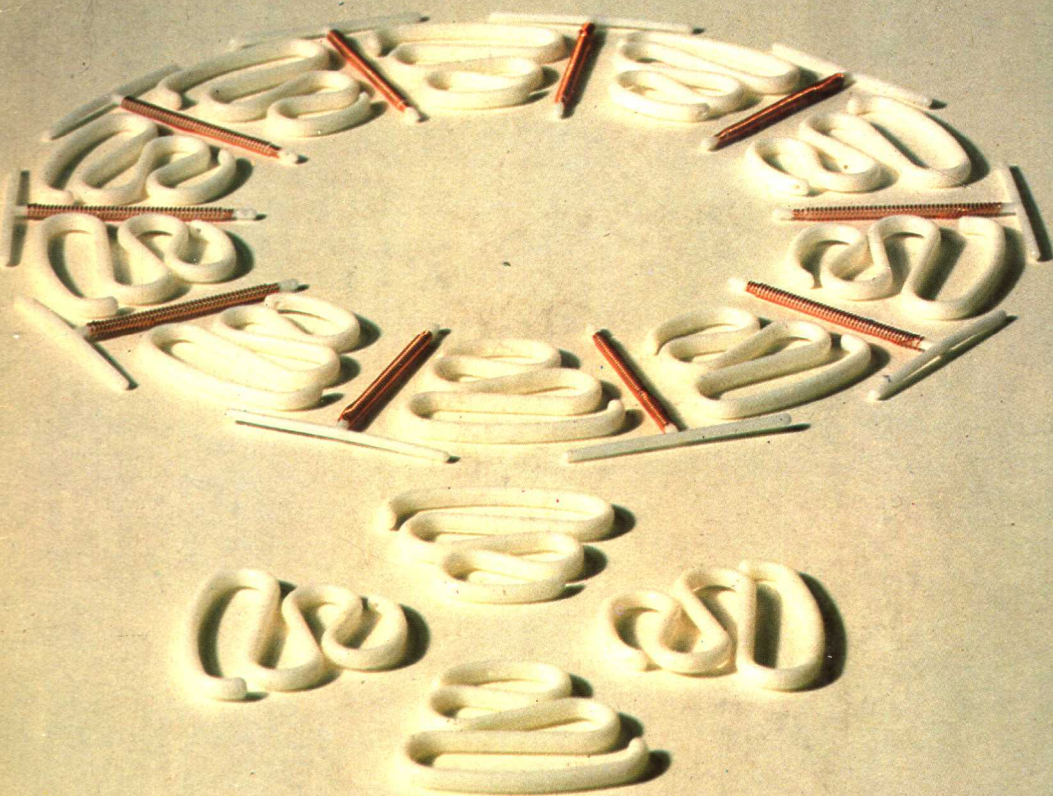


# **Manual for the provision of intrauterine devices IUDs**



**R. H. Gray**



**World Health Organization 1980**

# MANUAL FOR THE PROVISION OF INTRAUTERINE DEVICES (IUDs)

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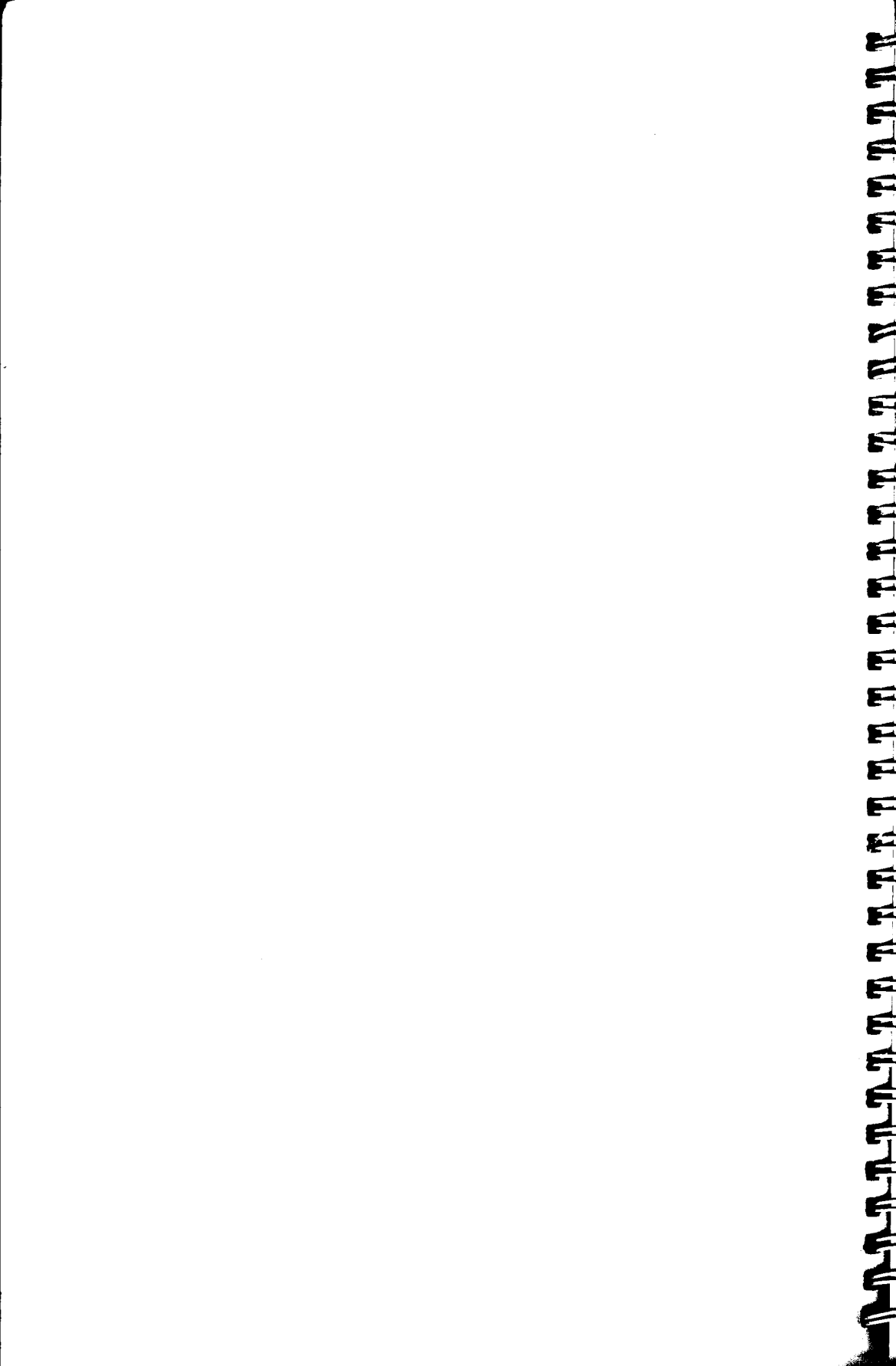
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## *Preface*

*This manual was designed to be used as a source of technical information to supplement practical training in the skills required for the insertion or removal of intrauterine devices (IUDs) and for the client counselling, history-taking, and physical examination needed. As a teaching document, the manual should be used only with the guidance of an experienced trainer, preferably as a part of a training course. The manual can also be used as a reference document by trained health personnel providing IUD services.*

*Field tests of the manual in training programmes in Turkey and the Philippines have suggested the following general indications:*

- 1. The manual can be used as the basic technical reference for a training programme, but care should be taken to ensure that it is adapted to local needs.*
- 2. Practical training in pelvic examination and IUD insertion and removal can best be accomplished in small groups of 2–3 trainees per trainer.*
- 3. Training in the acquisition of practical skills must be flexible, and most trainees need to perform at least 50–60 supervised pelvic examinations before they acquire adequate skill and self-confidence. Emphasis should be placed upon familiarity with the normal pelvic findings so that departures from normality can be easily detected. Trainees should be shown cases illustrating the different contraindications or complications associated with IUD use.*
- 4. Each trainee should perform between 10 and 15 supervised IUD insertions, if possible.*
- 5. The checklists and instructions in Annex 1 of the manual were found to be valuable for the diagnosis of abnormalities and the management of cases.*



## Introduction

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IUDs are plastic devices which have a contraceptive action when inserted into the cavity of the uterus. There are several different IUDs but this manual will describe the use of two widely used types, the Lippes loop ("the loop") and the copper T (Fig. 1).

