

FEMALE STERILIZATION

What health workers need to know



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Family Planning and Population
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CONTENTS

Introduction	1
What is female sterilization?	3
How effective is female sterilization?	3
Who should consider undergoing female sterilization?	3
When can a woman have the procedure?	5
What are the common surgical approaches or procedures? ...	6
How does timing affect choice of surgical approach?	12
What are the common techniques for blocking the fallopian tubes?	12
Ligation and division	12
Mechanical devices	13
Electrical methods	13
How does the surgical approach and the timing factor affect choice of the blocking technique?	15
What are the health benefits of female sterilization?	15
What are the possible complications of female sterilization?	16
Short-term	16
Long-term	16
What are the considerations regarding immediate postpartum sterilization?	17
Where can sterilization be performed?	18
Who can perform the procedure?	18

How do health workers help couples with decision-making?	19
What is informed consent?	22
What are the common restrictions on obtaining sterilization?	24
What pre-operative care is required?	24
What do women need to know before the surgery?	24
What follow-up care and information is necessary?	25
Is reversal possible?	26
What other advice about sterilization should health workers give?	26
Female sterilization and breast-feeding	26
Female sterilization and sexually transmitted diseases	26
Where can health workers get more information?	28
APPENDIX I: Sample informed-consent form for voluntary surgical contraception	31
APPENDIX II: Sample pre-operative and post-operative instructions to clients	32
REFERENCES	35

Introduction

Female sterilization is the most widely used family planning method in the world and one of the most effective. Of the 202 million married men and women who have been sterilized worldwide, 163 million are women. Of this, 161 million are in developing countries. This figure is expected to increase to 210 million by the year 2005.¹ Female sterilization is one of the options available to couples who have decided to end childbearing. Information and guidance about sterilization should be part of a broad discussion about family planning options.

As sterilization is only suitable for women who are certain that they want no more children, it is critical that family planning programmes offering female sterilization provide careful counselling which highlights the permanence of this procedure and the availability of safe and effective alternatives for couples interested in long-term reversible protection from pregnancy. These long-acting temporary methods (intrauterine devices and Norplant®) can also be good choices for women who desire no more children. Additionally, male sterilization, or vasectomy, is a highly effective and convenient method for couples seeking permanent protection from pregnancy.

Since couples typically complete their families many years before women reach menopause, they usually need many years of contraceptive protection. The prospect of several more years of reproductive capability (women usually remain at potential risk of pregnancy until about age 50 and men are fertile throughout life) may lead them to choose a contraceptive that is either permanent or long-acting. Female sterilization is an attractive option for many women because it is a single procedure that provides protection without the need for future involvement by the woman. Given the permanence of this option, however, it is essential that the decision to undergo sterilization is made thoughtfully and voluntarily, on the basis of complete

¹ UNFPA, Technical Report No. 18, *Contraceptive Use and Commodity Costs in Developing Countries, 1994-2005*

information about the procedure, including its risks, benefits and alternatives.

This booklet provides answers to the most common questions about female sterilization. It offers an overview of the following major points about female sterilization that health workers need to know:

- what female sterilization is and how it works,
- its advantages and disadvantages,
- its risks and benefits, and
- how to help women make well-considered choices.

It is hoped that the most current information on these topics will be useful in providing high quality services to all clients. This guide is a prototype; it may be adapted and modified into versions appropriate for use by providers at various levels.

What is female sterilization?

Female sterilization is the surgical procedure used to end a woman's ability to become pregnant. This procedure involves blocking (commonly referred to as occluding) the fallopian tubes (also called uterine tubes or oviducts) so that the egg and sperm cannot meet (see Fig. 1). This is done during a relatively simple operation, which varies according to:

- surgical approach used to reach the tubes
- the technique used to block the tubes
- the timing of the procedure.

The timing factor — whether or not the procedure will be performed just after a woman gives birth — influences the choice of both the surgical approach and the blocking technique. It will also have an important influence on the type of counselling issues that need to be discussed.

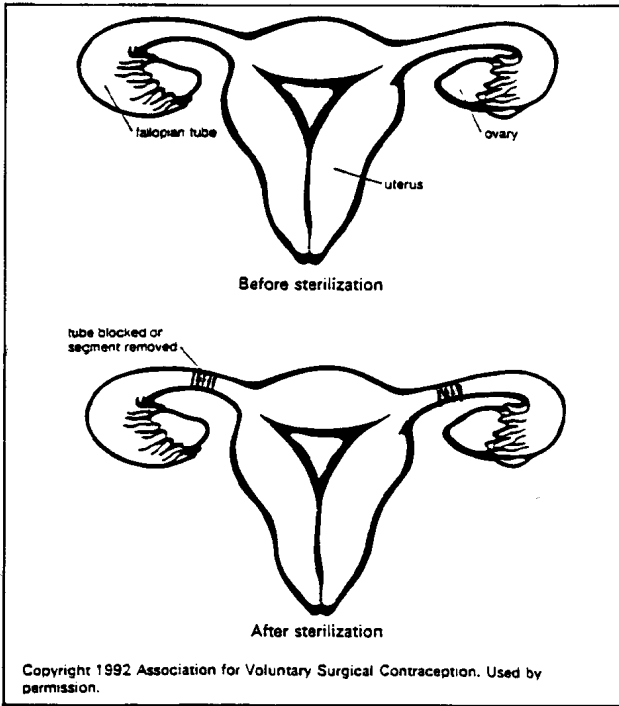
How effective is female sterilization?

Women who choose sterilization benefit from highly effective protection from pregnancy. With less than one in 100 women getting pregnant after one year, female sterilization is one of the most effective contraceptive options available today.

