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INTRAUTERINE DEVICES

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## 6 INTRAUTERINE DEVICES



## 1 Definition

The intrauterine device (IUD) is a safe and effective method of reversible contraception. IUDs are small flexible devices made of metal and/or plastic; they may be inert, or may release copper or hormone. Copper-bearing devices include the 'Copper T 380A' (TCu 380A), the 'Copper T 220C' (TCu 220C), the 'Multiload Copper 375' (ML Cu 375) and the 'Nova T' (Nova T) (see Figure 6.1). A levonorgestrel-releasing IUD is available in a few countries.

*Duration of use:* The TCu 380A has proved to be highly effective for at least 12 years with a cumulative pregnancy rate of 2.2 per 100 women, while the TCu 220C is also effective for this length of time, but to a lesser degree. The ML Cu 375 is effective for at least 10 years. The Nova T200 is recommended for up to 3 years of use, after which failure rates increase substantially. The Nova T380 is effective for 5 years, with a cumulative pregnancy rate of 2.0.

The levonorgestrel-releasing IUD lasts for more than 5 years with a cumulative pregnancy rate at 5 years of 03.-1.1 per 100 women.

The inert devices may be used up to the menopause. Although they are no longer recommended for new clients, there is no need to remove them before menopause if the woman is satisfied with the method and has no problems with it.

Figure 6.1 Copper-bearing IUDs



*Mode of action:*

Any IUD prevents pregnancy by a combination of mechanisms of action, including:

- Inhibition of sperm migration in the upper female genital tract.
- Inhibition of ovum transport.
- Inhibition of fertilization.

The levonorgestrel-releasing IUD, in addition to the above, causes changes in the amount and viscosity of the cervical mucus, inhibiting sperm penetration.

## 2 Indications

**An IUD should be provided to any woman who requests it after receiving appropriate counselling and reaching an informed decision, and who has no contraindications to its use (see section 3 of this chapter).**

An IUD may be particularly appropriate for women who:

- Are parous and want a highly effective, long-acting, reversible method of contraception.
- Prefer a method of contraception that does not require action daily or with every act of sexual intercourse.
- Are breast-feeding.
- May have difficulty obtaining contraceptives supplies on a regular basis.
- Lack privacy, making use of some other methods problematic (e.g., crowded living quarters, no storage space for contraceptives).
- Show risk status changes during use of another method of contraception (e.g., women who take contraceptives that contain oestrogen who start to smoke or who develop peripheral vascular disease or diabetes mellitus).
- Do not want to have any more children, but do not wish to be sterilized.

### 3 Medical eligibility criteria

The International Planned Parenthood Federation and other bodies have collaborated with the World Health Organization (WHO) in the development of eligibility criteria for the use of various contraceptive methods. The following classification (the WHO medical eligibility criteria) was agreed:

- *Category 1:* A condition for which there is no restriction for the use of the contraceptive method.
- *Category 2:* A condition where the advantages of using the method generally outweigh the theoretical or proven risks.
- *Category 3:* A condition where the theoretical or proven risks usually outweigh the advantages of using the method.
- *Category 4:* A condition which represents an unacceptable health risk if the contraceptive is used (i.e., the contraceptive is contraindicated).

#### Category 4 (contraindications)

**Do not advise the use of any IUD or provide it to women with:**

- Known or suspected pregnancy.
- Puerperal or post-abortion sepsis current or within the last three months.
- Pelvic inflammatory disease (PID) current (if develops during IUD use becomes a category 2).
- Sexually transmitted infection (STI) current (refers to STIs that may produce cervical infection, chlamydia or gonorrhoea) (if these develop during IUD use becomes a category 2).
- Purulent cervicitis.
- Confirmed or suspected malignancy of the genital tract.
- Unexplained vaginal bleeding (suspicious for serious condition) (if develops during IUD use, becomes a category 2).
- Cervical cancer awaiting treatment (if develops during IUD use, becomes a category 2).
- Endometrial cancer (if develops during IUD use becomes a category 2).

- Congenital uterine abnormalities or benign tumours of the uterus (fibroids) which distort the cavity in a manner incompatible with proper IUD placement.
- Malignant gestational trophoblastic disease.
- Known pelvic tuberculosis (if develops during IUD use becomes a category 3).