**Fig. 1. Two intrauterine devices**



### Copper T

### Lippes Loop

The insertion of an IUD is not difficult, but it requires a clear understanding of basic anatomy in order to perform a pelvic examination to determine the position of the uterus and to exclude disease. You must also have a proper training in IUD insertion and removal techniques, and in the procedures required for follow-up and supervision. This manual, with the checklists in Annex 1, will act as a guide to help you insert IUDs and care for women using IUDs.

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<sup>a</sup>Various models of the Copper T IUD are in use or under development. While these may differ in some details from the one illustrated in this book, the basic construction and methods of use are the same for all models. The Copper T model 220 C (not illustrated here) has recently been recommended as a suitable alternative to the Lippes loop for use in family planning programmes.



# 1. Anatomy of the pelvic organs

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## GENERAL ANATOMY OF THE PELVIS

The general anatomy of the pelvic organs is shown in Fig. 2 and 3. The pelvis contains the following three main organ systems: (a) the reproductive organs, (b) the urinary bladder, and (c) the rectum.

The main reproductive organ we are concerned with is the uterus, since the IUD is inserted into the cavity of the uterus and, of course, this is where the growing fetus lies during pregnancy. The uterus is a pear-shaped muscular organ normally occupying a central position in the pelvis. The cervix or neck of the uterus is the lower part of the uterus, and connects the main body of the uterus with the external birth canal or vagina. Through each top corner of the uterus the two uterine tubes (the fallopian tubes) enter, one on each side, and they transmit the egg or ovum from the ovaries (Fig. 2).

In front of the uterus lies the bladder, in which urine collects from the kidneys, and from it leads the urethra, through which the urine is discharged (Fig. 3). In order to examine the uterus it is necessary to *ensure that the bladder is emptied so that the reproductive organs can be properly felt*, otherwise errors in diagnosis are likely to occur.

Behind the uterus and vagina there lies the lower part of the large intestine—the rectum (Fig. 3).

The pelvic organs lie within a cavity formed by the pelvic bones, which are covered by muscles, and the cavity is lined internally by a membrane called the peritoneum. The lower part of the pelvic cavity consists of a muscular “pelvic floor” through which run the rectum, vagina and urethra.

## ANATOMY OF THE REPRODUCTIVE ORGANS

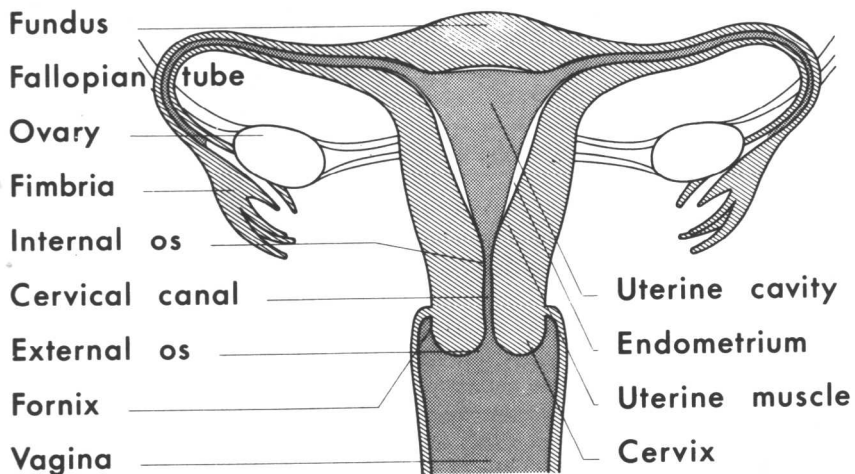
It is necessary to consider the anatomy of the reproductive organs in more detail in order to perform a pelvic examination, to insert an IUD properly, and to care for patients using an IUD.

