years of use: About 2 pregnancies per 100 women (18 to 19 per 1,000 women).
- Effectiveness varies slightly depending on how the tubes are blocked, but pregnancy rates are low with all techniques. One of the most effective techniques is cutting and tying the cut ends of the fallopian tubes after childbirth (postpartum tubal ligation).



Fertility does not return because sterilization generally cannot be stopped or reversed. The procedure is intended to be permanent. Reversal surgery is difficult, expensive, and not available in most areas. When performed, reversal surgery often does not lead to pregnancy (see Question 7, p. 181).

Protection against sexually transmitted infections (STIs): None

Side Effects, Health Benefits, Health Risks, and Complications

Side Effects

None

Known Health Benefits

Helps protect against:

- Risks of pregnancy
- Pelvic inflammatory disease (PID)

May help protect against:

- Ovarian cancer

Known Health Risks

Uncommon to extremely rare:

- Complications of surgery and anesthesia (see below)

Complications of Surgery (see also Managing Any Problems, p. 178)

Uncommon to extremely rare:

- Female sterilization is a safe method of contraception. It requires surgery and anesthesia, however, which carry some risks such as infection or abscess of the wound. Serious complications are uncommon. Death, due to the procedure or anesthesia, is extremely rare.

The risk of complications with local anesthesia is significantly lower than with general anesthesia. Complications can be kept to a minimum if appropriate techniques are used and if the procedure is performed in an appropriate setting.

Correcting Misunderstandings (see also Questions and Answers, p. 180)

Female sterilization:

- Does not make women weak.
- Does not cause lasting pain in back, uterus, or abdomen.
- Does not remove a woman's uterus or lead to a need to have it removed.
- Does not cause hormonal imbalances.
- Does not cause heavier bleeding or irregular bleeding or otherwise change women's menstrual cycles.
- Does not cause any changes in weight, appetite, or appearance.
- Does not change women's sexual behavior or sex drive.
- Substantially reduces the risk of ectopic pregnancy.

Who Can Have Female Sterilization

Safe for All Women

With proper counseling and informed consent, any woman can have female sterilization safely, including women who:

- Have no children or few children
- Are not married
- Do not have husband's permission
- Are young
- Just gave birth (within the last 7 days)
- Are breastfeeding
- Are infected with HIV, whether or not on antiretroviral therapy (see Female Sterilization for Women With HIV, p. 171)

In some of these situations, especially careful counseling is important to make sure the woman will not regret her decision (see Because Sterilization Is Permanent, p. 174).

Women can have female sterilization:

- Without any blood tests or routine laboratory tests
- Without cervical cancer screening
- Even when a woman is not having monthly bleeding at the time, if it is reasonably certain she is not pregnant (see Pregnancy Checklist, p. 372)

Why Some Women Say They Like Female Sterilization

- Has no side effects
- No need to worry about contraception again
- Is easy to use, nothing to do or remember



Medical Eligibility Criteria for Female Sterilization

All women can have female sterilization. No medical conditions prevent a woman from using female sterilization. This checklist asks the client about known medical conditions that may limit when, where, or how the female sterilization procedure should be performed. Ask the client the questions below. If she answers “no” to all of the questions, then the female sterilization procedure can be performed in a routine setting without delay. If she answers “yes” to a question, follow the instructions, which recommend caution, delay, or special arrangements.

In the checklist below:

- *Caution* means the procedure can be performed in a routine setting but with extra preparation and precautions, depending on the condition.
- *Delay* means postpone female sterilization. These conditions must be treated and resolved before female sterilization can be performed. Give the client another method to use until the procedure can be performed.

- *Special* means special arrangements should be made to perform the procedure in a setting with an experienced surgeon and staff, equipment to provide general anesthesia, and other backup medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen also is needed. Give the client another method to use until the procedure can be performed.

1. Do you have any current or past female conditions or problems (gynecologic or obstetric conditions or problems), such as infection or cancer? If so, what problems?

