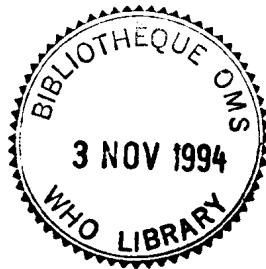


VASECTOMY

What health workers need to know



Family Planning and Population
Division of Family Health
World Health Organization
1994

Acknowledgement

The World Health organization gratefully acknowledges the financial support of the United Nations Population Fund (UNFPA) for the preparation and production of this document.

Comments and queries related to this document should be addressed to the Unit of Family Planning and Population, Division of Family Health, World Health Organization, 1211 Geneva 27, Switzerland.

© World Health Organization, 1994

This document is not issued to the general public, and all rights are reserved by the World Health Organization (WHO). The document may not be reviewed, abstracted, quoted, reproduced or translated, in part or in whole, without the prior written permission of WHO. No part of this document may be stored in a retrieval system or transmitted in any form or by any means - electronic, mechanical or other - without the prior written permission of WHO.

The views expressed in documents by named authors are solely the responsibility of those authors.

CONTENTS

Introduction	1
What is vasectomy?	3
How does vasectomy work?	3
What happens during a vasectomy?	5
What is different about the no-scalpel technique?	6
When is a man sterile?	9
How will vasectomy affect a man?	9
Who should consider undergoing vasectomy?	10
How do health workers help couples with decision- making?	11
How effective is Vasectomy?	13
Do men experience pain?	13
What are the possible health concerns?	13
Short-term effects	14
Long-term effects	14
What are the possible psychological effects?	15
Where can the procedure be performed?	15
Who can perform the procedure?	16
What do clients need to know for planning?	16
Will vasectomy protect against getting or passing on sexually transmitted diseases (STDs), including HIV?	17

What is informed consent? 17

What pre-operative care is required? 20
 Psychological screening 20
 Medical screening 20

What do men need to know before the surgery? 20

What postoperative care and information are necessary? 21

What is semen analysis? 22

Can vasectomy be reversed? 22

How does vasectomy compare to female sterilization? 23

What would make vasectomy more popular? 24

Where can health workers get more information? 25

APPENDIX I: Sample postoperative instructions to clients . . . 28

APPENDIX II: Sample informed-consent form for
 voluntary surgical contraception 30

REFERENCES 31

Introduction

Since most couples have all the children that they want long before the end of their fertility (men are fertile throughout life, women until about age 50), they will need effective protection against unwanted pregnancy for many years. Sterilization is one of the options available to couples who have decided to end childbearing.

Vasectomy is a simple operation that makes it impossible for a man to make his partner pregnant. During a vasectomy, a man's two tubes or sperm ducts are cut and blocked so that no sperm will be in his semen. Ideally, a couple wishing to end childbearing should consider either vasectomy or female sterilization, which are both highly effective methods of permanent contraception.

Today, however, four times as many female sterilizations are performed as vasectomies in the world as a whole. Surgical sterilization of women is the most widely used contraceptive in the world. Female sterilization accounts for most of the 202 million couples currently benefitting from sterilization (an estimated 39 million couples have undergone vasectomy). Although the number of vasectomies is significant in only a few countries so far, this trend is changing.

The number of men choosing vasectomy is growing significantly as family planning programmes expand efforts to make the method more available and accessible. It is already a popular choice for couples seeking permanent contraception in the United States, Europe and Asia. A new focus on the male role in reproductive health has spurred efforts to include men in family planning services which traditionally have been geared towards women. Also, an improved vasectomy technique developed in China is being used increasingly throughout the world. This no-scalpel technique, widely believed to reduce men's anxieties about vasectomy, is attracting more clients and providers to the method.

Cultural patterns and inaccurate information as well as legal, political, and religious considerations influence the acceptance of vasectomy. Despite barriers to male contraception, efforts to introduce vasectomy services elsewhere around the world have been successful. Research suggests that the low prevalence of vasectomy may not be an indication of resistance by men as much as it is a result of the limited focus on men and male methods by family planning programmes.

Vasectomy is one of the few methods that allows men to take personal responsibility for contraception. Others are condoms, abstinence or withdrawal. For couples who definitely want no more children, it offers an alternative to female sterilization. Vasectomy is a simpler and safer procedure than female sterilization, and performing it requires minimal extra training for those performing female sterilizations.

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

- what vasectomy is and how it works,
- what are the various techniques,
- what are the advantages and disadvantages,
- what are the risks and benefits, and
- how to help men make well-considered choices.