### External genitalia

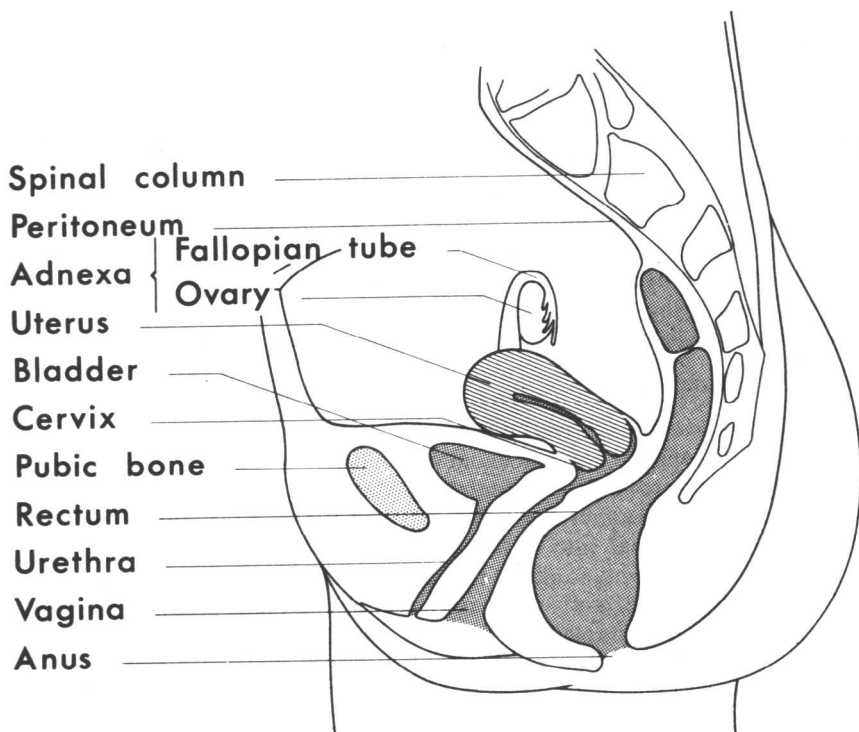
The female external genitalia (or vulva) are shown in Fig. 4. You need to know the anatomy of this area before performing a bimanual pelvic examination and in order to insert a speculum properly.

On both sides of the entrance of the birth canal or vagina lie two folds of skin, the outer and much thicker labia majora, and the inner, much thinner, labia minora. In front of the entrance of the vagina lies the entrance of the urethra and the clitoris, which are very sensitive; you should avoid touching this area during pelvic examination. Behind the vagina an area of skin covers the tissues, called the perineum, which separate the vagina from the rectum and anus.

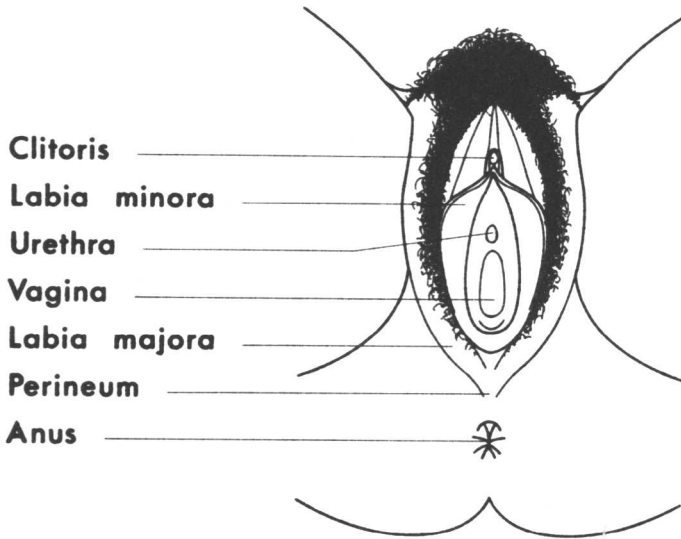
**Fig. 2. The anatomy of the pelvic organs:  
cross-section viewed from the front**



**Fig. 3. The anatomy of the pelvic organs:  
cross-section viewed from the side**



**Fig. 4. The perineum**



#### **Internal genital organs**

Fig. 2 shows these organs viewed from the front; Fig. 3 shows them in a cross-section viewed from the side.

#### **Vagina**

The vagina is the birth canal, which runs upwards and backwards from the external skin of the vulva to the cervix. The lining wall of the vagina is called the vaginal mucosa—a pink, modified form of skin which tends to form longitudinal and circular folds.

The cervix protrudes into the top of the vaginal canal. The arched pouch of the vagina created by this protrusion is called the vaginal vault, which is divided into four areas relative to the position of the cervix. These are the anterior, posterior, and (on each side) the lateral fornices; the posterior fornix is that part of the vaginal vault lying just behind the cervix.