NO **YES** If she has any of the following, use *caution*:

- Past pelvic inflammatory disease since last pregnancy
 - Breast cancer
 - Uterine fibroids
 - Previous abdominal or pelvic surgery
- ▶ If she has any of the following, *delay* female sterilization:
- Current pregnancy
 - 7–42 days postpartum
 - Postpartum after a pregnancy with severe pre-eclampsia or eclampsia
 - Serious postpartum or postabortion complications (such as infection, hemorrhage, or trauma) except uterine rupture or perforation (*special*; see below)
 - A large collection of blood in the uterus
 - Unexplained vaginal bleeding that suggests an underlying medical condition
 - Pelvic inflammatory disease
 - Purulent cervicitis, chlamydia, or gonorrhea
 - Pelvic cancers (treatment may make her sterile in any case)
 - Malignant trophoblast disease
- ▶ If she has any of the following, make *special* arrangements:
- AIDS (see Female Sterilization for Women With HIV, p. 171)
 - Fixed uterus due to previous surgery or infection
 - Endometriosis
 - Hernia (abdominal wall or umbilical)
 - Postpartum or postabortion uterine rupture or perforation

(Continued on next page)

2. Do you have any cardiovascular conditions, such as heart problems, stroke, high blood pressure, or complications of diabetes? If so, what?

- NO **YES** If she has any of the following, use *caution*:
- Controlled high blood pressure
 - Mild high blood pressure (140/90 to 159/99 mm Hg)
 - Past stroke or heart disease without complications
- ▶ If she has any of the following, *delay* female sterilization:
- Heart disease due to blocked or narrowed arteries
 - Blood clots in deep veins of legs or lungs
- ▶ If she has any of the following, make *special* arrangements:
- Several conditions together that increase chances of heart disease or stroke, such as older age, smoking, high blood pressure, or diabetes
 - Moderately high or severely high blood pressure (160/100 mm Hg or higher)
 - Diabetes for more than 20 years or damage to arteries, vision, kidneys, or nervous system caused by diabetes
 - Complicated valvular heart disease

3. Do you have any lingering, long-term diseases or any other conditions? If so, what?

- NO **YES** If she has any of the following, use *caution*:
- Epilepsy
 - Diabetes without damage to arteries, vision, kidneys, or nervous system
 - Hypothyroidism
 - Mild cirrhosis of the liver, liver tumors (Are her eyes or skin unusually yellow?), or schistosomiasis with liver fibrosis
 - Moderate iron-deficiency anemia (hemoglobin 7–10 g/dl)
 - Sickle cell disease
 - Inherited anemia (thalassemia)
 - Kidney disease
 - Diaphragmatic hernia
 - Severe lack of nutrition (Is she extremely thin?)

- Obesity (Is she extremely overweight?)
 - Elective abdominal surgery at time sterilization is desired
 - Depression
 - Young age
 - Uncomplicated lupus
- ▶ If she has any of the following, *delay* female sterilization:
- Gallbladder disease with symptoms
 - Active viral hepatitis
 - Severe iron-deficiency anemia (hemoglobin less than 7 g/dl)
 - Lung disease (bronchitis or pneumonia)
 - Systemic infection or significant gastroenteritis
 - Abdominal skin infection
 - Undergoing abdominal surgery for emergency or infection, or major surgery with prolonged immobilization
- ▶ If she has any of the following, make *special* arrangements:
- Severe cirrhosis of the liver
 - Hyperthyroidism
 - Coagulation disorders (blood does not clot)
 - Chronic lung disease (asthma, bronchitis, emphysema, lung infection)
 - Pelvic tuberculosis
 - Lupus with positive (or unknown) antiphospholipid antibodies, with severe thrombocytopenia, or on immunosuppressive treatment

Female Sterilization for Women With HIV

- Women who are infected with HIV, have AIDS, or are on antiretroviral (ARV) therapy can safely undergo female sterilization. Special arrangements are needed to perform female sterilization on a woman with AIDS.
- Urge these women to use condoms in addition to female sterilization. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.
- No one should be coerced or pressured into having female sterilization, and that includes women with HIV.

Providing Female Sterilization

When to Perform the Procedure

IMPORTANT: If there is no medical reason to delay, a woman can have the female sterilization procedure any time she wants if it is reasonably certain she is not pregnant. To be reasonably certain she is not pregnant, use the Pregnancy Checklist (see p. 372).