*For the levonorgestrel-releasing IUD, the following contraindication also applies:*

- Current cancer of the breast.

Counsel any woman with any contraindication (other than pregnancy) about alternative methods of contraception (see also chapter 2: Counselling).

### **Category 3**

*There are conditions which require careful consideration* when advising a client on the possible use of an IUD, because the potential risks may outweigh the benefits of using the method. When any of these conditions is present, explain to the client the potential risks and recommend alternative contraceptive methods. If the client chooses the IUD because other contraceptive options are not available or acceptable, it is particularly important to advise her that close medical follow-up is required. These conditions include:

- Ovarian cancer (if develops during IUD use becomes a category 2).
- Increased risk of STIs (e.g., multiple partners or partner who has multiple partners).
- Initiation for women living with AIDS (if develops during IUD use becomes a category 2).
- Benign gestational trophoblastic disease (there is an increased risk of perforation, and treatment of the disease may require multiple uterine curettage).
- From 48 hours to 4 weeks postpartum.

*For the levonorgestrel-releasing IUD, the following conditions also require careful consideration:*

- Active viral hepatitis.
- Severe (decompensated) cirrhosis.
- Benign and malignant liver tumours.
- Current deep vein thrombosis or pulmonary embolism (DVT/PE).
- <48 hours postpartum.
- History of breast cancer with no evidence of disease for past 5 years.

**If an IUD is provided, record the woman's special condition in the clinical record. Advise her of warning signs relevant to her condition. In these cases the method should only be inserted by a trained medical doctor who should sign the client's record.**

## Category 2

IUDs can generally be used with precaution in the presence of:

- Menarche to < 20 years of age.
- Nulliparous (see section 4).
- < 48 hours postpartum (for the levonorgestrel-releasing IUD is a category 3).
- Post-abortion after second trimester abortion.
- Abnormalities (including cervical stenosis or cervical lacerations) which do not distort the uterine cavity or interfere with IUD insertion.
- Complicated valvular heart disease.
- Uterine fibroids without distortion of the uterine cavity.
- PID without subsequent pregnancy.
- Vaginitis without purulent cervicitis, chlamydia or gonorrhoea and other STIs (excluding HIV and hepatitis).
- High risk of HIV.
- HIV positive women and women with AIDS who are clinically well and on antiretroviral treatment (there may be an increased risk of PID due to suppressed immunological response).
- Anaemias including thalassaemia, sickle cell disease, iron deficiency

anaemia (not for levonorgestrel-releasing IUD).

- Severe dysmenorrhoea (not for levonorgestrel-releasing IUD).
- Heavy or prolonged bleeding (includes regular or irregular patterns).
- Endometriosis (not for the levonorgestrel-releasing IUD).

*For the levonorgestrel-releasing IUD*, the following conditions also require careful consideration:

- Multiple risk factors for arterial cardiovascular disease.
- History of hypertension (where blood pressure cannot be recorded).
- Raised blood pressure (systolic  $\geq 160$  or diastolic  $\geq 100$  mmHg).
- Hypertension with vascular disease.
- History of deep vein thrombosis or pulmonary embolism (DVT/PE).
- Major surgery with prolonged immobilization.
- Known hyperlipidaemia.
- Current and history of ischaemic heart disease (if develops during IUD use becomes a category 3).
- Stroke.
- Migraine with or without aura (if migraine with aura develops during IUD use becomes a category 3).
- Cervical intraepithelial neoplasia (CIN).
- Undiagnosed breast mass.
- Diabetes mellitus.
- Gallbladder disease.
- Mild (compensated) cirrhosis.

When any of these conditions are present, careful screening and appropriate monitoring will allow the potential of using an IUD to outweigh any potential risks.

## 4 Special situations

### Nulliparity

Nulliparity is not a contraindication for the use of an IUD. However, a history of pelvic infection, a previous ectopic pregnancy or multiple sex partners make the choice of an IUD inappropriate for a nulliparous woman. Clearly explain the possible increased risk of pelvic inflammatory disease and of possible subsequent infertility related to the use of an IUD before the client chooses this method.

