

# **The Enterprise Program**

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HEALTH INSURANCE ORGANISATION (HIO)  
FAMILY PLANNING SERVICES PROJECT

## **FAMILY PLANNING PRACTICE GUIDELINES FOR HIO SERVICE PROVIDERS**



5 April 1990

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## I. INTRODUCTION

One of the project aims is to promote reproductive and family health of HIO beneficiaries, spouses, and community residents through the establishment and provision of family planning services in fifty HIO polyclinics. These practice guidelines have been designed to assist service providers in the achievement of this goal; and to organise a framework for the development of a standard of care that will provide direction towards a uniform family planning practice level in HIO polyclinics.

The level of information contained in the guidelines is based on cultural context and needs of the service providers, particularly the physicians who are the team leaders and service managers; as well as site visits to five of the fifteen family planning clinics that have been established in Phase 1 of the subproject. The first draft was completed in August 1989 and distributed to the clinics. Three months later, fifty-seven physicians participated in two-day training sessions held in Cairo, Alexandria and Tanta. The purpose of the sessions was to upgrade clinical knowledge; revise the guidelines in accordance with the recommendations of the physicians; encourage adoption of the practices as outlined in this revised document; and improve their role as clinic managers.

At each clinic, the family planning service team is composed of a physician, two nurses, a social worker and a cleaner. In order to achieve the goal of high-quality voluntary services, each staff must be cognizant of their individual and team member role, and the teams' efforts and activities directed towards the assurance of client satisfaction of services received. Pills, IUDs, injectables, condoms and vaginal foaming tablets (VFT) will be offered at the service sites. Patients desiring NORPLANT<sup>R</sup> or other contraceptive services unavailable at HIO will be referred to other facilities. All participating physicians will receive Contraceptive Technology, International edition, Hatcher et al 1989, as a reference source.

HIO family planning staff should make every effort to support services that are voluntary, safe, of high-quality, and delivered in an environment of informed choice, mutual respect and confidentiality. "Voluntary services" implies that recipients of services are free to select a contraceptive method without force or coercion. "Informed choice" implies that by providing accurate information and education, family planning staff are able to help clients make a knowledgeable decision about which family planning method is most appropriate for their needs and lifestyle. Service providers must ensure that clients are aware of all possible family planning methods, including the risks and benefits of each method, how to use it correctly, how effective it is in preventing pregnancy, and that they are free to change their mind at any time. And finally, when HIO service providers practice the following guidelines, patients will receive services that focus on safe medical practices that promote patient safety and health.

A copy of these guidelines will be located in each clinic; a review of the guidelines will be conducted annually; and revisions will be made as appropriate in accordance with changing client needs, contraceptive technology, resources, and availability of additional child spacing methods, such as injectables and mini-pills.

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2 April 1990

## II. STEPS IN THE MANAGEMENT OF NEW AND TRANSFER CLIENT ACCEPTORS

All first time client acceptors (new and transfer) will have the following:

- A. Complete History Taking - (physician) family, medical, surgical, obstetrical, gynecological, menstrual, contraceptive, allergies, current medications, smoking.
- B. Complete Physical Examination - (physician) thyroid, heart, lungs, liver, eyes and skin (for anemia, jaundice and pallor), legs (varicosities, edema), breast (including self-breast examination).
- C. Pelvic Examination - (physician) Speculum and bimanual.
- D. Blood Pressure (physician)
- E. Weight (nurse)
- F. Laboratory Testing - (nurse)
  - urinalysis for sugar, protein, albumin
  - hemoglobin
  - pregnancy testing if indicated
- G. Counselling and Education
  - On results of history, examination and lab testing (physician)
  - On ALL AVAILABLE family planning methods at polyclinic or if not available there, other sites in Cairo where they can be obtained. Brief description of each method. (social worker)
  - Have samples available and let patient touch and feel them, if appropriate. (social worker)
  - Use pictures, posters, models to demonstrate. (social worker)
  - Give patient a pamphlet to take home. (social worker)
  - Inform about EACH method (physician/social worker)
    - how it works in the body to prevent pregnancy
    - how to use it correctly
    - chances of pregnancy if used correctly/incorrectly
    - advantages vs disadvantages of method
    - contraindications
    - common side-effects
    - danger signs

- The method the clients choose will depend upon their preference, history, the presence of any contraindications and the physicians recommendations after examination.
- If there are medical reasons to temporarily postpone giving the method a client desires, try to offer a back-up method (VFT, condom). That is, no client should leave the clinic without a method.
- Refer to your training notes on purpose, principles and techniques of counselling, and in Hatcher, the G-A-T-H-E-R approach. The English word "GATHER" means "to bring together". This helps to remind the provider of the correct steps in the counselling procedure.