Woman's situation	When to perform
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Having menstrual cycles or switching from another method	Any time of the month <ul style="list-style-type: none">• Any time within 7 days after the start of her monthly bleeding. No need to use another method before the procedure.• If it is more than 7 days after the start of her monthly bleeding, she can have the procedure any time it is reasonably certain she is not pregnant.• If she is switching from oral contraceptives, she can continue taking pills until she has finished the pill pack to maintain her regular cycle.• If she is switching from an IUD, she can have the procedure immediately (see Copper-Bearing IUD, Switching From an IUD to Another Method, p. 148).
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No monthly bleeding	<ul style="list-style-type: none">• Any time it is reasonably certain she is not pregnant.
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After childbirth	<ul style="list-style-type: none">• Immediately or within 7 days after giving birth, if she has made a voluntary, informed choice in advance.• Any time 6 weeks or more after childbirth if it is reasonably certain she is not pregnant.
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After miscarriage or abortion	<ul style="list-style-type: none">• Within 48 hours after uncomplicated abortion, if she has made a voluntary, informed choice in advance.
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After using emergency contraceptive pills (ECPs)	<ul style="list-style-type: none">• The sterilization procedure can be done within 7 days after the start of her next monthly bleeding or any other time it is reasonably certain she is not pregnant. Give her a backup method or oral contraceptives to start the day after she finishes taking the ECPs, to use until she can have the procedure.
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Ensuring Informed Choice

IMPORTANT: A friendly counselor who listens to a woman's concerns, answers her questions, and gives clear, practical information about the procedure—especially its permanence—will help a woman make an informed choice and be a successful and satisfied user, without later regret (see *Because Sterilization Is Permanent*, p. 174). Involving her partner in counseling can be helpful but is not required.

The 6 Points of Informed Consent

Counseling must cover all 6 points of informed consent. In some programs the client and the counselor also sign an informed consent form. To give informed consent to sterilization, the client must understand the following points:

1. Temporary contraceptives also are available to the client.
2. Voluntary sterilization is a surgical procedure.
3. There are certain risks of the procedure as well as benefits. (Both risks and benefits must be explained in a way that the client can understand.)
4. If successful, the procedure will prevent the client from ever having any more children.
5. The procedure is considered permanent and probably cannot be reversed.
6. The client can decide against the procedure at any time before it takes place (without losing rights to other medical, health, or other services or benefits).

Because Sterilization Is Permanent

A woman or man considering sterilization should think carefully: “Could I want more children in the future?” Health care providers can help the client think about this question and make an informed choice. If the answer is “Yes, I could want more children,” another family planning method would be a better choice.

Asking questions can help. The provider might ask:

- “Do you want to have any more children in the future?”
- “If not, do you think you could change your mind later? What might change your mind? For example, suppose one of your children died?”
- “Suppose you lost your spouse, and you married again?”
- “Does your partner want more children in the future?”

Clients who cannot answer these questions may need encouragement to think further about their decisions about sterilization.

In general, people most likely to regret sterilization:

- Are young
- Have few or no children
- Have just lost a child
- Are not married
- Are having marital problems
- Have a partner who opposes sterilization

None of these characteristics rules out sterilization, but health care providers should make especially sure that people with these characteristics make informed, thoughtful choices.

Also, for a woman, just after delivery or abortion is a convenient and safe time for voluntary sterilization, but women sterilized at this time may be more likely to regret it later. Thorough counseling during pregnancy and a decision made before labor and delivery help to avoid regrets.

The Decision About Sterilization Belongs to the Client Alone

A man or woman may consult a partner and others about the decision to have sterilization and may consider their views, but the decision cannot be made for them by a partner, another family member, a health care provider, a community leader, or anyone else. Family planning providers have a duty to make sure that the decision for or against sterilization is made by the client and is not pressured or forced by anyone.

Performing the Sterilization Procedure

Explaining the Procedure

A woman who has chosen female sterilization needs to know what will happen during the procedure. The following description can help explain the procedure to her. Learning to perform female sterilization takes training and practice under direct supervision. Therefore, this description is a summary and not detailed instructions.

(The description below is for procedures done more than 6 weeks after childbirth. The procedure used up to 7 days after childbirth is slightly different.)

The Minilaparotomy Procedure

1. The provider uses proper infection-prevention procedures at all times (see Infection Prevention in the Clinic, p. 312).
2. The provider performs a physical examination and a pelvic examination. The pelvic examination is to assess the condition and mobility of the uterus.
3. The woman usually receives light sedation (with pills or into a vein) to relax her. She stays awake. Local anesthetic is injected above the pubic hair line.
4. The provider makes a small vertical incision (2–5 centimeters) in the anesthetized area. This usually causes little pain. (For women who have just given birth, the incision is made horizontally at the lower edge of the navel.)
5. The provider inserts a special instrument (uterine elevator) into the vagina, through the cervix, and into the uterus to raise each of the 2 fallopian tubes so they are closer to the incision. This may cause discomfort.
6. Each tube is tied and cut or else closed with a clip or ring.
7. The provider closes the incision with stitches and covers it with an adhesive bandage.
8. The woman receives instructions on what to do after she leaves the clinic or hospital (see Explaining Self-Care for Female Sterilization, p. 177). She usually can leave in a few hours.