### Abnormal vaginal bleeding

Irregular bleeding patterns are common among healthy women. Do not withhold inserting an IUD in the absence of any reason to suspect a pathological condition. However, if a woman has vaginal bleeding suggestive of a condition related to pregnancy or a pathology such as pelvic malignancy, it should be investigated before an IUD is inserted.

### Sexually transmitted infections (STIs)

If a client may be at a high risk of STIs, including HIV, advise the use of condoms in addition to the IUD.

### HIV infection

If the client is HIV positive or if a client has AIDS and is being treated and is clinically well and healthy under antiretroviral drugs (ARVs) and, after proper counselling and discussion of other contraceptive alternatives, she chooses to use an IUD, recommend the use of condoms, in addition to the IUD, for prevention of STIs and HIV transmission.

## 5 Counselling and information

**All clients for IUD insertion must receive appropriate counselling for selection and use of this method of contraception.** Review the woman's history to determine the possibility of existing contraindications to the method, and take this into account when providing counselling. In general, the IUD is very safe for women in a mutually monogamous sexual relationship because these women are very unlikely to develop pelvic inflammatory disease associated with IUD use. **Encourage clients to ask all their questions so that any uncertainties and misunderstandings can be cleared up** (see also chapter 2: Counselling).

### For selection of the method

Discuss the following points with each client in a language she understands:

- Advantages and disadvantages of the IUD, including:
  - Effectiveness;
  - Risks and benefits;
  - Side-effects, particularly the possibility of heavier menstrual periods;
  - The procedures of insertion and removal; *and*
  - Cost.
- Alternative family planning methods including information as appropriate on:
  - Effectiveness;
  - Risks and benefits;
  - Side-effects; *and*
  - Cost.
- The type of IUD to be inserted (a sample should be shown) and the proper time for its replacement.
- The importance of encouraging the client to come back anytime to discuss problems or have the IUD removed.

### For use of the method

See instructions in section 11 of this chapter.

## 6 Who can insert IUDs?

Doctors, midwives, nurses and other health professionals can insert IUDs, provided that they have been properly trained and that this is in accordance with the country's regulations.

## 7 Health assessment

The purpose of the health assessment is to determine the client's suitability for the use of this method. It should also be taken as an opportunity to offer the client other available sexual and reproductive health services as appropriate.

- *Medical/social history:* Include gynaecological and obstetric history; present illnesses, including diabetes mellitus, anaemia or immunodepression; and history of STIs, including HIV, PID and risk-factors to STI such as multiple sexual partners.
- *Physical examination:* Speculum visualization of cervix and bimanual pelvic examination must always be included and any other examination as indicated by the medical history.
- *Laboratory tests:* These are not routinely required for the use of an IUD except when indicated by the medical history and physical examination. Whenever possible and appropriate, selected tests should be offered to women as part of reproductive health services, including:
  - STI/HIV screening: laboratory tests.
  - Haemoglobin or haematocrit.
  - Cervical (Pap) smear.

## 8 IUD selection

- The smaller, copper-bearing devices have been shown to be appropriate, safe and effective, with a low pregnancy rate. Compared with the bulkier inert IUDs, they are easier to insert and usually cause fewer side-effects, such as pain and excessive menstrual blood loss. The newer copper-bearing devices (TCu 380A, TCu 220C, ML Cu 375 and Nova T) are more effective and offer a longer duration of use than older copper-bearing devices (e.g., 'TCu 200' and 'Copper 7'). For these reasons, older copper-bearing devices and the inert IUDs are no longer recommended. The levonorgestrel-releasing IUD may be an adequate choice for women who are likely to have pain or bleeding problems using the copper IUDs. However, their availability is limited.
- When one particular device has no significant medical advantages over another, bear cost factors in mind.
- Because of possible problems in the disinfection of bulk-package IUDs, use only individually packed, pre-sterilized IUDs.
- Different IUDs require different insertion techniques. It is recommended that only 1 type of IUD be used in any service delivery setting; at the most, 2 with similar insertion techniques may be used. This specialization will help the staff inserting the devices to maintain a high level of skill.

## 9 Timing of insertion

Unless otherwise stated, the following recommendations apply to copper-bearing IUDs and levonorgestrel-releasing IUDs alike.