- G - Greet clients
- A - Ask clients about themselves
- T - Tell clients about family planning methods
- H - Help clients chose a method
- E - Explain how to use a method
- R - Return for follow-up

#### CONTINUING USERS

- Update health history and medical record. (physician)
- Client counselling on satisfaction with chosen method, health, or other family concerns. (physician/social worker)
- Complete physical examination, laboratory testing performed annually.
- Non-HIO beneficiaries pay for examination and testing.

### III. ORAL CONTRACEPTIVES - THE COMBINED PILL

Combined oral contraceptives are very effective (0.1% - 3% failure rate) in preventing pregnancy and contain an estrogen and progestin component in varying combinations. They cause systemic changes that affect ovulation, implantation, gamete transport and corpus luteum function. Commonly used pills today contain 30-50 mcg of an estrogen and 1 mg or less of a progestin.

Since the 1960s, the estrogen component in the pill has decreased as serious side-effects and many minor side-effects are estrogen-related. Today it is also becoming known that progestins may also have dose-related adverse effects on lipid patterns; and reducing the dosage of progestins results in a net lipid effect that is less unfavorable. Researchers hope that lowering the progestins will lower the risk of cardiovascular disease. Therefore, try to provide one of the lower dose pills like Norminest (low estrogen-35 mcg estrogen and lower dose progestins such as 0.5 mg norethindrone) especially if you feel the patient will take them correctly and consistently. For example, pills that have:

#### no more than 35 mcg of estrogen

Ethinyl Estradiol - 35 mcg daily  
(estrogen)

#### and low dosages of progestin

Norethindrone - 0.4 mg or 0.5 mg daily or triphasic  
(progestin) preparations (triovular) containing varying  
amounts from 1.5 to 1.0 mg daily.

Levonorgestrel in the triphasic preparation  
(progestin)

- 1.925 mg in the 21 pill cycle (receives 39% less levonorgestrel than a woman receives from the monophasic pill providing 0.15 mg levonorgestrel daily for 21 days, or 3.15 mg of levonorgestrel during the entire 21 day pill cycle).
- triphasic pills generally have less progestin and simulate progestin levels in the menstrual cycle.
- there are at the present time no triphasic preparations in the HIO clinics, but are available in the market.

## NONCONTRACEPTIVE HEALTH BENEFITS OF ORAL CONTRACEPTIVES<sup>1</sup>

The pill offers several significant benefits, in addition to contraception, that outweigh the side-effects or complications of pills. These benefits should be discussed with clients during counselling.

1. Ovarian cancer: risk reduced by as much as 50%.
2. Endometrial cancer: risk reduced by as much as 50%.
3. Benign breast cysts and fibroadenomas of the breast: pill users less likely to develop breast tumors.
4. Relief of cyclic problems: pills minimise menstrual cramps, increase menstrual regularity.
5. Iron deficiency anemia: amount of blood loss is decreased.
6. Pelvic inflammatory disease: pill users are less likely to develop more severe forms of PID.
7. Ectopic pregnancy: pills prevent ectopic pregnancy by preventing ovulation.
8. Recurrent ovarian cysts: incidence of functional ovarian cysts is reduced by more than 90%.
9. Acne: acne is often improved in women taking oral contraceptives.

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<sup>1</sup>from Hatcher et al, Contraceptive Technology, International Edition, 1989, p. 245-248.

## ORAL CONTRACEPTIVES AVAILABLE IN HIO POLYCLINICS

<u>Brand Name</u>	<u>Estrogen</u>	<u>Progestin</u>
Primovlar	50 mcg Ethinyl Estradiol	0.5 mg Norethisterone
Anovlar	50 mcg " "	1 mg " acetate
Microvlar	30 mcg " "	0.15 mg Levonorgestrel
Norminest	35 mcg " "	0.5 mg Norethindrone

Of women taking pills, most stop the pill for non-medical reasons, that is, not due to complications or side-effects. Therefore, family planning staff need to make a concerted effort to keep clients on the pill through the provision of information the client understands, reassurance on common side-effects, and opportunities for clients to visit services as often as necessary.