#### **Cervix of the uterus**

The cervix is the neck of the uterus. It consists of a firm muscular wall surrounding a central cervical canal which is lined by a mucous membrane containing numerous mucus-secreting glands. The cervical canal leads directly from the vagina into the cavity of the body of the uterus. The opening of the canal into the vagina is called the external os, and the opening into the uterus is called the internal os.

The cervix can normally be readily felt and visualized during a vaginal examination. It is through its canal that an IUD is inserted into the body of the uterus.

### *Body of the uterus*

The body of the uterus is a hollow, muscular, pear-shaped organ approximately 7.5 cm long and 5 cm wide, lying at the centre of the pelvic cavity. It is connected above to the fallopian tubes; below, it is continuous with the cervix.

The body of the uterus normally lies in a mid-line position when viewed from the front (Fig. 2), but can lie in one of three positions when viewed from the side (Fig. 5):

- It usually lies in the *anteverted position*, facing forwards, in which case the cervix points backwards;
- Sometimes, however, it lies *retroverted*, facing backwards, in which case the cervix usually points forwards; or
- It may be in a *mid-position*, i.e., halfway between the position of anteversion and retroversion.

The topmost, broad part of the uterus is called the fundus. The walls of the uterus consist of muscle covered externally by peritoneum, and they normally feel firm and smooth during pelvic examination. Inside the body of the uterus there is the triangle-shaped uterine cavity. At the upper angles of this cavity are the openings of the fallopian tubes, whilst the cervical canal leads into the lowest part of the cavity (Fig. 2). The cavity is lined by a special type of tissue called the endometrium, which is shed during each menstrual period and grows again before the next period.

### *Fallopian tubes (Fig. 2 and 3)*

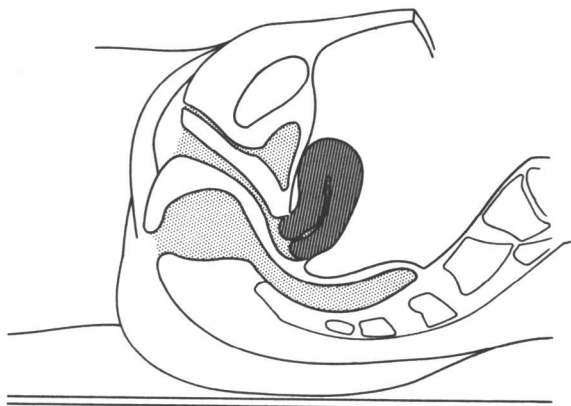
The fallopian tubes connect the cavity of the uterus with the abdominal (peritoneal) cavity near the ovaries. The opening of each tube into the uterus is very small, but the opening near the ovary is broad and its margins consist of delicate fringe-like processes called fimbriae. The fallopian tubes are held in position by a loose fold of tissue called the broad ligament. The fallopian tubes carry the egg from the ovary to the uterus. They are very sensitive to infection and when this occurs they are very tender at pelvic examination and may become swollen and palpable.

### *The ovaries (Fig. 2 and 3)*

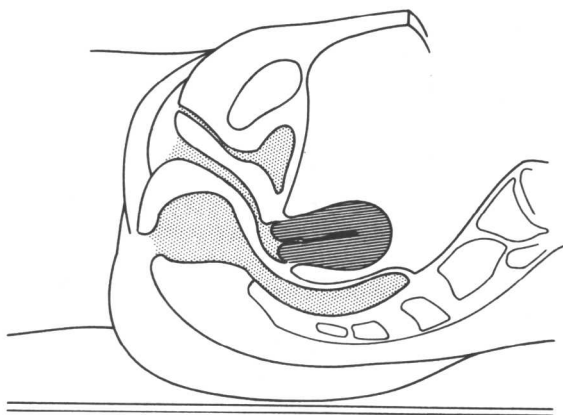
The two ovaries are small glands which lie in the pelvic cavity, one on each side of the uterus near the opening of the fallopian tubes. The egg or ovum is produced in the ovary and is wafted into the fallopian tubes by the action of the fimbriae. It is usually difficult to feel normal ovaries; if they are enlarged, this may indicate the presence of a disease process.

The ovaries, fallopian tubes and broad ligaments are known collectively as the adnexa.