It is hoped that the most up-to-date information on these topics can be used to provide 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 vasectomy?

Vasectomy is a permanent method of contraception for men. It is a simple operation that makes a man's semen free of sperm by blocking the tubes that normally carry sperm to mix with seminal fluid. Vasectomy is one of the few methods that allows men to take personal responsibility for contraception. It is highly effective and does not affect sexual performance or masculinity.

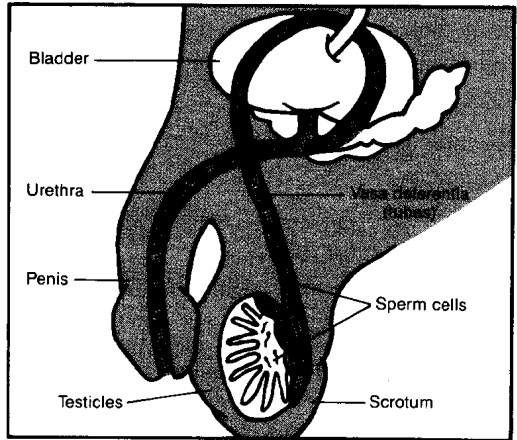
How does vasectomy work?

When male sperm enter a woman's vagina and one of them joins a woman's egg, the woman will probably become pregnant. Without sperm in his semen, a man can no longer make his partner pregnant.

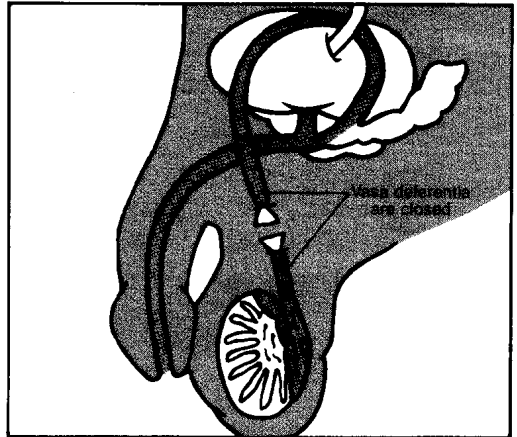
Sperm travel from the testes (where they are made) through two tubes (vasa deferentia) in the scrotum and mix with seminal fluid before coming out of the penis. During a vasectomy, the tubes in the scrotum are blocked (tied or sealed) so that sperm cannot reach the semen.

Fig. 1: Side views of the reproductive organs illustrating the site and principles of vasectomy

Before vasectomy sperm pass freely through the male reproductive tract



After vasectomy the tubes (vasa deferentia) are blocked, and sperm cells are prevented from reaching and joining female egg cells



What happens during a vasectomy?

The procedure usually involves one or two small incisions in the scrotum (1 cm) to reach the two tubes through which sperm travel from the testes to the urethra. The tubes, called vasa deferentia, are then cut and sealed by one of several techniques. It is a minor operation that usually takes 15 minutes in a clinic or doctor's office.

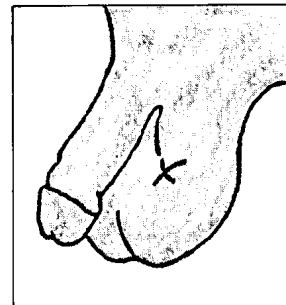
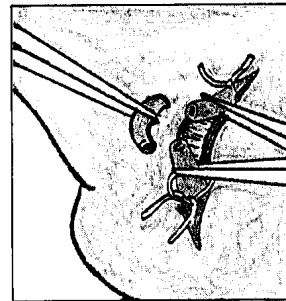
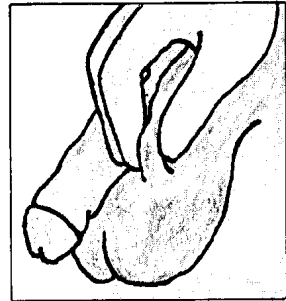
Fig. 2: (Adapted from AVSC, *Permanent birth control for men*, 1986)

After the scrotum is shaved and cleaned, a provider injects a local anaesthetic into the skin of the scrotum to prevent pain.

When the drug has numbed the area, the doctor makes a small cut (one on each side of the sac). Through this opening, he can reach and lift up the tubes with mosquito forceps. Alternatively, a newer approach, called the no-scalpel technique, uses specially-designed instruments to reach the tubes through a puncture in the scrotum rather than a scalpel incision.