### POSSIBLE CONTRAINDICATIONS TO USE OF COMBINED ORAL CONTRACEPTIVES<sup>2</sup>

#### A. Absolute Contraindications:

1. Thrombophlebitis or thromboembolic disorder (or history thereof)<sup>3</sup>
2. Cerebrovascular accident (or history thereof)
3. Coronary artery or ischemic heart disease (or history thereof)
4. Known or suspected breast carcinoma (or history thereof)
5. Known or suspected estrogen-dependent neoplasia (or history thereof)
6. Pregnancy
7. Benign or malignant liver tumor (or history thereof)
8. Known impaired liver function at present <sup>4</sup>
9. Previous cholestasis during pregnancy

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<sup>2</sup> from Hatcher et al, Contraceptive Technology, International Edition, 1989, p. 257.

<sup>3</sup> Some clinicians do not consider thromboembolic events related to known trauma or an intravenous needle a contraindication to pills.

<sup>4</sup> In areas of the world where endemic infections alter liver function tests for a high percentage of the population, few women would be started on pills if this finding were used as an absolute contraindication.

B. Strong Relative Contraindications:

10. Severe headaches, particularly vascular or migraine headaches which start after initiation of oral contraceptives
11. Hypertension with resting diastolic BP of 90 mm Hg or greater, or a resting systolic BP of 140 mm Hg or greater on three or more separate visits, or an accurate measurement of 110 mm Hg diastolic or more on a single visit<sup>5</sup>
12. Mononucleosis, acute phase
13. Elective major surgery or major surgery requiring immobilisation planned in next four weeks
14. Long-leg cast or major injury to lower leg
15. Over 40 years old, accompanied by a second risk factor for the development of cardiovascular disease (such as diabetes or hypertension)
16. Over 35 years old and currently a heavy smoker (15 or more cigarettes a day)
17. Abnormal bleeding<sup>6</sup>

C. Other Considerations that may suggest that pills are not the ideal contraception:

- o Diabetes, prediabetes or a strong family history of diabetes<sup>7</sup>
- o Sickle cell disease (SS) or sickle C disease (SC)

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<sup>5</sup> The three authors of Contraceptive Technology who are clinicians consider three diastolic pressures greater than 90 mm Hg a very strong contraindication to combined pills.

<sup>6</sup> Several reviewers of this book strongly feel that abnormal genital bleeding should be listed as an absolute contraindication to pill use. We consider it a potential rather than absolute contraindication because "abnormal" cannot be easily defined. If you, the clinician, feel that the specific patient's bleeding pattern is "abnormal" and cannot identify the cause, do not provide her with pills.

<sup>7</sup> Some clinicians do not consider diabetes, prediabetes, or a family history of diabetes a contraindication to combined pills and are willing to initiate pills and observe carefully. Other clinicians require that the patient's primary care physician, the endocrinologist, or the person who cares for her diabetes participate in the decision to provide OCs. The decision to provide OCs is a shared responsibility, and the primary care physician must renew approval annually.

- o Active gallbladder disease
- o Congenital hyperbilirubinemia (Gilbert's disease)
- o Undiagnosed, abnormal genital bleeding
- o Over 50 years old
- o Completion of term pregnancy within past 10-14 days
- o Weight gain of 10 pounds or more while on the pill
- o Cardiac or renal disease (or history thereof)
- o Conditions likely to make patient unreliable at following pill instructions (mental retardation, major psychiatric illness, alcoholism or other chemical abuse, history of repeatedly taking oral contraceptives or other medication incorrectly)
- o Lactation
- o Family history of death of a parent or sibling due to myocardial infarction before age 50. Myocardial infarction in a mother or sister is especially significant and indicates a need for lipid evaluation
- o Family history of hyperlipidemia

## EARLY PILL DANGER SIGNS

Oral contraceptive pill clients should be taught pill danger signs and these should be reviewed again at each visit. The English word "ACHES" as in "aches and pains" helps remind the provider of the danger signs :

- A - Abdominal pain (severe)
- C - Chest pain (severe), cough, shortness of breath
- H - Headache (severe), dizziness, weakness or numbness
- E - Eye problems (vision loss or blurring), speech problems
- S - Severe leg pain (calf or thigh)

## PILL ACCEPTORS THAT REFUSE HISTORY, EXAMINATION AND LAB TESTING

Occasionally, new clients may come to the clinic requesting to buy pills, but refusing to take and pay for the initial physical examination and laboratory testing. Every effort will be made by the family planning team (physician, social worker and nurse) to inform and counsel the client about the importance of an initial health assessment before prescribing a contraceptive method. However, if the client still refuses, HIO staff will sell the client 3 cycles of pills.