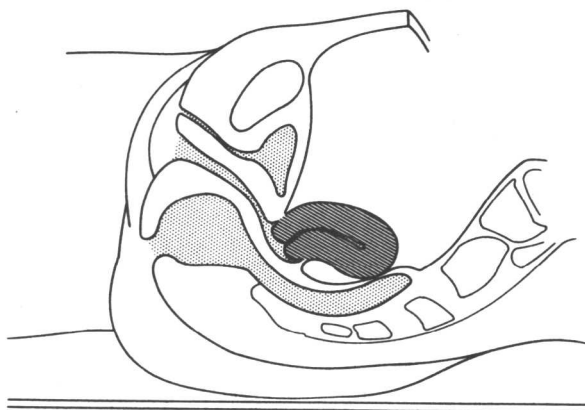
**Fig. 5.    *The position of the uterus  
(with the woman lying on her back)***



**Anteverted**



**Mid - position**



**Retroverted**

## 2. IUD insertion requirements

---

There are *six steps* that you should always follow with each IUD insertion:

1. Assembly of the instruments and equipment
2. Provision of information and education to new acceptors
3. History-taking by completing the checklist
4. Pelvic examination and sounding of the uterus
5. IUD insertion
6. Client instructions and reassurance.

### ASSEMBLY OF INSTRUMENTS AND EQUIPMENT

You should make sure that the following instruments and equipment are *sterile* and *ready to hand* before commencing a clinic, and you should check through this list before inserting an IUD.

1. IUD<sup>a</sup>
2. Inserter (unloaded)<sup>a</sup>
3. Sterile gloves
4. Sterile bivalve speculum<sup>b</sup>
5. Sterile sponge holding forceps<sup>b</sup>
6. Sterile toothed tenaculum used in your clinic<sup>b</sup>
7. Sterile uterine sound<sup>b</sup>
8. Sterile scissors<sup>b</sup>
9. Sterile dressing forceps<sup>b</sup>
10. Sterile metal bowls (2)<sup>b</sup>
11. Benzalkonium chloride solution or weak aqueous iodine solution<sup>c</sup>
12. Vulval pads
13. An appropriate light source, as used in your clinic

---

<sup>a</sup>The IUDs and inserters should be presterilized for 24 hours in the benzalkonium chloride solution *or* for 10 minutes in the aqueous iodine solution. The IUD should not be left in the benzalkonium chloride solution for more than 24 hours at a time as the plastic may become brittle.

<sup>b</sup>The metal instruments should be sterilized in an autoclave or by boiling, depending on the procedure routinely used in your clinic.

<sup>c</sup>Benzalkonium chloride solution available commercially in the strength designated 1:750 should be used. The iodine solution should be freshly prepared daily as follows: 25 ml of 2% tincture of iodine in 1 litre of water, or 7 ml of 7% tincture of iodine in 1 litre of water. These are often designated "aqueous iodine solution 1:2500".

## INFORMATION AND EDUCATION FOR NEW ACCEPTORS

The objectives of providing information and education are as follows:

- to make sure that the woman fully understands the use of an IUD, including its advantages and disadvantages;
- to make sure that she understands the procedures you will perform prior to and during the insertion;
- to ensure that she realizes the need for follow-up and supervision while using the IUD;
- and as a result, to gain her confidence in you and the method advised. This is of the greatest importance.

The following approach should be adopted:

1. You should put the woman at her ease by adopting a sympathetic and reassuring manner. Allow her to talk freely about any problems that she may have and adopt an unhurried, friendly approach.
2. Explain the use of the IUD along the following lines:
  - (a) Show the woman an IUD and tell her that it is a plastic device which is inserted into the uterus to prevent pregnancy.
  - (b) It has the advantage of providing continuous protection from pregnancy without interfering with marital relations or requiring a constant effort of memory. It is convenient and simple to use, and provides good protection against pregnancy. When she no longer requires protection, the device can be easily removed and she should have no difficulty becoming pregnant again.
  - (c) A *trained* person must both insert and remove the IUD and demonstrate its position and mode of insertion by using a plastic model.
  - (d) After insertion many women experience light bleeding or cramps for the first 3–5 days, and the first few menstrual periods may be rather longer and heavier than normal. Reassure the patient that if these symptoms occur they are not unusual and will resolve with time.
  - (e) Explain to the woman that you must ask a number of questions and perform a pelvic examination before inserting an IUD to make certain that the device is suitable for her. This will involve the use of some medical instruments which she will see or hear during the examination.
  - (f) Tell her that the pelvic examination should not be painful, but may cause some minor discomfort, and that she will feel momentary discomfort when the IUD is inserted but this will soon cease.
  - (g) After insertion she should return to the clinic in one month's time to check that all is well; reassure her that she can come to see you at any time if she has any difficulties or worries.