Who should consider undergoing female sterilization?

Female sterilization is suitable for most women who are certain that they want no more children and need a reliable contraceptive. From a medical perspective, the procedure is most appropriate for women who have no contraindications to surgery or anaesthesia. Women who have a current pelvic infection

Fig. 1: Female Sterilization



should not undergo the procedure until treated and fully recovered. When the procedure is to be done immediately after child delivery, it is best performed when there are no signs of infection or other complications associated with delivery.

Female Sterilization should be presented as one of many options available to women interested in permanent contraception. Potential clients should receive complete information about all available family planning methods with no undue emphasis on sterilization. Health workers should carefully screen potential clients for sterilization to ensure that each has a desire to end childbearing and has a full understanding of the risks and benefits of the method. Various factors, especially the client's age and the number of living children, may be warning signals that a client will become dissatisfied later with her decision. This regret appears to be more common among women with certain characteristics or situations, such as:

- young age
- few or no children
- marital instability
- partner who doesn't agree with decision
- uncertain about wanting more children.

These warning signs are useful for identifying women who may need special counselling but should not be used arbitrarily to deny the procedure to a woman who has made an informed and voluntary decision.

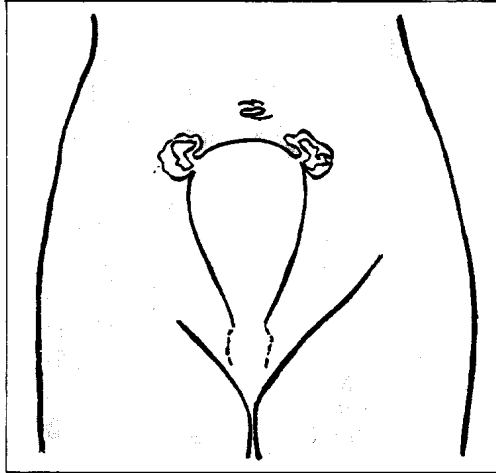
When can a woman have the procedure?

The sterilization procedure can be done at most times during a woman's reproductive life. It is usually performed during:

- the **immediate postpartum period**, immediately following or up to 48 hours after a vaginal delivery, or during a caesarean section delivery,
- the **post-abortion period**, immediately following an induced or spontaneous abortion, or
- the **interval period**, when the woman has not recently been pregnant or at least six weeks since a woman's last delivery (when the uterus has returned to its normal size).

Female sterilization should not be performed when a woman is pregnant or during days 8 to 41 after delivery. With special care, sterilizations can be performed during days 3 to 7 after delivery (the **postpartum period**). (See Fig. 2.)

Fig. 2: *The uterus and fallopian tubes after delivery*



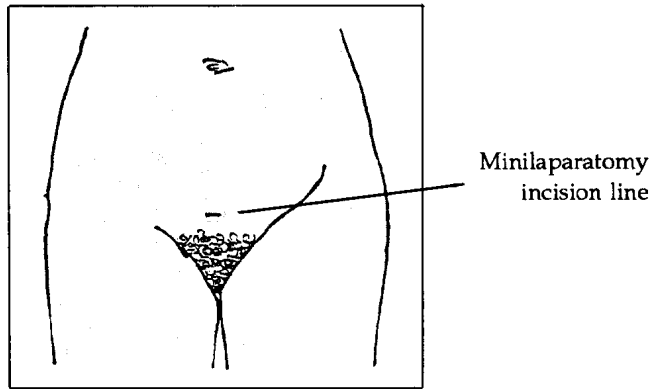
Adapted from Stewart et al., 1987.
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What are the common surgical approaches or procedures?

Two common approaches, both through the abdomen, are used to reach the fallopian tubes:

- minilaparotomy involves a small abdominal incision (Fig. 3) through which a surgeon usually lifts the fallopian tubes out of the abdomen to block them. The incision is 2-5 cm above the pubic hairline when a woman has not recently been pregnant or 1.5-3 cm just below the navel or umbilicus for postpartum procedures. This procedure is appropriate for women during interval, post-abortion and immediate postpartum periods. During interval minilaparotomy, the provider may use a uterine elevator, a metal instrument which is inserted into the vagina to raise the uterus. This makes it easier to move the pelvic structures so that the tubes are near the incision site.

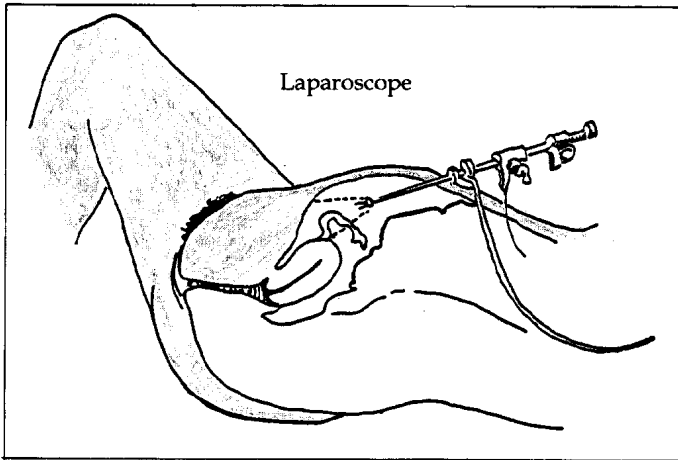
Fig. 3: Incision site for minilaparotomy female sterilisation, interval procedure



- laparoscopy uses a laparoscope, a narrow lighted tube through which a surgeon is able to see into the abdominal cavity and pelvic structure (Fig. 4). This optical instrument is inserted through a small puncture near the navel, or umbilicus. The same opening, or sometimes a second puncture, is used to manipulate the organs and block the tubes. It is recommended only for women in the interval period or following first-trimester abortion (when gestation is less than 12 weeks). Laparoscopy should not be performed on women during the postpartum period because of the orientation and the vascular nature of the postpartum uterus.