### PILL ACCEPTORS (New and Transfer)

1. Explain results of history, examination and lab test. (physician)
2. Physician will prescribe the type of pill most suitable for client.
3. Give 3 cycles of pills. Begin with a 35 mcg of estrogen and 0.5 mg norethindrone pill, e.g. Norminest. (physician)
4. Make sure patient understands how to take pills correctly; has opportunity to ask questions; knows danger signs; common side-effects; and when to return to clinic. (physician/social worker)
5. Give return appointment in 10 weeks and written information about type of pill and how to take it correctly. (nurse)
6. Accurately complete record and report forms. (all relevant staff)

### REVISITS

1. Ask if patient has any problems, concerns, side-effects and record it. Review self breast exam. (social worker/physician)
2. Take blood pressure and weight, check varicose veins and breasts. No charge or fee for this visit. (physician)
3. Review warning signals and ask client to demonstrate how she takes pills. Instruct client as necessary. (physician/social worker)
4. Give 6 cycles of pills. (nurse)

5. Give return appointment in 5 1/2 months. (social worker)
6. Accurately complete record and report forms.

#### MISSED APPOINTMENTS

1. Follow-up by telephone or home visit, as appropriate. (social worker)

#### MANAGEMENT OF COMMON PILL SIDE-EFFECTS

##### Breakthrough Bleeding and Spotting

- this often occurs in the first four months of use and later subsides.
- ensure client is taking pills everyday at same time and not missing pills.
- if spotting persists after three (3) months switch to a 50 mcg pill, e.g. Primovlar or Anovlar or consider an alternative child spacing method.
- if indicated, rule out pregnancy, pelvic infection, cervical polyps or inflammation, and other gynecologic causes of bleeding.

##### No Withdrawal Bleeding at End of Pill Cycle

- review how client is taking pills. If pills are taken incorrectly (missing pills, etc.) rule out pregnancy.
- if one cycle of withdrawal bleeding has been missed and client is taking pills correctly, reassure client that this can occur.
- if two cycles of withdrawal bleeding have been missed evaluate for pregnancy and/or other causes of amenorrhoea. If no pregnancy, and client is taking pills correctly, try a 50 mcg pill, e.g., Anovlar or Primovlar or consider another child spacing method.

##### Mild Headaches

- take careful history and rule out other causes such as tension, stress, sinusitis, allergies, sepsis, hypertension, migraine, visual problems, etc.
- if the headache is clearly related to starting pills, discontinue pills or change to a pill with lower estrogen/and or progestin activity and give return appointment after one pill cycle and assess carefully again.
- discontinue pill if headache persists.
- always take headache complaints seriously in a pill user because they are the major danger signal coming before cerebrovascular accidents.

### Depression

- rule out previous personal or family history of depression and other organic causes such as poor health, anemia, hypothyroidism, hypoglycemia, low levels of vitamin B<sub>6</sub>, etc.
- assess to determine whether depression has occurred following initiation of pills
- if related to initiation of pills, switch to a low-dose pill e.g., microvlar, or recommend client use another method of child spacing

### Nausea

- take careful history and rule out pregnancy, infection, gallbladder disease, etc.
- if related to initiation of pills, it is caused by the estrogenic component of the pill
- advise client that it may disappear after the first few cycles and to take pill with evening meal or at bedtime
- or may change to a pill with lower dose of estrogen, e.g., microvlar
- instruct client to take an extra pill from a separate package if she vomits within one hour of taking pill

### Weight Gain

- rule out pregnancy, increase in diet, depression, etc.
- determine if related to initiation of pills. Estrogen and progestin in pills may induce water retention or increase subcutaneous fat.
- fluid retention is due either to progestin or estrogen in the pill and causes cyclic weight changes; decrease the estrogen dose of the pill, or discontinue pills.
- if weight gain is due to increased breast tissue and subcutaneous fat, switch to a pill with decreased estrogenic potency, e.g., microvlar or discontinue pills.