One tube at a time is lifted out of its sheath with forceps or a specially designed vasectomy hook. A segment of the tube is cut (and sometimes a small section, up to 1 cm of the tube, may be removed), and then the cut ends are tied tightly enough to block the tube or sealed by cautery (a needle electrode is used to cauterize both ends).

The tube is returned to the scrotum and the small incision may be closed with stitches, either absorbable sutures or nonabsorbable silk.



What is different about the no-scalpel technique?

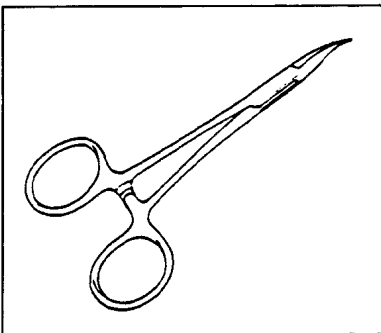
A newer method of vasectomy developed in China uses a tiny puncture instead of a scalpel cut to reach the tubes in the scrotum. This procedure, which is as effective as the conventional approach, is currently being used in many programmes around the world. In China, where 10 million men have had no-scalpel vasectomy, it has become the standard technique.

Compared to conventional vasectomy, no-scalpel vasectomy has some advantages. The procedure takes less time (about ten minutes) and offers faster recovery. An improved method of anaesthesia helps make the procedure less painful. The technique involves less injury to tissue and less bleeding, fewer complications, and less discomfort during the procedure and afterwards. Men appear to be less fearful of a technique that does not involve cutting into their scrotum. No stitches are required to close the tiny puncture, and the scar is nearly invisible.

No-scalpel vasectomy differs in the way the doctor reaches the tubes because of two instruments developed especially for the technique, a ringed clamp and a sharp-tipped dissecting forceps (see Fig. 3).

Fig. 3: (Adapted from AVSC working paper no. 3, September 1993: The Introduction of No-Scalpel Vasectomy in the United States, 1988-1992)

Dissecting forceps



Ringed clamp

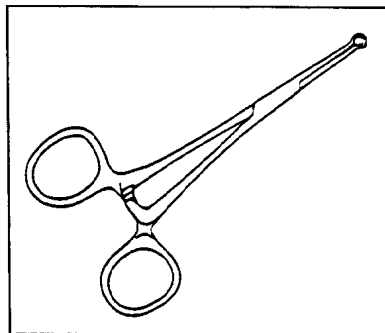


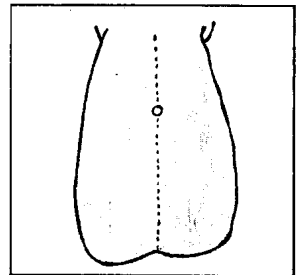
Table 1: Comparison of conventional and no-scalpel techniques.

	CONVENTIONAL	NO-SCALPEL
Instruments	Requires a few inexpensive standard surgical instruments.	Requires two instruments developed especially for the technique.
Surgical skills and expertise	Can be performed by non-doctors as safely as doctors.	Can be performed by non-doctors as safely as doctors.
Setting	Can be performed at nearly any permanent health facility as well as by mobile teams.	Can be performed at nearly any permanent health facility as well as by mobile teams.
Time	approx. 15 minutes	approx. 10 minutes
Complications	Very low rate of possible infection or swelling near incision, or bleeding under the skin.	Decreased rate of complications, including bleeding problems.
Side-effects	Short-term pain and swelling.	Decreased incidence of pain and swelling.
Effectiveness	Highly effective. Failure occurs less than 1% after one year.	Highly effective. Failure occurs less than 1% after one year.
Acceptability	Slightly more discomfort during procedure and afterwards. Men may be fearful of incision in scrotum.	Men appear to be less fearful of a technique that does not involve cutting into scrotum. No stitches are required.

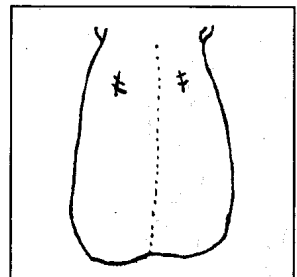
1. After injecting local anaesthesia, the provider feels for the tubes under the skin and holds them in place with the ringed clamp, which is designed to encircle and pinch the tubes just beneath the scrotal skin without penetrating the skin.
2. Instead of making incisions, the provider uses the sharp-tipped forceps to pierce the skin of the scrotum.
3. With this same instrument, the provider gently stretches the tiny opening just large enough to expose the tubes and lift them out.
4. One tube is lifted out and blocked using the same methods as conventional vasectomy.
5. Then through the same opening, the opposite tube is pulled through, cut and blocked.