Both approaches are highly safe and effective and either can be performed under local anaesthesia and light sedation on an outpatient basis. The two approaches, however, differ in some important respects, making one or the other more appropriate in certain settings or circumstances. In most countries where resources are limited, **minilaparotomy** is the most common approach since it requires simple, inexpensive and easily maintained equipment, may be performed by general medical

Fig. 4: *Laparoscope illuminating the abdominal cavity*



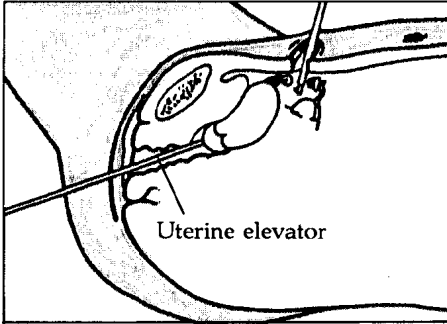
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practitioners or trained paramedical staff, and is recommended for both postpartum and interval procedures. Minilaparotomy may be performed in maternity centres and basic health facilities with surgical capacity. Minilaparotomy is appropriate for women in most cases, although it can be more difficult to use for obese women and those with tubal adhesions from infection or previous surgery (Fig. 5).

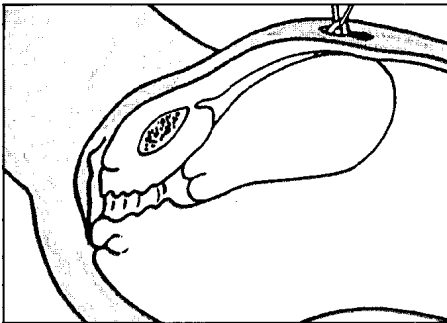
By contrast, **laparoscopy** (with its smaller incision) may be somewhat less painful and result in a slightly lower rate of complication, a shorter recovery time and a smaller scar. It is usually available only at large referral centres. It is a more complicated procedure that requires sophisticated equipment such as the laparoscope that is costly and difficult to maintain. It requires highly trained specialists, usually obstetrician-gynaecologists, and a fully-equipped hospital operating room or immediate back-up facilities for complications (which are rare but can be of a serious nature). Furthermore, surgeons need to maintain the specialized surgical skills required for the technique. Research shows that the rate of complications decreases significantly when the surgeon is specially trained and performs the procedure on a regular basis.

Fig. 5: Interval and postpartum minilaparotomy

Interval minilaparotomy



Postpartum minilaparotomy



Adapted from *Family Planning Handbook for Doctors*, IPPF Medical Publications, 1988
Used by permission.

Table 1: Comparison of minilaparotomy and laparoscopy for female sterilization

	Minilaparotomy	Laparoscopy
Instruments and equipment	Requires a few inexpensive, standard surgical instruments.	Requires sophisticated, and expensive endoscopic equipment, that is difficult to maintain.
Surgical skills and expertise	Can be performed by health workers with basic surgical ability and skills, after training in the technique.	Restricted to specially trained surgeons, usually obstetricians and gynaecologists. Requires regular practice to maintain skills.
Timing	Suitable for postpartum, post-abortion and interval periods	Most suitable for interval period and following first trimester abortion
Setting	May be performed in maternity centres and basic health facilities with surgical capacity.	Fully equipped operating room and anaesthetist required.
Time necessary for the operation	Depending on the experience of the operator, takes on average 10-20 minutes.	Depending on the experience of the operator, takes on average 5-15 minutes and so most appropriate for services with large daily case-loads.

	Minilaparotomy	Laparoscopy
Precautions	Difficult to use for obese women (especially for interval procedures) and those with pelvic scarring and adhesions.	Not recommended for postpartum women or for women with previous lower abdominal surgery or pelvic infections.
Complications	Complications are rare. Slight risk of bowel and bladder injuries, uterine perforation and wound infection.	Complications are rare. Slight risk of vascular injury, bowel injury and insufflation accidents. Some complications may require use of general anaesthesia.
Anaesthesia	Recommended local anaesthesia.	Local, spinal or general anaesthesia.
Side-effects	Short-term abdominal pain may occur.	Postoperative chest and shoulder pain resulting from abdominal insufflation may occur.
Effectiveness	Highly effective; failure rates less than 1% after 12 months.	Highly effective; failure rates less than 1% after 12 months.

How does timing affect choice of surgical approach?

Minilaparotomy can be used to reach the tubes at any time (during the interval, post-abortion or postpartum periods), whereas **laparoscopy** should only be performed during the interval period or following an early induced (first-trimester) abortion. Laparoscopy is not otherwise recommended for use postpartum because of the possibility of injury to the large, vascular uterus of postpartum women.

What are the common techniques for blocking the fallopian tubes?

The choice of the blocking method depends upon several factors, including type of surgical approach (minilaparotomy or laparoscopy), the timing of the sterilization (postpartum or interval), provider's training, and availability of supplies. Once the provider reaches the uterine tubes, the tubes can be blocked (Fig. 6) by two commonly used methods:

- **Ligation and division** (cut and section). Ligation is used only with minilaparotomy (both postpartum and interval cases), this method involves tying each fallopian tube with suture material and then cutting and removing a section. The most common method is the **Pomeroy technique**, in which a segment of the fallopian tube is **tied in a loop and then the top portion of the loop is cut and removed**. Another method — the **Parkland technique** — involves **tying the tube at two points and removing the intervening segment**.