### MAJOR COMPLICATIONS

Circulatory disorders are the most important complications caused by oral contraceptives and are primarily cardiovascular in nature such as:

- myocardial infarction
- cerebrovascular accident and
- thromboembolism

THE RISK OF THESE COMPLICATIONS IS INCREASED IN WOMEN WHO ARE 35 YEARS OLDER AND WHO SMOKE. Therefore, personal and family risk factors must be evaluated, as indicated in contraindications list, before prescribing contraceptive pills as a child spacing method. In addition, clients must be knowledgeable about warning signals and instructed to return to clinic immediately for assessment.

## Interactions with Other Drugs

Care should be taken when pill clients are using other medication. The other medication may affect the contraceptive effectiveness of the pill or the pill may alter the therapeutic effect of the medication. Some of the more common drug interactions are listed here, with suggested management.

Interacting Drugs	Adverse Effects (Probable Mechanism)	Comments, Recommendations
Anticoagulants	Decreased anticoagulant effect	Use alternative contraceptive
Barbiturates (Phenobarbital & others)	Decreased contraceptive effect	Use pill containing 50 mcg of ethinyl estradiol or use alternative contraceptive
Corticosteroids	Possible increased corticosteroid toxicity	Clinical significance not established
Hypoglycemics (Tolbutamide, Diabinase, Orinase, Tolinase)	Possible decreased hypoglycemic effect	Monitor blood glucose
Penicillin	Decreased contraceptive effect with ampicillin	Use pill containing 50 mcg of ethinyl estradiol or use back-up method
Phenytoin (Dilantin)	Decreased contraceptive effect. Possible increased phenytoin effect	Use alternative contraceptive Monitor phenytoin concentration
Rifampin	Decreased contraceptive effect	Use alternative contraceptive
Tetracycline	Decreased contraceptive effect	Use pill containing 50 mcg of ethinyl estradiol or use back-up method
Theophylline (Brok tabs, Marax, Primatene, Quibron, Tetral, Theo-dur, and others)	Increased theophylline effect	Monitor theophylline concentration
Vitamin C	Increased serum concentration and possible increased effects of estrogens with 1 g or more per day vitamin C	Decrease vitamin C to 100 mg per day

Source: Adapted from Rizack MA, Hillman CDM. Medical letter handbook of adverse drug interactions. New Rochelle, NY: Medical Letter, 1985.

#### IV. THE INJECTABLE CONTRACEPTIVE - DEPO-PROVERA

Recently, the injectable contraceptive Depo-Provera has been approved in Egypt as a contraceptive alternative for child spacing after using it for several years on selective study populations. Depo-Provera contains progestin hormone only (NO ESTROGEN) and is also known as DMPA or medroxyprogesterone acetate. It is a long-acting progestin and is a highly effective method of contraception with failure rates of less than 1 per 100 women years. Each intramuscular injection of 150 mg of DMPA provides three months (12 weeks) of contraceptive protection. DMPA may prevent pregnancy by inhibiting ovulation, thickening the cervical mucus, and creating a thin endometrium.

Research indicates that:

1. Depo-Provera is a good method for women who are breastfeeding, as it does not influence the amount of breast milk production and may even increase the length of time a woman can breastfeed.
2. It is suitable for women who are not able to take combined pills because of the risk of estrogen-related complications. For example, blood pressure, headaches, and heavy smoking.
3. It is suitable for women living under conditions where personal hygiene is difficult.

#### CONTRAINDICATIONS

The absolute contraindications for Depo-Provera are the same as those of the combined oral pills including:

- pregnancy
- Ca of breast or genital tract
- abnormal uterine bleeding

Refer to pages 6 through 9 for combined pill contraindications. It is thought, that the long-acting progestin in Depo-Provera injectable does not increase the risk of thrombo-embolic disease as does the progestin in combined pills (estrogen + progestin) and mini-pills (progestin only pills).

Some women experience post-DMPA infertility lasting 6-12 months, although fertility does return in over 80% of women within 1 year after DMPA is stopped. Therefore a woman's plans for fertility should be considered before selection of DMPA. If a woman plans to get pregnant, she should stop the injection several months before she plans to conceive.

If a client has a history of diabetes in pregnancy, monitor her carefully as some laboratory tests have shown that DMPA alters carbohydrate metabolism.