Fig. 4: Comparison of conventional and no-scalpel vasectomy (Adapted from AVSC, No-scalpel Vasectomy, 1993)

No-scalpel vasectomy: no stitches are needed to close the tiny opening



Conventional vasectomy: two small cuts stitched closed



When is a man sterile?

A man is not sterile immediately after the operation because there will be some active sperm left in the semen. This means that a man can cause a pregnancy until all sperm are out of the semen. Another contraceptive method should be used until 15-20 ejaculations have occurred, or a period of 12 weeks has elapsed, or a test shows sperm-free semen.

How will vasectomy affect a man?

A man's testes will continue to make sperm (which will be absorbed by the body as un-used sperm cells are normally in men whether or not they have had a vasectomy). The glands that produce semen will continue to produce it in the same amount. When a man ejaculates, the only difference is that there will be no sperm in the semen.

A vasectomy does not affect production of male hormones. Men should not expect any change in physical traits of masculinity, body strength, sexual drive, erections, or climaxes. Without the worry of unplanned pregnancy and the concern of using a temporary contraceptive, some men report increased sexual pleasure.

Some men may experience regret or other emotional problems after the operation, sometimes because of already existing problems before the vasectomy or because of unanticipated events such as changes in marital status or loss of a child.

Who should consider undergoing vasectomy?

Sterilization is suitable for most men and women who are certain that they want no more children. Vasectomy may be the right choice for a couple who have had all the children they want and need a reliable contraceptive. It is particularly suitable for those couples who cannot use or do not want to use other methods of contraception. Reasons for having a vasectomy may include:

- completion of desired family size,
- desire for permanent contraception,
- desire to remove the burden of family planning from their partners, and
- desire to not risk passing on a hereditary disease

Good counselling is vital in order to minimize the possibility of future regret. Vasectomy should be offered as only one of several family planning methods. Typical vasectomy clients are married men who already have children. It may not be the right choice for men who are young (less than 30-35 years) or those in an unstable relationship. Men should not choose vasectomy just to please a partner or because they expect it to solve emotional or sexual problems. It is also not advisable for a man who is interested in reversing the procedure later.

Potential vasectomy clients must be carefully screened both medically and psychologically. Medically, a man with no current local skin infections or genital tract infections, may be a good candidate for vasectomy. Some conditions, including severe anaemia, bleeding disorders, and diabetes, may require extra precautions (hospitalizing the man for the operation, for example).

How do health workers help couples with decision-making?

Research has shown that the decision-making process is similar for most vasectomized men. Initial knowledge about the procedure was not enough. Rather, it was talking to other vasectomized men - getting the facts and their fears allayed - that led them to a decision to have a vasectomy.

Testimony of a friend or relative may have the most influence on men who decide to have vasectomy, but men who are interested in vasectomy may have varying levels of knowledge, understanding and motivation. Counselling helps to ensure that the decision is informed and voluntary and unlikely to be regretted later. Counselling helps to ensure that men make decisions based on correct and complete information about vasectomy and its effects. Counselling should clarify misconceptions, such as common misbeliefs that the procedure affects masculinity or sexual performance, which may discourage men from choosing vasectomy. It must be explained that the procedure does not affect circulating levels of male hormones or change in sexual functioning or satisfaction.

Potential clients for vasectomy should receive information about all available family planning methods. It is important that a man's decision be based on clear, complete and accurate information and on careful examination of his individual situation. Couples wishing to maintain the option of having children should be counselled not to undergo sterilization. Family planning providers should emphasize the permanence of sterilization and the availability of alternatives, including temporary male and female methods. A man can use condoms, assist his partner in natural family planning, or his partner may prefer to use long-term female methods (such as Norplant® or intrauterine devices).

Effective counselling should ensure that vasectomies are performed only on those men who are likely to be satisfied with the method. Men should be encouraged to discuss the subject

with their partners. Whenever possible, the man's partner should receive counselling, either together or separately.

Fig. 5: Wherever possible, a man's partner should also receive counselling either together or separately



How effective is Vasectomy?

Vasectomy, when performed using the standard surgical approach or the "no-scalpel" method, is 99 percent effective. There is a very small chance that a man's partner will become pregnant after he has had a vasectomy. One of the most common causes of failure is unprotected intercourse shortly after vasectomy. A pregnancy may happen if a couple does not use some other kind of contraception until the semen is free of sperm.