Two other ligation and division techniques used previously are the Uchida and Irving techniques. Both are very effective but require large incisions (the Irving has been done during caesarean section) and because of their

more complicated nature, take a relatively long time to perform.

- Mechanical devices. The preferred choice for use with laparoscopy, this involves placing a device (hinged or spring clips or a small ring or band made of silicone rubber), to close and seal each tube. The various **mechanical** methods, which are suitable for interval cases using laparoscopy, require a specialist surgeon trained in laparoscopy. The rates of failure and complications may increase if training is inadequate or skills not maintained by routine practice of the procedure.
- Electrical methods. Electrocoagulation is used with a laparoscope to burn and block the tubes. This method is no longer recommended because research shows a greater risk for internal burns during the procedure and for ectopic pregnancy after the operation.

Fig. 6: Selected blocking techniques for female sterilization

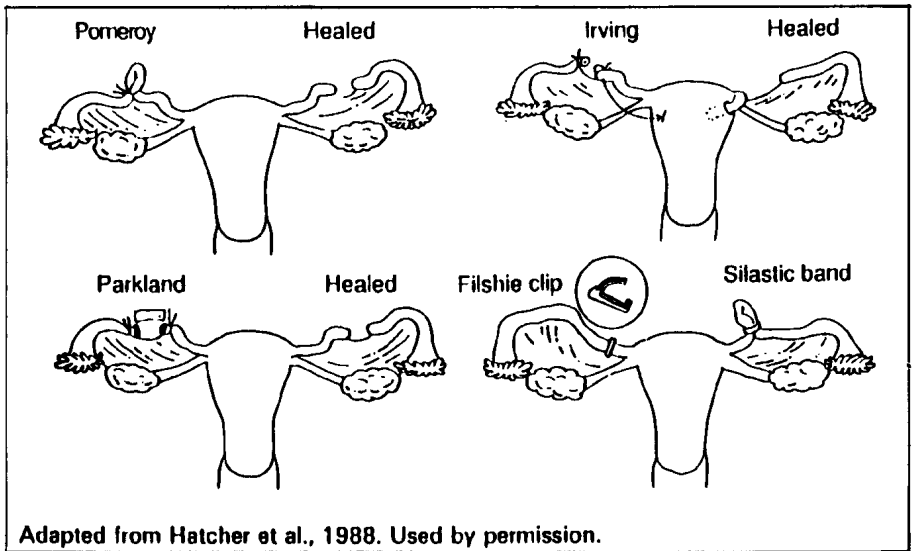


Table 2: Advantages and disadvantages of female sterilization blocking techniques

Technique	Advantages	Disadvantages
<p>Ligation and division Parkland, Pomeroy</p> <p>Irving</p>	<p>Effective; suitable for postpartum and interval cases; low rate of complications; simple; specialist surgeon not needed; inexpensive.</p> <p>Highly effective; can be done during caesarean section.</p>	<p>Cannot be used with laparoscopy.</p> <p>More difficult to perform than Pomeroy and Parkland; requires more time and laparotomy.</p>
<p>Mechanical Silicone band Filshie clip Spring clip</p>	<p>Destroy less tubal tissue than ligation; fast; suitable for interval cases using laparoscopy in high-volume settings. Filshie clip may be used for postpartum cases.</p>	<p>Usually applied by laparoscopy, which requires specialist surgeon and laparoscopy training; rates of failure and complications can increase if training is inadequate or skills not maintained. Silicone band and spring clip are not recommended for postpartum use.</p>
<p>Electrical Electro-coagulation</p>	<p>Can be performed via laparoscopy; fast; may cause less post-operative pain than mechanical techniques.</p>	<p>Usually destroys more tubal tissue; requires specialist surgeon and laparoscopy training; rates of failure and complications can increase if training is inadequate or skills are not maintained; associated with burns to internal organs as well as a higher risk of later ectopic pregnancy than ligation or mechanical devices. Not officially approved or endorsed for general use by many countries.</p>

How does the surgical approach and the timing factor affect choice of the blocking technique?

The timing of the procedure, whether a woman wants to have the procedure immediately after delivery or not, influences the choice of both the surgical approach and the blocking method. During the interval period (when a woman has not recently been pregnant or it has been at least six weeks since delivery), either surgical approach (minilaparotomy or laparoscopy) can be used along with either blocking method (ligation or a mechanical device). For immediate postpartum sterilization, minilaparotomy is the recommended surgical approach, with ligation, using clips, rings or bands. During caesarean surgery, ligation is the most common method. For post-abortion sterilization, both surgical approaches and blocking methods may be used (although the mechanical devices require extra care because of the somewhat enlarged tubes).

What are the health benefits of female sterilization?

Given the considerable health risks associated with unspaced pregnancies, the use of contraceptives provides a significant health benefit to women at risk of unwanted pregnancy. No one contraceptive is ideally suitable for all clients. Sterilization offers highly effective protection for those women who need a reliable contraceptive and are certain that they wish no more children. It offers permanent and safe protection from an unwanted pregnancy with none of the potential health problems associated with some temporary methods. Also in contrast to temporary methods, it does not require continuous involvement by the woman. A woman who has undergone sterilization is spared the common worries linked to temporary methods — partner compliance, inconvenience, side-effects, supply problems, and the consequences of forgetfulness. In addition to its benefit as

a contraceptive, recent research suggests that sterilization may reduce a woman's risk of ovarian cancer.²

What are the possible complications of female sterilization?