### DEPO-PROVERA DANGER SIGNALS

Patients should know to come to the clinic if they develop any of the following problems:

- Weight gain
- Headaches
- Heavy bleeding
- Depression
- Frequent urination

### DEPO-PROVERA NEW ACCEPTORS

1. In addition to the procedures outlined for all new acceptors, client counselling and provision of accurate information is extremely important. This is to provide reassurance and minimise her anxiety regarding amenorrhoea, and menstrual irregularity for which no adverse long-term effects have been demonstrated. (physician/social worker)
2. Begin Depo-Provera during the first five days of the menstrual cycle.
3. Maintain aseptic technique when preparing and injecting Depo-Provera. (nurse)
4. Supply an additional contraceptive method for two weeks when the first injection is given.
5. Give the client an instructional pamphlet to take home. (social worker)
6. Review danger signs and how to do self-breast examination. (physician)
7. Give a 3 months appointment. (physician)
8. Accurately complete record and report forms. (all relevant staff)

### DEPO-PROVERA REVISITS

1. Ask client if she has had any problems or concerns and if she is satisfied with method. (physician/social worker)
  2. Take and record weight. (nurse)
  3. Give the injection. (nurse)
  4. Review danger signs and client instructions on use. Review self-breast examination. (social worker)
  5. Give 3 months appointment. (nurse)
  6. Annual physical examination and laboratory testing on all continuing users. (physician)
- Non-HIO beneficiaries pay for the examination and laboratory testing.
7. Accurately complete record and report forms. (all relevant staff)

#### ADMINISTRATION OF DEPO-PROVERA (Nurse)

1. The first injection of 150 mgm is given during the first five days of the menstrual cycle. A back-up method is provided for two weeks (condom, VFT).
2. Nurse washes hands, with soap and water before preparing to give injection. A new syringe and needle is used each time. (Disposable syringes and needles are used in HIO facilities).
3. Injection site (intramuscular injection in deltoid muscle of upper arm or upper outer quadrant of hip) is swabbed with isopropyl alcohol or ethyl alcohol 70% for 10 seconds and allowed to air dry for 30 seconds. (To promote antisepsis and decrease pain at time of injection).
4. Injection is administered using the "Z-track" method:
  - When pressing the skin down use only the thumb to press and to move the skin to the side.
  - Inject the Depo-Provera deeply and slowly, into the muscle, keeping the skin pushed to the side.
  - After the Depo-Provera has been injected, the needle remains in the muscle for two seconds.
  - Take the needle out quickly, and at the same time release the skin in order to close the needle track.
  - Dispose of syringe and needle so that it cannot be used again. Place in a special container for sharp objects. When container is full, burn or bury the container.
5. Nurse washes hands with soap and water, reassures client and assists client to physicians room (and/or social worker) for additional counselling and education.

## MANAGEMENT OF DEPO-PROVERA SIDE-EFFECTS

1. Heavy or Prolonged Bleeding
  - a. Check for anemia. If hematocrit drops more than 5 points discontinue DMPA or give iron supplementation.
  - b. World Health Organisation recommends EITHER:
    - one combined oral contraceptive daily for 14 days

OR

    - an IM injection of a synthetic estrogen - 5 mg estradiol cypionate or estradiol valerate.
  - c. INTRAH (Program for International Training in Health) clinical guidelines recommend as follows:
    - Give one tablet daily of combined oral contraceptives for 21 days (one packet); this will stop the bleeding.
    - Give supplemental iron tablets to follow the 21 days of combined oral contraceptives. Tell client to expect a withdrawal bleed.
  - d. Follow-up client and monitor hemoglobin levels.
2. Amenorrhoea, Light Bleeding or Spotting  
(Medical intervention is not necessary for the above side-effects.)
  - a. Amenorrhoea is a common side effect after 9-12 months of DMPA use and is due to suppression of the endometrium.
  - b. Breakthrough bleeding or spotting may occur in the first six months and disappears over time.
  - c. Allay client's concerns by counselling before initiating DMPA and provide reassurance at each visit that these are common side-effects and do not indicate a problem.
  - d. For spotting or bleeding between periods, INTRAH recommends giving a combined oral contraceptive, one tablet daily, for seven days. Reassure client. If spotting or bleeding persists, re-examine to rule out possible causes.