### *Having menstrual cycles*

- She can have an IUD inserted any time within the first 12 days after the start of menstrual bleeding, at her convenience. No additional contraceptive protection is needed.
- An IUD can also be inserted at any other time during the menstrual cycle, at her convenience, if it can be reasonably established that she is not pregnant (see chapter 11: Diagnosis of pregnancy). No additional contraceptive protection is needed.

### *Switching from another method:*

An IUD can be inserted immediately, if it is reasonably certain that the client is not pregnant. There is no need to wait for her next menstrual period. No additional contraceptive protection is needed.

- *Advantages of insertion during the menstrual period:*
  - It is less likely that the device will be inserted into a pregnant uterus.
  - Insertion may be easier.
  - Any bleeding related to the insertion is less likely to cause anxiety.
- *After a full-term pregnancy:* If the provider has received proper training, a copper IUD may be inserted immediately after the placenta has been expelled, or within 1 to 2 days after delivery. Special care must be taken to ensure proper placement and to avoid perforation. If the IUD is not inserted by the second postpartum day, insertion should be delayed for 4 weeks. A levonorgestrel-releasing IUD should only be inserted after 6 weeks of delivery if the woman is breast-feeding or planning to breast-feed.
- *After spontaneous or medically induced first-trimester abortion:* An IUD may be safely inserted immediately at this time except in women with pelvic infection.

**Immediate and early postpartum insertion, and immediate post-abortion insertion, should be performed only by specially trained health personnel.**

## 10 Inserting the IUD

### Minimum equipment requirements for IUD insertion:

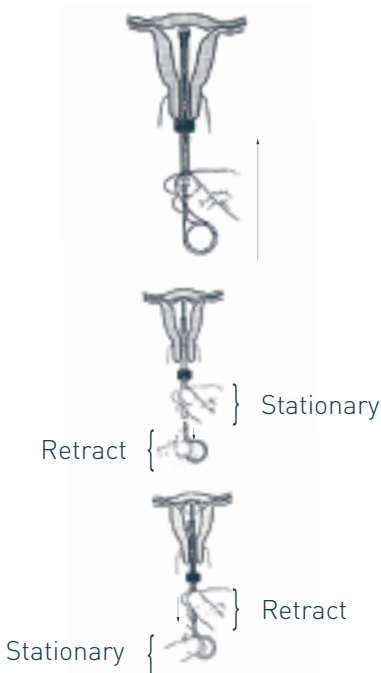
- 1 sponge-holding forceps.
- 1 tenaculum or Allis-Chalmers forceps.
- 1 Pean artery forceps, curved.
- 1 speculum.
- 1 uterine sound.
- 1 iodine cup.
- 1 pair of scissors.

### Principles of safe and effective IUD insertion

- All equipment must be sterilized or high-level disinfected (see chapter 15: section 5.5). Disposable non-sterilized gloves may be used only if the IUD is loaded into the inserter tube inside the package and the no-touch technique is used for insertion.
- Before and during the insertion procedure, tell the woman what will happen during the procedure and encourage her to ask questions. Explain to her that she may feel some discomfort during some of the steps.
- Perform a bimanual pelvic examination to determine the size, shape, position and mobility of the uterus; to identify any adnexal lump; and to rule out any signs of pelvic infection or early pregnancy.
- Different IUDs require different insertion techniques. The safest rule is to follow the manufacturer's specific instructions meticulously.
- All steps in the insertion procedure should be performed slowly and gently.
- Take special care in cleaning the cervix with an antiseptic solution before insertion.
- The use of a tenaculum may be necessary to steady the cervix, particularly when the fundus is flexed sharply to the anterior or posterior.
- Always sound the uterus to confirm the direction and position of the uterine canal and to estimate its depth.