The Laparoscopy Procedure

1. The provider uses proper infection-prevention procedures at all times (see Infection Prevention in the Clinic, p. 312).
2. The provider performs a physical examination and a pelvic examination. The pelvic examination is to assess condition and mobility of the uterus.
3. The woman usually receives light sedation (with pills or into a vein) to relax her. She stays awake. Local anesthetic is injected under her navel.
4. The provider places a special needle into the woman's abdomen and, through the needle, inflates (insufflates) the abdomen with gas or air. This raises the wall of the abdomen away from the pelvic organs.

5. The provider makes a small incision (about one centimeter) in the anesthetized area and inserts a laparoscope. A laparoscope is a long, thin tube containing lenses. Through the lenses the provider can see inside the body and find the 2 fallopian tubes.
6. The provider inserts an instrument through the laparoscope (or, sometimes, through a second incision) to close off the fallopian tubes.
7. Each tube is closed with a clip or a ring, or by electric current applied to block the tube (electrocoagulation).
8. The provider then removes the instrument and laparoscope. The gas or air is let out of the woman's abdomen. The provider closes the incision with stitches and covers it with an adhesive bandage.
9. The woman receives instructions on what to do after she leaves the clinic or hospital (see Explaining Self-Care for Female Sterilization, next page). She usually can leave in a few hours.

Local Anesthesia Is Best for Female Sterilization

Local anesthesia, used with or without mild sedation, is preferable to general anesthesia. Local anesthesia:

- Is safer than general, spinal, or epidural anesthesia
- Lets the woman leave the clinic or hospital sooner
- Allows faster recovery
- Makes it possible to perform female sterilization in more facilities



Sterilization under local anesthesia can be done when a member of the surgical team has been trained to provide sedation and the surgeon has been trained to provide local anesthesia. The surgical team should be trained to manage emergencies, and the facility should have the basic equipment and drugs to manage any emergencies.

Health care providers can explain to a woman ahead of time that being awake during the procedure is safer for her. During the procedure providers can talk with the woman and help to reassure her if needed.

Many different anesthetics and sedatives may be used. Dosage of anesthetic must be adjusted to body weight. Oversedation should be avoided because it can reduce the client's ability to stay conscious and could slow or stop her breathing.

In some cases, general anesthesia may be needed. See Medical Eligibility Criteria for Female Sterilization, p. 168, for medical conditions needing special arrangements, which may include general anesthesia.

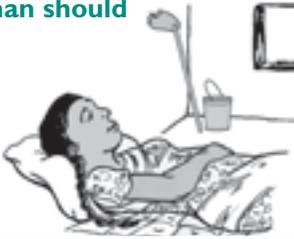
Supporting the User

Explaining Self-Care for Female Sterilization

Before the procedure the woman should

- Use another contraceptive until the procedure.
- Not eat anything for 8 hours before surgery. She can drink clear liquids until 2 hours before surgery.
- Not take any medication for 24 hours before the surgery (unless she is told to do so).
- Wear clean, loose-fitting clothing to the health facility if possible.
- Not wear nail polish or jewelry.
- If possible, bring a friend or relative to help her go home afterwards.

After the procedure the woman should



- Rest for 2 days and avoid vigorous work and heavy lifting for a week.
- Keep incision clean and dry for 1 to 2 days.
- Avoid rubbing the incision for 1 week.
- Not have sex for at least 1 week. If pain lasts more than 1 week, avoid sex until all pain is gone.

What to do about the most common problems

- She may have some abdominal pain and swelling after the procedure. It usually goes away within a few days. Suggest ibuprofen (200–400 mg), paracetamol (325–1000 mg), or other pain reliever. She should not take aspirin, which slows blood clotting. Stronger pain reliever is rarely needed. If she had laparoscopy, she may have shoulder pain or feel bloated for a few days.

Plan the follow-up visit

- Following up within 7 days or at least within 2 weeks is strongly recommended. No woman should be denied sterilization, however, because follow-up would be difficult or not possible.
- A health care provider checks the site of the incision, looks for any signs of infection, and removes any stitches. This can be done in the clinic, in the client's home (by a specifically trained paramedical worker, for example), or at any other health center.