## V. INTRAUTERINE DEVICE

The Copper T 380A IUD will be available for HIO clients. There are two copper collars on the horizontal arms and a copper wire wound on the vertical arm, producing a total exposed surface area of 380 mm<sup>2</sup> of copper. It can be effectively used as a contraceptive method for up to four years. The contraceptive effectiveness (0.5%-1% failure rate) and rates for expulsion, perforation and removal of IUDs have been found to vary from clinic to clinic. This depends on how well the clinician pays attention to selecting and counselling clients, timing of insertion, the insertion technique, infection control practices and the management of complaints. The IUD is an appropriate method for breastfeeding women.

**NOTE** that all IUD insertion clients must have a History and Pelvic Examination (speculum and bimanual) before inserting the IUD. The Copper T 380A is inserted using the Withdrawal Technique. This technique is different from that used for plastic loop IUDs and should be studied carefully.

Copper T 380A

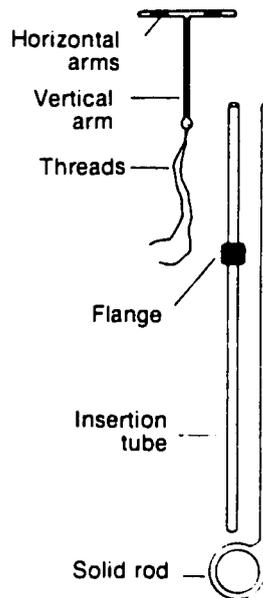


FIGURE 1

## POSSIBLE CONTRAINDICATIONS TO USE OF IUDs<sup>8</sup>

### A. Absolute Contraindications:

1. Active, recent, or recurrent pelvic infection (acute or subacute), including known or suspected gonorrhoea.
2. Pregnancy (known or suspected).

### B. Strong Relative Contraindications:

3. Undiagnosed, irregular, or abnormal uterine bleeding.
4. Risk factors for PID:
  - o postpartum endometritis
  - o infection following an abortion that occurred in the past three months
  - o impaired response to infection (diabetes, steroid treatment)
  - o recurrent history of gonorrhoea
5. Risk factors for exposure to the human immunodeficiency virus (HIV).<sup>9</sup>
6. Cervical or uterine malignancy (known or suspected),
7. History of ectopic pregnancy.
8. Impaired coagulation response (idiopathic thrombocytopenic purpura, anticoagulant therapy, etc.)

C. Other possible relative contraindications include valvular heart disease, which may make the patient susceptible to subacute bacterial endocarditis (some clinicians recommend prophylactic antibiotics); anatomical difficulties such as an abnormal shape (leiomyomata, endometrial polyps, bicornuate uterus), cervical stenosis, or a small uterus; menstrual disorders such as severe dysmenorrhoea, severe menorrhagia or endometriosis; anemia, history of impaired fertility in a woman who desires a future pregnancy; history of fainting; and allergy to copper or diagnosed Wilson's disease.

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<sup>8</sup> Hatcher et al, p. 315.

<sup>9</sup> Hatcher et al, pp. 79-83.

### TIMING OF IUD INSERTION

1. The IUD may be inserted any time during menstruation, preferably the first 5 days of the cycle, or at any time provided she is not pregnant.
2. The IUD may be inserted six weeks postpartum provided she is not pregnant and to be confirmed by abstinence from sexual relations or use of a barrier method.
3. The IUD may be inserted for Cesarean Section clients at 6 - 8 weeks postpartum. Client may not have more than 3 C-sections.

### PROCEDURE FOR INSERTION OF COPPER T 380A (Physician only)

1. Explain the procedure to the patient to help her relax. Do not open the IUD package until the bimanual and speculum examination has been completed.
2. Use a clean glove to perform a careful bimanual examination to rule out pregnancy, infection and determine size and position of uterus. It is important to determine size and position in order to know the proper direction for uterine sounding and insertion of IUD. An unrecognised retroflexed uterus increases the possibility of uterine perforation at the time of insertion.
3. Discard the glove and cleanse the cervix SEVERAL TIMES with an antiseptic solution BETADINE after you have inserted a warm speculum and viewed the cervix.