- Do not attempt to insert the IUD into a uterus which sounds less than 6.5 cm (6 cm or less for the Nova T).
- The sterility of the uterine sound must be meticulously maintained; do not allow it to touch any potentially contaminated surface, including the speculum or vaginal mucosa, before passing it into the endocervical canal.
- If there is an obstruction at the level of the internal os, a little movement or outward traction with the tenaculum may enable the sound to enter more easily. **Do not use force**, but maintain steady pressure with the sound gently against the internal os for 2 to 3 minutes to overcome any spasm. If it still does not pass, **stop the procedure**. Discuss with the client alternative methods of contraception or consult with the next most senior staff member if you are in doubt.
- Load the IUD inside the package, even when sterilized gloves are worn, to reduce the chances of contamination. All health personnel inserting IUDs should learn how to load the device inside the package and to perform the insertion of the IUD (see Figure 6.2) without contamination.

Figure 6.2 Inserting the Cu T 380A IUD



### Prophylactic use of antibiotics for IUD insertion

- Prophylactic antibiotics are generally not recommended for IUD insertion. However, recommended infection prevention procedures should be strictly followed.
- In settings of high prevalence of STIs where there is limited STI screening, such prophylaxis may be considered.
- Counsel the client to watch for symptoms of PID, especially during the first month.

Figure 6.3 Cu T 380A IUD in place



### 11 Instructions to the client

Provide the following instructions clearly and in a language appropriate to the background of the client.

#### **Detecting if the IUD is properly placed**

Explain to the client that the IUD can be spontaneously expelled, especially during the first 6 weeks after insertion or during a menstrual period.

Advise the woman to check that the IUD is in place by feeling for the IUD threads. The IUD threads should be checked after every menstrual period,

and any time that there is unusual cramping during a period. Some women may be reluctant to check for the threads; if this is the case, reinforce the above advice while showing understanding about her concerns and constraints. Use a sample IUD to let the woman practice feeling the threads and lower part of the device.

Advise the woman to return to the clinic as soon as possible if she:

- Cannot feel the threads;
- Feels the hard part of the device;
- Expels the device; or
- Misses a period.

In the meantime she should use a non-hormonal method of contraception such as condoms.

### **Side-effects**

Advise the client about possible side-effects (see section 13).

### **Warning signs**

Advise the client to return to the clinic if pregnancy is suspected or if she is experiencing any of the following signs and symptoms which might indicate a possible complication:

- Fever and/or chills.
- Pelvic pain or tenderness.
- Purulent vaginal discharge.
- Excessive abnormal bleeding.

To prevent anxiety in the client, explain to her that serious complications are very rare. You can mention that her health will be better protected by using this highly reliable method of contraception than allowing an unintended pregnancy to occur.

### **Follow-up**

Advise the client to visit a clinic for a routine follow-up within 3 months, but not before the first menstrual period. The primary purpose is to check that the IUD has not been expelled and there are no major complaints. Thereafter a routine follow-up is advisable every year.

Tell the client the date of the next visit, the name and type of IUD she has obtained and when it should be removed or replaced (see section 1 of this chapter).

This information, the list of warning signs, and the name, address and telephone number of the clinic can be put on a card or leaflet and given to the client. This has to be written and presented in a way the client or somebody close to her (in case she cannot read) can easily understand.

## 12 Follow-up care

### 3 month and annual follow-up protocols

- Update the client's address and how to make contact with her.
- Discuss with the client any question, concern or problem she may have related to the method.
- Perform a vaginal examination and review instructions for checking the IUD threads.
- Perform additional examinations or laboratory tests depending upon the client's problems or questions.
- Treat any cervicitis, vaginitis or vulvovaginitis that has developed during use of the IUD.

At the annual follow-up perform breast examination (with instructions for self-awareness) and take a cervical (Pap) smear if this is due and possible.

If regular follow-up care as described above is not feasible, carefully counsel the user regarding possible complications and where to go for care.

## 13 Side-effects

- Cramping pain may occur for the first 24 to 48 hours after insertion of the device. If the woman experiences this, she can take pain-relief tablets such as aspirin, ibuprofen or paracetamol (acetaminophen). If the pain does not improve or becomes severe, she should visit the clinic. (Pain does not usually occur after 48 hours).