“Come Back Any Time”: Reasons to Return

Assure every client that she is welcome to come back any time—for example, if she has problems or questions, or she thinks she might be pregnant. (A few sterilizations fail and the woman becomes pregnant.) Also if:

- She has bleeding, pain, pus, heat, swelling, or redness of the wound that becomes worse or does not go away
- She develops high fever (greater than 38° C/101° F)
- She experiences fainting, persistent light-headedness, or extreme dizziness in the first 4 weeks and especially in the first week

General health advice: Anyone who suddenly feels that something is seriously wrong with her health should immediately seek medical care from a nurse or doctor. Her contraceptive method is most likely not the cause of the condition, but she should tell the nurse or doctor what method she is using.

Helping Users

Managing Any Problems

Problems Reported as Complications

- Problems affect women’s satisfaction with female sterilization. They deserve the provider’s attention. If the client reports complications of female sterilization, listen to her concerns and, if appropriate, treat.

Infection at the incision site (redness, heat, pain, pus)

- Clean the infected area with soap and water or antiseptic.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if the infection has not cleared.

Abscess (a pocket of pus under the skin caused by infection)

- Clean the area with antiseptic.
- Cut open (incise) and drain the abscess.
- Treat the wound.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if she has heat, redness, pain, or drainage of the wound.

Severe pain in lower abdomen (suspected ectopic pregnancy)

- See Managing Ectopic Pregnancy, below.

Suspected pregnancy

- Assess for pregnancy, including ectopic pregnancy.

Managing Ectopic Pregnancy

- Ectopic pregnancy is any pregnancy that occurs outside the uterine cavity. Early diagnosis is important. Ectopic pregnancy is rare but could be life-threatening (see Question 11, p. 182).
- In the early stages of ectopic pregnancy, symptoms may be absent or mild, but eventually they will become severe. A combination of these signs or symptoms should increase suspicion of ectopic pregnancy:
 - Unusual abdominal pain or tenderness
 - Abnormal vaginal bleeding or no monthly bleeding—especially if this is a change from her usual bleeding pattern
 - Light-headedness or dizziness
 - Fainting
- *Ruptured ectopic pregnancy*: Sudden sharp or stabbing lower abdominal pain, sometimes on one side and sometimes throughout the body, suggests a ruptured ectopic pregnancy (when the fallopian tube breaks due to the pregnancy). Right shoulder pain may develop due to blood from a ruptured ectopic pregnancy pressing on the diaphragm. Usually, within a few hours the abdomen becomes rigid and the woman goes into shock.
- *Care*: Ectopic pregnancy is a life-threatening, emergency condition requiring immediate surgery. If ectopic pregnancy is suspected, perform a pelvic examination only if facilities for immediate surgery are available. Otherwise, immediately refer and/or transport the woman to a facility where definitive diagnosis and surgical care can be provided.

Questions and Answers About Female Sterilization

1. Will sterilization change a woman's monthly bleeding or make monthly bleeding stop?

No. Most research finds no major changes in bleeding patterns after female sterilization. If a woman was using a hormonal method or IUD before sterilization, her bleeding pattern will return to the way it was before she used these methods. For example, women switching from combined oral contraceptives to female sterilization may notice heavier bleeding as their monthly bleeding returns to usual patterns. Note, however, that a woman's monthly bleeding usually becomes less regular as she approaches menopause.

2. Will sterilization make a woman lose her sexual desire? Will it make her fat?

No. After sterilization a woman will look and feel the same as before. She can have sex the same as before. She may find that she enjoys sex more because she does not have to worry about getting pregnant. She will not gain weight because of the sterilization procedure.

3. Should sterilization be offered only to women who have had a certain number of children, who have reached a certain age, or who are married?

No. There is no justification for denying sterilization to a woman just because of her age, the number of her living children, or her marital status. Health care providers must not impose rigid rules about age, number of children, age of last child, or marital status. Each woman must be allowed to decide for herself whether or not she will want more children and whether or not to have sterilization.

4. Is it not easier for the woman and the health care provider to use general anesthesia? Why use local anesthesia?

Local anesthesia is safer. General anesthesia is more risky than the sterilization procedure itself. Correct use of local anesthesia removes the single greatest source of risk in female sterilization procedures—general anesthesia. Also, after general anesthesia, women usually feel nauseous. This does not happen as often after local anesthesia.