Short-term. Complications are rare. The types of complications vary by the type of surgical procedure. Minilaparotomy complications include wound infection, uterine perforation with uterine elevator, and bladder or intestinal injury. Laparoscopy complications may involve anaesthesia problems, tears and transections of the tubes, and injuries to organs from instruments such as the uterine elevator, insufflation needle or trocar. Although the complications with laparoscopy are not more common than with minilaparotomy, some are more severe and require general anaesthesia. The rate of complications is highly dependent on the level of surgical skill and experience.

The chance of having these problems is largely limited to the time of surgery or shortly thereafter. Most of these problems can be prevented with attention to careful screening, use of local anaesthesia with light sedation, careful surgical technique, good asepsis, and appropriate postoperative care. The seriousness of these problems can be minimized if they are recognized early and treated promptly. Oral and written postoperative instructions (with illustrations where needed for low and non literate women) should direct women to return to the clinic one week after the procedure to ensure that no infection has occurred.

Long-term. Failure of sterilization is rare. However, when pregnancy occurs in a woman who has undergone sterilization, it is likely to be an ectopic (tubal) pregnancy, which is potentially fatal. Women should be counselled about the importance of getting medical attention immediately if they believe that they might be pregnant.

² *Challenges in Reproductive Health Research*, WHO, see reference 3

Subsequent regret about the sterilization decision is another possible consequence. Research results underscore the importance of counselling women considering sterilization about the permanent nature of sterilization and the possibility of regret.

What are the considerations regarding immediate postpartum sterilization?

The period immediately after childbirth is a popular time for women to undergo sterilization by minilaparotomy. It offers advantages from both the mother's and provider's perspective. It is often less painful and recovery time is shorter than with interval minilaparotomy. It is convenient for the mother because it eliminates the need for a separate visit for the sterilization procedure and having the procedure done immediately postpartum does not prolong the normal hospital or maternity stay.

From the provider's viewpoint, a smaller incision is possible because of the enlarged postpartum uterus, and it is easier to reach the fallopian tubes. With less extensive abdominal manipulation, less instrumentation is necessary. The engorged fallopian tubes in postpartum women can be more difficult to block, however, so that mechanical devices such as rings and clips are usually not suitable. One device, the Filshie Clip, is an exception.

Immediate postpartum sterilization may have some advantages, but the chance that a woman will regret her previous decision after undergoing sterilization is higher with women who undergo the procedure at this time, especially in cases of a child's illness or death or a change in marital status. Proper counselling is very important.

As pregnancy and childbirth may influence a woman's decision to have no more children, it is critical that counsellors encourage careful thought about the decision. The choice should be made well in advance of delivery or abortion and never when

postpartum and abortion clients are sedated or in labour. Stress, pain and sedatives may influence a decision that later will be the wrong choice. Research suggests that regret after postpartum sterilization may be more common among younger women (less than 30 to 35 years old), women with few children, and those having caesarean sections. For postpartum clients with medical problems or for those who do not wish a permanent method, other long-term options exist. The IUD and Norplant may be inserted during the immediate postpartum.

Women who have a caesarean delivery may choose to undergo sterilization during the same procedure. However, a caesarean section should NOT be performed for the primary purpose of sterilization because it involves the risks associated with any major surgery. Furthermore, sterilization should be performed at the time of caesarean section only with the woman's full consideration and informed decision well before the procedure.

Where can sterilization be performed?

In the case of minilaparotomy, the procedure can be performed in maternity centres and basic health facilities with surgical capacity, including both permanent and temporary facilities with access to referral care. Laparoscopy requires a fully-equipped hospital, where laparoscopy is performed on a regular basis and an anaesthetist is available.

Who can perform the procedure?

The type of provider varies with choice of surgical approach. Any doctor, nurse or other paramedical with basic surgical experience can be trained to perform **minilaparotomy**. Research and programme experience have shown that properly trained non-doctors can perform this procedure as safely as doctors. By contrast, **laparoscopy** should be performed only by

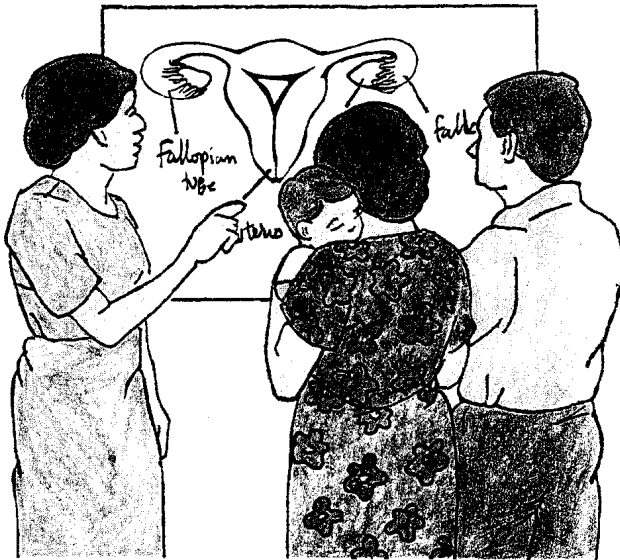
doctors specialized in abdominal and pelvic surgery who have undergone training in the technique and who perform it on a regular basis. Also, for laparoscopy, an anaesthetist should be available because of the potential for serious complications that would require general anaesthesia.

How do health workers help couples with decision-making?

The purpose of family planning counselling is to assist couples with information and guidance about selection of a family planning method. In addition to providing complete and accurate information about methods of contraception (filling in gaps in the client's knowledge and correcting misconceptions), a counsellor focuses on how these choices relate to a woman's specific needs and circumstances. Couples wishing to maintain the option of having children should be counselled not to undergo sterilization. A woman's right to make an informed and free choice is compromised when strong emphasis is placed on particular methods of contraception. Women should feel no pressure to choose sterilization.