## HISTORY-TAKING AND USE OF CHECKLISTS

The objective of taking a proper history and using the checklist is to ensure that there are no contraindications to the use of an IUD. These contraindications are covered more fully on page 38. The main points of concern are:

- abnormal bleeding, which may indicate cancer or some other uterine abnormality;
- excessive menstrual bleeding or pain, which may be made worse by using an IUD;
- pregnancy;
- a history of lower abdominal pain, fever or vaginal discharge, which may indicate infection;
- the date of the last menstrual period or last delivery or abortion, which is important with regard to the timing of IUD insertion (see page 28).

The admission checklist in Annex 1, page 48 will allow you to take a comprehensive history and you should complete this form carefully for each new acceptor. The checklist contains a series of questions to which you should record the answers by placing a tick in the boxes provided. If any answer falls into a shaded box, you should carefully follow the instructions as these will assist you in determining which women can use an IUD and which women require another contraceptive method or referral to a doctor for further investigation and treatment.

## PELVIC EXAMINATION AND SOUNDING OF THE UTERUS

The objectives of the pelvic examination are:

- to ensure that there are no pelvic abnormalities or disease states that may contraindicate the use of an IUD;
- to determine the position and length of the uterine cavity so as to insert the IUD properly.

The contraindications that can be detected on pelvic examination are described more fully on page 38. The main *contraindications* are:

- cancer;
- infection;
- confirmed or suspected pregnancy;
- inability to insert a uterine sound and/or to determine the direction and depth of the uterine cavity;
- large fibroids, which may make insertion difficult.

The physical examination section of the checklist and instructions shown on page 48 will help you to perform the pelvic examination systematically and to record your findings. You should complete this checklist with every new acceptor. Record your findings by placing a tick in the boxes provided. If any observation falls into a shaded box you should follow the instructions as these will assist you in determining whether you can proceed with the insertion procedure or whether you should refer the patient to a doctor.



### *Pelvic examination*

There are four main procedures:

1. Examination of the lower abdomen
2. Bimanual examination
3. Speculum examination
4. Sounding of the uterus.

### **Preliminary abdominal examination**

This often allows the identification of obvious abnormalities, and is essentially the first step in gaining the patient's confidence and cooperation to achieve the necessary relaxation.

- STEP I. Tell the woman that you wish to examine her abdomen first and then to do an internal examination.
- STEP II. *Ask her to empty her bladder* so that you will be able to feel the pelvic organs clearly.
- STEP III. She should then remove her clothing from the waist downwards and lie on the examination table. Provide her with a covering sheet to preserve her modesty.
- STEP IV. Now gently (with a warm hand) examine the lower abdomen to make sure there are no obvious abnormalities. You will be shown how to do this and how to gain relaxation of the abdominal wall.
- STEP V. Having completed this preliminary examination you should proceed to the bimanual examination.

### **Bimanual examination**

This is a more detailed examination to detect any disease, especially those which are *contraindications* to IUD insertion. It is necessary to determine the capacity of the vagina and the position of the cervix in order to choose the right size of speculum and to insert it in the right direction. Finally, it is necessary to determine the position of the body of the uterus so that later the sound and IUD may be inserted in the correct direction to avoid the danger of perforation.

- STEP I. Tell the woman that you wish to examine her internally and ask her to separate her knees and arrange her position so that her hips are slightly over the edge of the table (stirrups are used at this stage in many clinics to support the legs). Reassure her that she will not be hurt and ask her to breathe quietly through her mouth. *Do not hurry the procedure:* this will avoid upsetting the patient, gain relaxation of the abdomen, and allow you to be sure of your findings. You should have washed your hands and be wearing rubber gloves.