- Vaginal discharge may occur during the first few weeks due to the initial reaction of the lining of the uterus (endometrium). This should not be a cause for concern, but if the discharge is heavy, or accompanied by pelvic pain and/or fever, the woman should contact the clinic immediately.
- Changes in menstrual periods – including spotting or light bleeding between periods – are common during the first 3-6 months of use of a copper-bearing IUD. These are not harmful and usually improve over time. The client may be advised to take a short course of non-steroidal anti-inflammatory drugs during the bleeding days. If the changes persist or if her periods are more than twice as heavy as normal, underlying gynaecological problems should be excluded. If the client finds the changes unacceptable, remove the IUD and help her to choose another method of contraception.

## 14 Complications

When complications occur, the client may be in a state of emotional distress. It is important that service providers take care of the psychological needs of the client as well as of her medical condition.

**Comfort the woman and give her emotional support.**

**Every IUD provider must be able to recognize the complications of IUD insertion and use, and be familiar with at least first-line management.**

Specialist consultation should be called in as soon as possible when necessary.

Potential IUD complications include: perforation, excessive bleeding and pelvic inflammatory disease (PID).

### 14.1 Perforation

Perforation is a rare event which almost always occurs at the time of insertion, when it may be accompanied by sudden pain and/or bleeding. It may also be symptomless. There is a greater risk of perforation postpartum after second trimester abortion when the uterus is soft, or during lactation when the uterus can be very small.

*If perforation is recognized or suspected at the time of sounding the uterus or inserting the IUD:*

- Stop the procedure immediately. Remove the IUD by pulling the threads, if it has already been released from the inserter tube; otherwise, remove the IUD with the inserter tube.
- Keep the woman at absolute rest, and check vital signs every 5 to 10 minutes during the first hour post-perforation. Then check vital signs every 30 minutes until signs are normal and stable.
- If there is an alteration in vital signs or haematocrit, spontaneous pain, or peritoneal signs, start an intravenous line for fluids with a large-calibre needle, and arrange emergency admission into a properly equipped medical facility. Never try to manage problems in which you lack skills or experience or about which you feel uncertain. If necessary, call a gynaecologist or surgical specialist as soon as possible.
- If the perforation gives no signs or symptoms, the woman can be sent home 2 to 6 hours after the perforation, depending on how accessible an emergency facility is to the client's home.

*If perforation is detected at a later time after the insertion and the IUD threads are not accessible (see section 16: Lost threads):*

- Retrieval may require a laparoscopy or laparotomy. This should be attempted only by a doctor trained in these techniques.
- Closed inert devices (such as rings) must be removed as they can cause bowel obstructions; open inert devices (such as the Lippes loop) can be left in the peritoneal cavity unless there are symptoms of problems or the woman requests removal. Copper-bearing IUDs should be removed to prevent adhesions. However, if adhesions have already developed and make access to and retrieval of an IUD too difficult, the IUD should be left in place.

## 14.2 Excessive bleeding

No standard effective medication is currently available for treatment of bleeding in IUD users, although non-steroidal anti-inflammatory drugs and anti-fibrinolytic agents have been used with some success. Proper counselling and empathetic attention, together with reassurance, help women to cope with this side-effect. Treatment with oral iron has been shown in some cases to compensate for blood loss. Irregular and excessive bleeding usually decreases after several cycles. If the bleeding is so excessive as to be a health threat or the woman is dissatisfied, then

remove the IUD and help her to choose another method of contraception. Treat anaemia with iron supplements and/or encourage foods containing iron, but avoid blood transfusion.

### 14.3 Pelvic inflammatory disease

Pelvic infection associated with IUD use may occur when the insertion is performed under unsanitary conditions, or when the IUD is inserted in the presence of an undiagnosed STI; it may also develop later in women at risk of STIs. The usual symptoms of pelvic infection are vaginal discharge, pelvic pain or tenderness, abnormal bleeding, chills and fever, but the infection can be silent. If PID is diagnosed:

- Treat the PID using appropriate antibiotics.
- There is no need for removal of the IUD if the woman wishes to continue its use.
- If the client does not want to keep the IUD, remove it after antibiotic treatment has been started.
- If the IUD is removed, the client can consider use of emergency contraceptive pills if appropriate (see chapter 10: Emergency contraception).
- If the infection does not improve, generally the course would be to remove the IUD and continue antibiotics. If the IUD is not removed, antibiotics should also be continued. In both circumstances, the client's health should be closely monitored.
- Provide comprehensive management for STIs, including counselling about condom use.