Counselling is particularly important in the case of sterilization because the procedure is permanent and it requires surgery. A counselling session with a woman considering sterilization should focus on the client's needs and desires. Whenever possible, a woman should be encouraged to include her partner in the counselling process. However, except where it is a legal requirement, partner consent should not be mandatory.

Fig. 7: Whenever possible, the partner or husband should be included in the counselling session



Counselling about both the decision to end fertility and the experience of surgery makes it more likely that a woman will be satisfied with her decision. Women can learn about family planning and sterilization while they are receiving prenatal, postpartum or primary health care. During the end of pregnancy or during the time of an abortion, a woman may be particularly receptive, but counsellors should be aware that these are often times of emotional stress when women may need more help in making a carefully considered decision. Research shows that clients who undergo sterilization during the post-abortion and immediate postpartum periods have a greater risk of future regret. Whenever possible, a client should decide well before delivery or abortion.

The counselling session should:

- Discuss the range of options. Information about sterilization must be part of a general discussion about family planning and the range of available choices. No strong emphasis should be placed on any particular method, such as sterilization.
- Clarify misconceptions. Attention should be given to identifying and counteracting rumours and myths about female sterilization and other methods of contraception. Research suggests misconceptions are a major obstacle to contraceptive use in some countries. Common misinformation about sterilization — for example, that sterilization will make a woman stop menstruating or affect her sexuality — can discourage a woman from choosing the method and should be addressed. **It is generally agreed that sterilization does not affect female hormones and that it does not change sexual desire or satisfaction.**
- Emphasize the permanence of sterilization. Family planning providers should emphasize the permanence of sterilization and the availability of alternative reversible methods. Providers involved in counselling should be trained to identify clients who are likely to change their mind about sterilization after the procedure has been performed. Younger women are at greatest risk of later regretting their decision. Age and other factors linked to heightened risk of future regret should be seen as warning signs but should not be used to deny the procedure to women who make a carefully considered decision.
- Discuss the sterilization procedure. Clients need to know the benefits and risks of surgical sterilization, including the rare but possible serious complications and the consequence of failure. They need to know what they can expect during and after surgery.

Counsellors should encourage a sufficient time interval between counselling and the procedure, and emphasize that clients are free to change their mind at any time before the procedure.

What is informed consent?

No one should ever be forced to undergo sterilization. A client who has chosen tubal sterilization must decide freely and only after fully knowing and understanding the relevant facts about sterilization and other family planning options. The client should be asked to express in her own words what she understands the procedure and its implications to be. This will help the provider ensure that the client is truly informed.

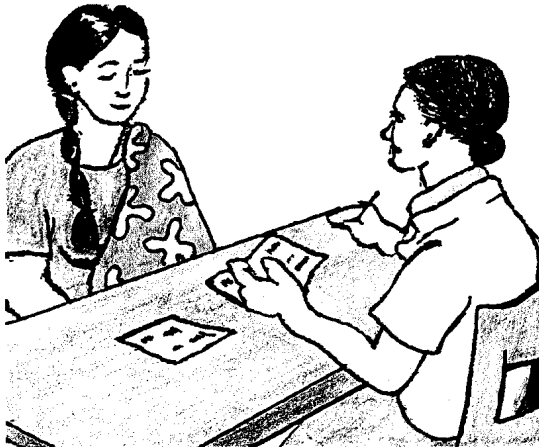
After counselling and careful consideration, a woman may decide that sterilization is the right choice for her. Often she will be asked to sign an **informed consent** form indicating that she has made an informed and free choice. In many countries, a client's signature on an informed consent form provides legal authorization for the operation. However, the informed consent form should not be dismissed as merely a legal requirement or a protection of the provider. A signed form does not guarantee that a decision was made freely or based on clear, complete and accurate information, but it can provide useful guidelines for family planning programs offering sterilization services. After careful screening and counselling, the form can serve as a final step in the informed consent process. It provides a reminder to both provider and client and helps to ensure that a client:

- knows that this is a surgical procedure and it is intended to permanently prevent the client from having more children,
- has been informed about alternative family planning methods,
- is aware of the benefits and risks of the procedure,
- has made a voluntary choice, and

- knows that she may change her mind at any time before surgery without loss of medical or financial benefits.

For clients who appear indecisive about sterilization or concerned about reversal, counsellors should emphasize the availability of temporary, long-acting methods. Informed consent forms should be initiated only after proper counselling has occurred and the client has made a firm decision (Fig. 8). Informed consent should be obtained before a woman is sedated or in labour. In some countries, husband or partner consent may be mandatory. Regardless of the legal requirements, counsellors should encourage women to include husbands and partners in counselling and the decision process.

Fig. 8: A woman should sign a consent form after counselling and only when she has made a firm decision



For a model consent form for sterilization, see Appendix 1.

What are the common restrictions on obtaining sterilization?

Regulations regarding sterilization vary, but most of them are designed to protect the client from coercion and to minimize the incidence of regret by women after sterilization. Some countries require a minimum age (usually varying between 30 and 35 years) and insist women already have a minimum number of children, sometimes specifying the sex. Many countries require women to wait for a specified period of time between making the decision to undergo sterilization and the procedure. Consent of the spouse or partner may be required, although it is generally recognized that the focus should be on counselling and not consent of the partner or spouse.

What pre-operative care is required?

Medical histories and physical examinations should include information regarding possible pregnancy, pelvic disease, previous abdominal surgery and other conditions that may increase a woman's risks.

What do women need to know before the surgery?