Failure can also result because of problems during surgery (when the tubes are not completely sealed, for instance), or after surgery, when the cut ends of the tubes reconnect by themselves. This reconnection usually occurs within the first three months after surgery and often follows the development of small lump or nodule where the two ends of the tube were blocked. Tying the fascia (sheath of the vas) over one of the cut ends is recommended by some experts to reduce the chance of reconnection.

Do men experience pain?

When the local anaesthetic is injected into the skin of the scrotum, a man will feel some discomfort. After the operation, a man is likely to feel sore for a few days, with some swelling or bruising on the scrotal skin around the incisions. Mild analgesics can be provided for the first few days after vasectomy to relieve such discomfort. The no-scalpel approach produces less discomfort during and after the operation.

What are the possible health concerns?

Vasectomy ends a man's fertility but produces no changes in the function or amount of male hormone and sperm produced. When performed under local anaesthesia and using a strict

aseptic technique, vasectomy poses little risk of side effects or complications.

Short-term effects. The most common complaints after surgery are pain and swelling. These side-effects are usually minor and disappear within one or two weeks without treatment. Ice packs, scrotal support and medication for mild pain provide relief. Men can minimize problems by avoiding strenuous activity for a day or two and by keeping the incision clean.

The chance of serious problems during or after vasectomy is slight. However, as with all surgery, some medical problems can occur. The following problems are rare but if they do occur they are easily treated:

- An infection or swelling around the incision, or
- bleeding under the skin of the scrotum caused when blood vessels are injured during surgery (one of the main advantages to no-scalpel technique is a decreased rate of bleeding complications), and
- a small lump of collected sperm that may form at the site of the blocked tube (caused by sperm leaking from the tube into the tissue around it).

Long-term effects. Most medical experts agree that vasectomized men are no more likely than other men to develop heart disease, cancer or other illnesses. However, concern has been raised recently about a possible relationship between vasectomy and prostate cancer, a common male cancer worldwide. Current epidemiological evidence is not clear. Results from various studies are inconsistent. Although it remains unclear whether the research results showing a link indicate a true risk or causal link, most epidemiologists consider that the studies are flawed due to methodological problems. Based on the current body of research evidence, no changes in policies and practices concerning vasectomy are advised. Providers should continue to provide vasectomy and screening for prostate cancer should be no different for men who have had vasectomy than for those who have not.

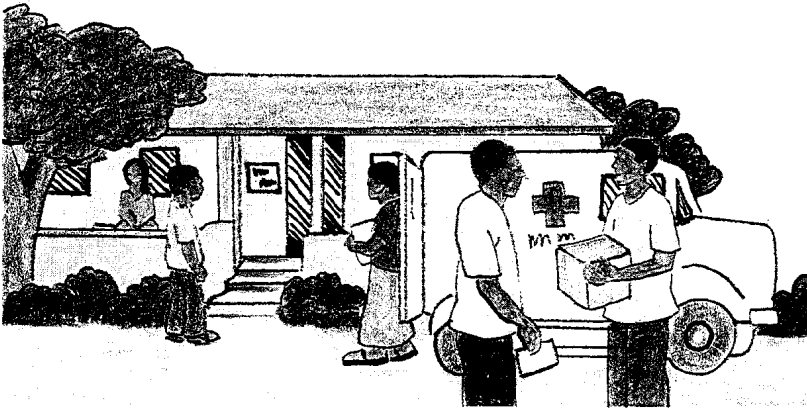
What are the possible psychological effects?

Research suggests that the great majority of vasectomized men report no regrets and would recommend the procedure to others. Men usually report no change in sexual desire or performance. Marital relations and sexual satisfaction sometimes improve, perhaps because fears of pregnancy are reduced. However, it is important to identify men who have sexual problems or serious marital or psychological problems during counselling before vasectomy. Experience suggests that these men are not good candidates for the procedure. They may be expecting vasectomy to solve problems that it cannot and research suggests they are much more likely to experience regret later about their decision.

Where can the procedure be performed?

The standard vasectomy procedure can be performed at nearly any health facility, including health care centres, family planning clinics, and the treatment rooms of private doctors. Where vasectomy services are not available, mobile teams can perform vasectomies and follow-up examinations in nonmedical facilities or in specially equipped vehicles where the basic medications, supplies, instruments and equipment are readily available.

Fig. 6: Where vasectomy services are not available, mobile teams can perform the operations and follow-up examinations



Who can perform the procedure?