When using local anesthesia with sedation, however, providers must take care not to overdose the woman with the sedative. They also must handle the woman gently and talk with her throughout the procedure. This helps her to stay calm. With many clients, sedatives can be avoided, especially with good counseling and a skilled provider.

5. Does a woman who has had a sterilization procedure ever have to worry about getting pregnant again?

Generally, no. Female sterilization is very effective at preventing pregnancy and is intended to be permanent. It is not 100% effective, however. Women who have been sterilized have a slight risk of becoming pregnant: About 5 of every 1,000 women become pregnant within a year after the procedure. The small risk of pregnancy remains beyond the first year and until the woman reaches menopause.

6. Pregnancy after female sterilization is rare, but why does it happen at all?

Most often it is because the woman was already pregnant at the time of sterilization. In some cases an opening in the fallopian tube develops. Pregnancy also can occur if the provider makes a cut in the wrong place instead of the fallopian tubes.

7. Can sterilization be reversed if the woman decides she wants another child?

Generally, no. Sterilization is intended to be permanent. People who may want more children should choose a different family planning method. Surgery to reverse sterilization is possible for only some women—those who have enough fallopian tube left. Even among these women, reversal often does not lead to pregnancy. The procedure is difficult and expensive, and providers who are able to perform such surgery are hard to find. When pregnancy does occur after reversal, the risk that the pregnancy will be ectopic is greater than usual. Thus, sterilization should be considered irreversible.

8. Is it better for the woman to have female sterilization or the man to have a vasectomy?

Each couple must decide for themselves which method is best for them. Both are very effective, safe, permanent methods for couples who know that they will not want more children. Ideally, a couple should consider both methods. If both are acceptable to the couple, vasectomy would be preferable because it is simpler, safer, easier, and less expensive than female sterilization.

9. Will the female sterilization procedure hurt?

Yes, a little. Women receive local anesthetic to stop pain, and, except in special cases, they remain awake. A woman can feel the health care provider moving her uterus and fallopian tubes. This can be uncomfortable. If a trained anesthetist or anesthesiologist and suitable equipment are available, general anesthesia may be chosen for women who are very frightened of pain. A woman may feel sore and weak for several days or even a few weeks after surgery, but she will soon regain her strength.

10. How can health care providers help a woman decide about female sterilization?

Provide clear, balanced information about female sterilization and other family planning methods, and help a woman think through her decision fully. Thoroughly discuss her feelings about having children and ending her fertility. For example, a provider can help a woman think how she would feel about possible life changes such as a change of partner or a child's death. Review The 6 Points of Informed Consent to be sure the woman understands the sterilization procedure (see p. 173).

11. Does female sterilization increase the risk of ectopic pregnancy?

No. On the contrary, female sterilization greatly reduces the risk of ectopic pregnancy. Ectopic pregnancies are very rare among women who have had a sterilization procedure. The rate of ectopic pregnancy among women after female sterilization is 6 per 10,000 women per year. The rate of ectopic pregnancy among women in the United States using no contraceptive method is 65 per 10,000 women per year.

On the rare occasions that sterilization fails and pregnancy occurs, 33 of every 100 (1 of every 3) of these pregnancies are ectopic. Thus, most pregnancies after sterilization failure are not ectopic. Still, ectopic pregnancy can be life-threatening, so a provider should be aware that ectopic pregnancy is possible if sterilization fails.

12. Where can female sterilization be performed?

If no pre-existing medical conditions require special arrangements:

- Minilaparotomy can be provided in maternity centers and basic health facilities where surgery can be done. These include both permanent and temporary facilities that can refer the woman to a higher level of care in case of emergency.
- Laparoscopy requires a better equipped center, where the procedure is performed regularly and an anesthetist is available.

13. What are transcervical methods of sterilization?

Transcervical methods involve new ways of reaching the fallopian tubes, through the vagina and uterus. A microcoil, Essure, is already available in some countries. Essure is a spring-like device that a specifically trained clinician using a viewing instrument (hysteroscope) inserts through the vagina into the uterus and then into each fallopian tube. Over the 3 months following the procedure, scar tissue grows into the device. The scar tissue permanently plugs the fallopian tubes so that sperm cannot pass through to fertilize an egg. Essure is unlikely to be introduced in low-resource settings soon, however, because of the high cost and complexity of the viewing instrument required for insertion.