A woman who has decided to undergo sterilization must be advised to use temporary contraceptives until the procedure has been performed. A counselling session before the surgery should provide instructions on how to prepare for surgery and what to expect during and after the operation. Simple, non-technical explanation of the surgical steps and the anaesthesia to be used will inform and reassure the client. Sample client instructions for both pre-operative and post-operative care.

Should include simple and clear illustrations for use with low and non literate populations (see Appendix II).

What follow-up care and information is necessary?

Most women can be discharged on the same day following minilaparotomy and laparoscopy, since recovery problems are minor and most complications are recognized either during or shortly after surgery. At that time, providers should again give women instructions on what to do after the surgery, including how to care for the wound and how to treat any pain that might occur, and what to expect (for instance, a small but visible scar will remain). **Women should be advised to seek medical attention immediately if they experience any increase in abdominal pain.**

A follow-up visit should occur within seven days of surgery. A woman who has undergone sterilization during the interval period can expect to return to normal activities within three to five days and sexual relations within a week or when she feels comfortable thereafter. For women who undergo the procedure immediately after delivery, the procedure does not extend the normal recovery period for childbirth.

A woman who has undergone sterilization has a less than one percent chance of becoming pregnant. However, providers and clients alike need to be aware of the possible consequences of pregnancy after sterilization. Among those women who do become pregnant after sterilization, there is a marked increase in risk of ectopic (tubal) pregnancy, which is potentially fatal. Women must be advised to watch for these signs of tubal pregnancy: lower abdominal pain, missed periods, and abnormal uterine bleeding.

Despite careful screening, some clients may experience difficulty in adjusting to being sterilized, especially in the event of remarriage or loss of a child. For these women, counselling

and support should be offered and appropriate information on centres of excellence where reversal services are available.

Is reversal possible?

Most women who choose sterilization feel that they have made the right choice, but some women later regret their decision. For some of these women, surgery to restore fertility may be an option. Although reversal is sometimes possible, sterilization should never be considered a reversible procedure. Women considering sterilization must be counselled about the intended permanence and the possibility of future regret.

Women should know that surgery to attempt to reverse sterilization is available only in some countries. Counselling should emphasize the following:

- Sterilization is intended to be permanent.
- Reversal procedure involves complex and lengthy surgery, highly trained surgeons and specialized equipment. It also often requires general anaesthesia. Risks are greater and recovery time is longer than for sterilization.
- A large number of reversal procedures are unsuccessful.
- Reversal surgery increases the chance that a woman will have a tubal pregnancy.

What other advice about sterilization should health workers give?

Female sterilization and breast-feeding. The procedure does not interfere with a mother's milk production or adversely affect the health of the child.

Female sterilization and sexually transmitted diseases. Women who undergo sterilization do not have any protection against sexually transmitted diseases (STDs), including human

immunodeficiency virus (HIV). Even if not at any risk of pregnancy, women who may be at risk of STDs must be counselled to use protection. For these women, condoms used correctly and at every intercourse are the best available protection. Other barrier methods (diaphragm, cap, sponge, and vaginal spermicides) provide limited protection.

Where can health workers get more information?

Association for Voluntary
Surgical Contraception (AVSC)
79 Madison Avenue
New York, NY 10016
USA

Association Pro-Bienestar de la
Familia Colombiana
(PROFAMILIA)
Calle 34 No. 14-52
Bogota 1
Colombia

Bangladesh Association for
Voluntary Sterilization (BAVS)
Road 132, House No. 160
Dhanmondi Residential Area
Dhaka 5
Bangladesh

Centers for Disease Control
(CDC)
Division of Reproductive
Health
1600 Clifton Road, N.W.
Atlanta, GA 30333
USA

Family Health International
(FHI)
Research Triangle Park
PO Box 13950
Durham, NC 27709
USA

Family Planning Association of
Kenya (FPAK)
PO Box 30581, Harambee Plaza
Hailé Sélassié Avenue
Nairobi
Kenya

Family Planning Association of
India
Bajaj Bhavan
Nariman Point
Bombay 400 021
India

Family Planning Association of
Nepal (FPAN)
Leknath Marg
PO Box 486
Kathmandu

Family Planning International
Assistance (FPIA)
810 Seventh Avenue
New York, NY 10019
USA

International Planned
Parenthood Federation (IPPF)
Regent's College
Inner Circle
Regent's Park
London NW1 4NS
UK

Population Communication
Services (PCS)
Population Information
Program
The John Hopkins University
624 North Broadway
Baltimore, MD 21205
USA

Program for International
Training in Health (INTRAH)
University of North Carolina
208 North Columbus Street
Chapell Hill, NC 27514
USA

Promoção de Paternidade
Responsavel (PRO-PATER)
Rua Margues de Paranagua, 359
01303 - Sao Paulo SP
Brazil

Thai Association for Voluntary
Sterilization (TAVS)
101 MU3 Prapinklaw-
Nakonchaisri Road
Chimplee Subdistrict
Bangkok 10170
Thailand

The JHPIEGO Corporation (a
Johns Hopkins Program for
International Education in
Reproductive Health)
Brown's Wharf
1615 Thames Street
Baltimore, MD 21231
USA

The Pathfinder Fund
9 Galen Street, Suite 217
Waterdown, MA 02172
USA

The Philippines Association for
Voluntary Surgical
Contraception (PAVSC)
2nd Floor, IMCH Building
11 Banawe Street
Quezon City, Manila
Philippines

The Population Council
1 Dag Hammarskjold Plaza
New York, NY 10017
USA

The Program for International
Training in Health (PATH)
4 Nickerson Street
Seattle, WA 98109
USA