Any medical doctors or paramedical staff trained in the technique can perform vasectomy. Experience shows that non-doctors perform the procedure as competently and as safely as doctors. Moreover, some programmes report that use of the paramedical staff for vasectomies has led to better community and client acceptance.

What do clients need to know for planning?

- Since a 48-hour rest after the procedure is performed decreases the risk of problems, men should not plan to resume normal activities until two or three days afterwards. Also, they should not shower or bathe for the first two days.

- Men should avoid strenuous heavy physical labour or exercise that could bring pressure to the genital area for one week.
- Men can cause a pregnancy until all the sperm are gone from their semen. It takes about 15-20 ejaculations or a period of 12 weeks for the semen to be clear of all sperm. Men can have sex as soon as they are comfortable, but they should remember that they are not sterile immediately after a vasectomy.
- Short-term complaints can include soreness for a few days after the operation. Bleeding, bruising and infections are possible, but these problems are minimized by careful surgical technique, aseptic conditions, and by a man's attention to postoperative instructions.

Will vasectomy protect against getting or passing on sexually transmitted diseases (STDs), including HIV infection?

Vasectomy offers no protection against sexually transmitted diseases (STDs), including HIV infection. A man who is at risk of contracting or transmitting a sexually transmitted disease should be advised that using condoms at every act of intercourse is the best way to protect himself and his partner.

What is informed consent?

No one should ever be forced to undergo sterilization. A client who has chosen to have a vasectomy must decide freely and only after understanding the relevant facts about vasectomy and other family planning options. Vasectomy should be performed only when a man makes his choice free of pressure, based on clear, complete and accurate knowledge about the

procedure, and after careful thought about his own circumstances.

After counselling and careful consideration, a man may decide that a vasectomy is the right choice for him. Often he will be asked to sign an **informed consent** form indicating that he 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. (Often a spouse's signature is also required.) 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 programmes 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:

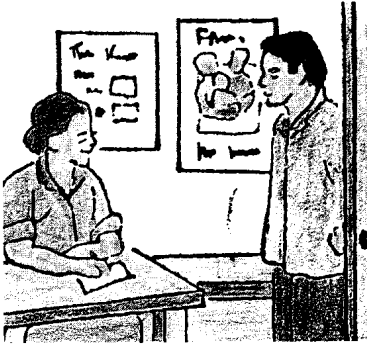
- knows that the procedure involves surgery,
- understands the intended permanence of vasectomy,
- has been informed about alternative family planning methods,
- is aware of the benefits and risks of the procedure (including the slight chance of failure),
- has made a free choice, and
- knows that he may change his mind at any time before surgery without penalty.

For clients who appear indecisive about sterilization or concerned about reversal, counsellors should emphasize the availability of temporary, long-acting methods. Documentation takes place after counselling, once the client has made a firm decision, but before surgery (see Appendix I). Counsellors should encourage men to include their partners in the counselling and the decision process.

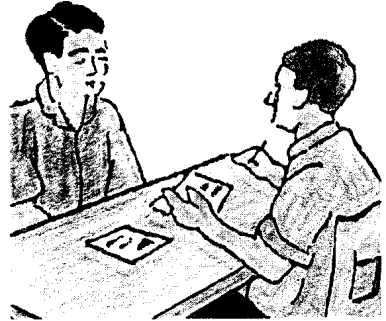
For a model consent form for sterilization, see Appendix II.

Fig. 7: Some of the events that take place when a client visits a vasectomy service

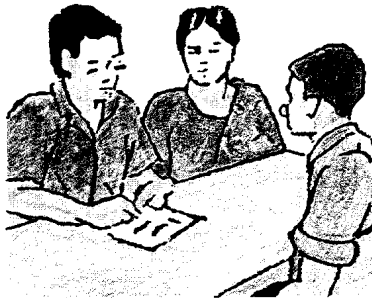
A. A client is welcomed at reception



B. The client receives detailed information from the health worker



C. The client preferably accompanied by his partner is counselled. If he decides to have a vasectomy, he signs a consent form.



What pre-operative care is required?

Psychological screening. Most men with psychological problems will be identified by the counselling process. Vasectomy may not be suitable for men who have a history of impotence or of psychological problems because they may be hoping that the procedure will relieve emotional or sexual problems. These men may also attribute their subsequent problems to the vasectomy. For men with no history of these disorders, there is no evidence that the incidence of these conditions is increased by having a vasectomy.