## 15 Pregnancy

Although highly effective in preventing pregnancy when fitted and used according to appropriate guidelines, pregnancy may occasionally occur among women who have an IUD in situ. Many women have successfully completed pregnancy under such circumstances, but there are significantly higher risks of spontaneous abortion, septic second-trimester abortion and premature delivery if the device is not removed. When pregnancy is detected in a woman with an IUD in place, explain to her the risks of keeping the IUD in place, and the smaller risks of its removal. If she agrees, carefully remove the IUD if the threads are

accessible. Advise her to seek care promptly if she has heavy bleeding, cramping, pain, abnormal vaginal discharge or fever. If the threads are not accessible, try to determine the location of the IUD by ultrasound. If the IUD is not located, this may suggest that an expulsion has occurred without the client noticing (and may explain the pregnancy). If the IUD is in place, advise the woman about termination of pregnancy where national laws permit. If the woman elects to continue the pregnancy, ensure that close supervision will be maintained.

IUD use does not increase the overall risk of ectopic pregnancy. However, IUDs protect against intrauterine pregnancies better than against ectopic pregnancies. When an IUD user does become pregnant, the pregnancy is therefore more likely to be ectopic than in a non-IUD user. An ectopic pregnancy is a life-threatening condition. Any woman who has an IUD fitted who complains of pain with vaginal bleeding or with amenorrhoea must be seen by a doctor to exclude a possible ectopic pregnancy. If an ectopic pregnancy is suspected, a bimanual examination can prompt rupture; thus, perform this examination in a clinical site which has facilities for emergency laparotomy.

## 16 Lost threads

Lost threads are very often the first indication that perforation or expulsion has occurred. This observation may also indicate the possibility of pregnancy.

If the threads are truly lost, first rule out the possibility of pregnancy. Then explore the cervical canal with narrow alligator forceps. If the threads cannot be located in the cervical canal, use a helix to retrieve the threads from the uterus. If the threads cannot be retrieved, a uterine sound may be used to determine if the IUD is still in the uterus.

If the IUD cannot be located inside the uterus, ultrasonography (or radiography if pregnancy has been excluded) may be indicated to determine if a perforation has occurred. If the IUD is not located in the abdomen, then perforation can be excluded and expulsion can be assumed.

## 17 When to remove the IUD

The IUD should be removed:

- *When the client makes a firm request:* The IUD should be removed without unnecessary delay.
- *When there is a medical indication for removal:* These indications include pregnancy, acute pelvic inflammatory disease, endometrial or cervical malignancy, uterine perforation, partial expulsion or abnormal and excessive bleeding that affects the health of the woman.
- *When the effective lifespan of the IUD has expired:* This applies only to medicated IUDs, including levonorgestrel-releasing and copper-bearing IUDs (see section 1).
- *When the woman reaches menopause:* Remove the IUD 1 year after her last period.

## 18 Service management

### 18.1 Client records

- All clients must have a clinical record.
- The clinical record for each client must include documentation of counselling, medical history, physical and laboratory findings, IUD insertion and follow-up, including any complications.

### 18.2 Supplies

- The use of only 1 type of IUD (or 2 at the most) in a clinic is recommended. This specialization will benefit training efforts as well as service delivery.
- Inert IUDs (e.g., Lippes loop) should not be supplied.
- Use sterile, individually packed IUDs. Discard the IUD if the seal is broken.
- The new copper-bearing devices (TCu 220C, TCu 380A, ML Cu 375 and Nova T) are preferable to the older copper-bearing devices such as TCu 200 and Copper 7.

- Devices which are pushed out of the applicator are more likely to perforate the uterus during insertion than devices which are left in place, using the **withdrawal technique without a push from the applicator**. Those devices that use the withdrawal technique also ensure better fundal placement; thus, their use is recommended.

### 18.3 Training

- All clinical and counselling staff must be trained in theoretical and practical aspects of IUD services, including screening for contraindications and recognition of signs of danger in the IUD user.
- All health personnel inserting IUDs must be competently trained in IUD insertion techniques and how to load and insert the IUD within the package. Training should stress the importance of avoiding contamination.