United Nations Fund for
Population Activities (UNFPA)
220 East 42nd Street
New York, NY 10017
USA

US Agency for International
Development (USAID)
Office of Population
Science and Technology Bureau
Washington, DC 20523
USA

WHO Regional Office for Africa
PO Box No. 6
Brazzaville
Congo

WHO Regional Office for
Europe
8 Scherfigsvej
2100 Copenhagen
Denmark

WHO Regional Office for
South-East Asia
World Health House
Indraprastha Estate
Mahatma Gandhi Road
New Delhi - 110002
India

WHO Regional Office for the
Americas/Pan American
Sanitary Bureau
525 23rd Street N.W.
Washington, DC 20037
USA

WHO Regional Office for the
Eastern Mediterranean
PO Box 1517
Alexandria 21511
Egypt

WHO Regional Office for the
Western Pacific
PO Box 2932
Manilla 2801
Philippines

World Health Organization
Avenue Appia
1211 Geneva 27
Switzerland

Sample informed-consent form for voluntary surgical contraception³

Client's statement

I, _____,
 (name of person undergoing operation)

consent to the operation of surgical contraception voluntarily and without any pressure or inducement from anyone to do so. I am aware of temporary birth control alternatives available to me. I fully understand that the operation is expected to make me permanently incapable of producing children. I know that there are some risks and a slight chance that the operation could fail. I also know that I may change my mind at any time before the operation. I have been given the opportunity to ask questions, and all questions have been answered to my satisfaction.

Statement of counsellor or operating practitioner (to be signed by the health professional who obtains the client's consent before the client undergoes a surgical contraception operation)

I, _____, certify that I have:
 (name and title)

- assessed the client's decision, provided thorough counselling, or ascertained that thorough assessment or counselling has been conducted
- explained the surgical procedure and anaesthesia regimen to be followed, including postoperative instructions
- explained and read this form to the client (if he or she is nonliterate)
- obtained (re)affirmation of the client's voluntary request for surgical contraception

Signature or mark of client: _____

Date: _____

Signature or mark of spouse or witness: _____

Date: _____

Signature of counsellor or operating practitioner: _____

Date: _____

Date of surgery: _____

Facility: _____

Operating practitioner: _____

³ This informed-consent form is reproduced from World Federation of Health Agencies for the Advancement of Voluntary Surgical Contraception. Ensuring informed choice for voluntary surgical contraception. New York, 1983.

APPENDIX II

Sample pre-operative and post-operative instructions to clients (oral and written)⁴

Written pre-operative and post-operative instructions should be provided for literate and illiterate clients. They are especially important in helping women to recognize complications and in providing information on where to go if they occur. The staff should review the instructions with each client before surgery; the postoperative instructions should also be given just before the client leaves the facility.

Brief written instructions specific to each facility will need to be developed and pretested with clients. These should be written in the local language using terms that the clients can easily understand. The sample instructions below indicate what information should be given to clients.

What you should know about your sterilization operation

This leaflet contains important information that you need to know. It tells you how to prepare for your sterilization operation and to take care of yourself afterwards.

Remember, sterilization is a surgical procedure. It is meant to be permanent. After sterilization, you will no longer be able to get pregnant. If you have any questions or doubts, talk to the clinic staff. We are here to help you.

Before going to the clinic:

1. Do not eat or drink anything for eight hours before the operation. You will be able to eat and drink after the operation.

⁴WHO (1992). *Female Sterilization: A guide to provision of services.*

2. Before going to the clinic for the operation, have a bath. Carefully wash the navel, belly, and genital area using soap.
3. Wear clean loose clothing.
4. Arrange for a family member or friend to come to the clinic to help you home after the operation.

When you return home

1. Rest for one or two days at home. You will probably be able to resume most of your normal activities within 3-5 days. Avoid heavy work or lifting for one week. This will help the wound heal.
2. Do not let the bandage get wet for 1-2 days.
3. Take the medicine provided by the clinic.
4. You may have sex as soon as it is comfortable for you. This is usually about one week after the operation.
5. Avoid pulling, scratching, or otherwise irritating the wound.
6. It is important for you to know what is normal following your surgery. There will probably be some pain and swelling around the wound; it may also be somewhat discoloured (bruised). This is normal and should not worry you.
7. Return to the clinic or notify the doctor or health worker if you have any of the following danger signals or if you notice any unusual body changes:
 - Fever within one week of the operation (over 38.0°C or 100.4°F).
 - A pain in your belly that does not go away or that becomes worse.
 - Bleeding or pus oozing from the wound.

- Signs that you may be pregnant - a missed period, stomach pains, or dark or spotty bleeding between periods. Watch for these signs at any time after the operation. They may mean the operation has failed, and you may be pregnant. This could be dangerous for you.

For any of these problems, you should telephone or go to the following location for medical care without delay:

.....

.....

.....

(add appropriate address)

Telephone number:

REFERENCES

1. World Health Organization. *Female Sterilization: A Guide to the Provision of Services*. WHO, 1992.
2. World Federation of Health Agencies for the Advancement of Voluntary Surgical Sterilization. *Safe and Voluntary Sterilization: Guidelines for Service Programs*. World Federation of Health Agencies for the Advancement of Voluntary Surgical Sterilization, 1988.
3. UNDP/UNFPA/WHO/WORLD BANK Special Programme of Research, Development and Research Training in Human Reproduction. *Challenges in reproductive health research*, Biennial Report 1992-1993.
4. Kleinman, R. *Family Planning Handbook for Doctors*. London, International Planned Parenthood Federation, 1988.
5. Hatcher, R. et al. *Contraceptive Technology*. 16th Ed. Atlanta, 1994.