Medical screening. A medical history and physical examination should include information about infections or other medical problems such as elephantiasis, severe anaemia, bleeding disorders, and heart disease. Many of these conditions can be treated, after which vasectomy can be performed. Others may require extra care (hospitalization, for example). Laboratory tests are usually not necessary.

What do men need to know before the surgery?

Most importantly, any man planning on having a vasectomy should be asked again if he is sure that he wants no more children. The permanence of the procedure should be emphasized as should the fact that he can change his mind at any time before the procedure.

Instructions before surgery should include:

- how to prepare for the procedure (clipping or shaving of pubic and scrotal hair may be done by the client or by a health care provider),

- what to do after surgery (for example, resting from heavy work or exercise for two days minimizes the chance of problems),
- when to come for a follow-up visit, and
- a reminder about the need for temporary contraception for a period of time after the vasectomy (15-20 ejaculations or 12 weeks).

What postoperative care and information are necessary?

Immediately after surgery, men need clear instructions about:

- how to care for the incision,
- what side-effects to expect (for example, some pain and swelling and minor bruising of the skin is normal and does not require medical attention), and
- what are signs of complications (a client should be advised to get medical attention if he experiences fever, blood or pus oozing from the incision site, or strong pain or swelling).

A man may return to normal activities and sexual intercourse with temporary contraception after two to three days. He should be reminded that he is not immediately sterile. He and his partner will need to use temporary contraception for the first 15-20 ejaculations or for twelve weeks, whichever occurs first.

Sample instructions for clients are given in Appendix I.

During follow-up visits, a provider evaluates the client's physical recovery from surgery, removes stitches (if non-absorbent), and provides counselling. After 15-20 ejaculations or 12 weeks, a test for sperm in a man's semen is often possible. During follow-up visits, the health care provider should be alert

to signs of emotional adjustment to loss of fertility and refer him for further counselling if needed.

What is semen analysis?

After 12 weeks or 15-20 ejaculations, the man's genital tract should be clear of the sperm (already stored in the man's reproductive tract before the vasectomy). A check for the presence of sperm in a man's semen can be done quickly and simply. Every client should be offered the opportunity to have a semen test so that he can be sure that the operation has been a success even though failure occurs very rarely (in less than 1% of vasectomized men).

Can vasectomy be reversed?

Vasectomy should be considered a permanent contraceptive method. Counselling men about the permanent nature is essential. Although surgery to restore fertility after a vasectomy is possible (by complex microsurgery to reconnect the cut ends of the tubes), pregnancy rates among partners of men who have undergone successful reversal procedures are low (ranging from 20 to 80 percent) depending upon the method of occlusion used. Men considering sterilization must be counselled about the intended permanence of vasectomy and the possibility of future regret. Sterilization should not be considered a reversible procedure. Counsellors should advise men who are concerned about the possibility of reversal before the surgery that vasectomy might not be the right choice for them.

Most men who choose vasectomy feel that they have made the right choice. Ideally, any man who is likely to regret having had a vasectomy will be identified during counselling and examinations before he undergoes the procedure. Even with effective counselling, however, some men may later regret their decision, often because of remarriage or death of a child. These

men should be referred for further counselling. Some may be candidates for surgery to restore their fertility.

Men should know that the surgical technique to reverse vasectomy is more difficult than vasectomy and not all men are appropriate candidates for it. Counselling should emphasize that the 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 vasectomy. Moreover, a high percentage of reversal procedures are unsuccessful, that is, they do not result in a future pregnancy.

How does vasectomy compare to female sterilization?

Both vasectomy and female sterilization which is the other permanent option, have advantages and disadvantages. Both methods involve safe minor procedures and offer highly effective protection against pregnancy. Neither provides any protection against STDs or HIV infection.

In comparison to female sterilization, vasectomy is simpler, somewhat safer, it can usually be performed in half the time of most methods of female sterilization, and it only leaves a minute scar. It is less expensive and slightly more reversible. Only one trained person (doctor or paramedical staff) with or without an assistant can safely perform vasectomy, whereas a team of at least three trained staff are normally needed to perform female sterilization. Vasectomy requires no specialized equipment or back-up facilities for dealing with immediate complications.

However, unlike female sterilization, vasectomy is not effective immediately following the procedure and so a couple must remember to use a temporary method until all the sperm has passed from the man's reproductive tract (usually after 15-20 ejaculations or after 12 weeks have elapsed). Despite these

drawbacks, vasectomy would be the preferred method medically if it were equally acceptable to men. In general, however, female sterilization appears to be more acceptable in many cultures, although evidence suggests that this problem may be largely due to a traditional lack of focus on male methods by family planning programmes.

What would make vasectomy more popular?

The popularity of vasectomy is strongly related to proper counselling of men, the separation of male sterilization clinics from female services, and enthusiasm of providers for the method. For example, experience in one region of China has shown that five times more men than women choose sterilization.

Research shows that the single most important factor in the low prevalence of the method is the limited availability of services. Some obstacles may be easy to overcome. For example, by opening clinics on weekends, minimizing waiting times, and providing transportation for clients, the number of vasectomies performed can increase significantly.

Experience has shown that, when a well-run vasectomy service is offered, vasectomy can become a prominent contraceptive method. Despite predictions that men would not accept vasectomy due to fear of "castration" or lost masculinity, reports indicate that when presented with adequate information, men from a broad range of cultural backgrounds are receptive to the idea of vasectomy. The number of men choosing vasectomy is growing significantly as more emphasis is placed on including men in family planning services and with the expansion of the no-scalpel method throughout the world.

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 Hammarksjold 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

* A video film entitled *No-scalpel vasectomy* is available from WHO, Geneva, for the price of US \$10.

APPENDIX I

Sample postoperative instructions to clients (oral and written)

Written postoperative instructions should be provided for literate and nonliterate men. They are especially important to help men recognize complications and to know where to go for treatment. The staff should review each point with each client before he leaves the facility. An illiterate man can usually find someone to read the instructions if he forgets.

Short written instruction specific to each programme will need to be developed. The sample material below is not intended as a model but rather as an illustration of points of information that should be provided.

1. Following surgery, return home and rest for the remainder of the day. You may be able to resume your normal activities after two or three days. Avoid physical work and strenuous exercise for at least 48 hours.
2. Wear the scrotal support for 48 hours during both waking and sleeping hours. After that, you may wear it as long as you are more comfortable with it than without it.
3. You may resume sexual intercourse after two or three days if you feel comfortable, but stop if it is uncomfortable. Also, avoid pulling, rubbing, or otherwise irritating the incision.
4. The stitches will dissolve themselves and do not have to be removed. (Note: This instruction must be modified if nonabsorbable sutures such as silk are used.)

5. Remember, to start with, you can still make your partner pregnant. For most men, sperm will not be cleared from the tubes until after 15-20 ejaculations. Until then, use another method of family planning to prevent pregnancy. The most certain way of knowing you are sterile is for a doctor to use a microscope to look for sperm in your semen. You may give your doctor a specimen of your semen for a sperm count after you have had 15-20 ejaculations.
6. If you have pain or discomfort, simple pain killers taken at intervals of four to six hours usually give adequate relief. (Note: Dose and name of the analgesic should be specified.)
7. Do not shower or bathe for the first full day following the vasectomy.
8. It is important for you to know what is normal and what is abnormal following your surgery. There will probably be some pain and swelling in the scrotal region; the scrotum may be somewhat discoloured (bruised). This is normal and should not worry you. Occasionally, blood from a tiny blood vessel may escape into the scrotum at the time of the surgery, and bleeding may continue. Notify the doctor or the health worker if you have any of the following danger signals or if you notice any unusual body changes:
 - Fever (over 38.0°C or 100.4°F).
 - Blood or pus oozing from the site of the incision.
 - Excessive pain or swelling.

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

(add appropriate address)

APPENDIX II

Sample informed-consent form for voluntary surgical contraception¹

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, _____,
(name and title)

certify that I have:

- 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: _____

¹ 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.

REFERENCES

1. World Health Organization. *Technical and Managerial Guidelines for vasectomy Services*. WHO, 1988.
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. Kleinman, R. *Family Planning Handbook for Doctors*. London, International Planned Parenthood Federation, 1988.
4. Hatcher, R. et al. *Contraceptive Technology*. 16th Ed. Atlanta, 1994.
5. World Federation of Health Agencies for the Advancement of Voluntary Surgical Contraception. *Ensuring informed choice for voluntary surgical contraception*. New York, 1983.
6. Liskin, L. et al. Vasectomy: safe and simple. *Population reports*, Series D, No.4, 1983.
7. Association for Voluntary Surgical Contraception. *Permanent birth control for men*, 1986.
8. Association for Voluntary Surgical Contraception. *No scalpel vasectomy: Good news for men considering vasectomy*, 1993.
9. Association for Voluntary Surgical Contraception Working Paper no. 3, September 1993: *The Introduction of No-Scalpel Vasectomy in the United States, 1988-1992*.