### USE STERILE TECHNIQUE THROUGHOUT !!

4. Apply the tenaculum on the anterior lip of the cervix at the 10 and 2 o'clock position about 1.5 to 2.0 cm from the cervical os. Close the tenaculum slowly, one notch at a time. Pull steadily downwards and outwards on the tenaculum to direct the cervix gently toward the opening of the vagina. This gentle traction on the tenaculum aligns the uterine cavity, endocervical canal and vaginal canal.
5. Guide the uterine sound slowly and gently into the cervical canal using meticulous sterile technique. Do not let the sound touch anything, even the speculum or vaginal mucosa. The uterine sound is used to confirm your bimanual position of the uterus and check for obstructions in the canal. A slight resistance will indicate that the tip of the sound has reached the fundus. Note the direction of the cavity and remove the sound.
6. Determine the depth of the uterus by noting the level of mucus and or blood on the sound. Most uteri sound to a depth of 6 to 8 cm. Do not insert a Copper T 380A into a uterus that is less than 6.5 cm or more than 12 cm in depth.
7. To minimise chance of introducing contamination, do not remove the Copper T 380A from the insertion tube prior to placement in the uterus. Do not bend the arms of the "T" earlier than 5 minutes before it is to be introduced into the uterus.

Sterility can be maintained in the absence of sterile gloves by folding the arms in the partially opened package on a flat surface and pulling the solid rod partially from the package so it will not interfere with assembly. Place thumb and index finger ON TOP OF PACKAGE on the ends of the horizontal arms. Push insertion tube against arms of the "T".

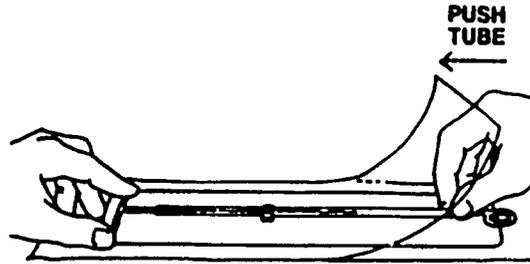


FIGURE 2

With hand still ON TOP OF PACKAGE, complete the folding of the arms to the sides of the copper T by bringing thumb and index finger together, while using the other hand to manoeuvre the insertion tube to pick up the arms of the "T". Insert no further than necessary to insure retention of the arms (about 1/4 inch only into the sheath). Introduce the solid rod into the insertion tube from the bottom alongside the threads until it touches the bottom of the Copper T 380A.

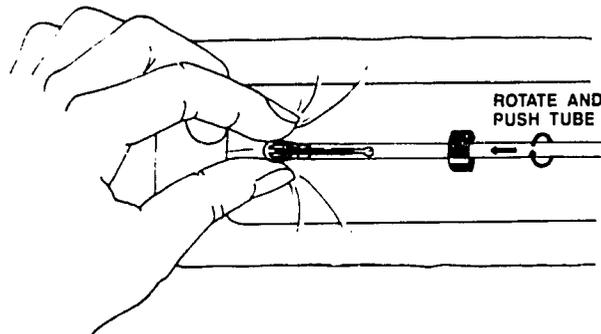
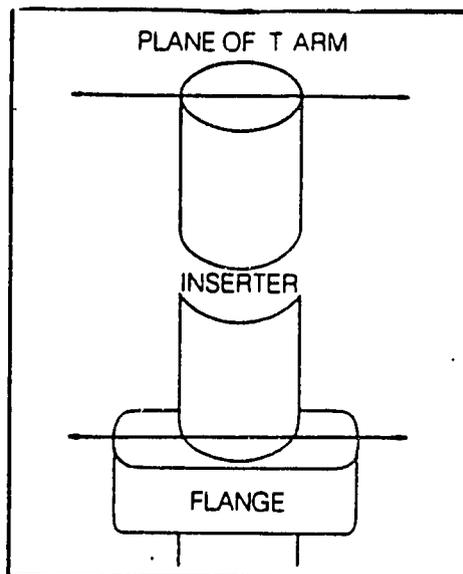


FIGURE 3

8. Adjust the blue movable flange so that the distance between the tip of the folded T and the top of the flange is equal to the sounding depth of the uterus - (the depth to which the Copper T 380A should be inserted-level of mucus/blood on sound). At this point, you may need to turn the flange to make certain that the horizontal arms of the "T" and the long axis of the flange lie in the same horizontal plane.



The plane of the T arm must match the plane of the flange.

FIGURE 4

9. Now tear off the plastic wrapper and in accordance with the position and direction of the uterine cavity, introduce the loaded insertion tube through the cervical canal and upward until Copper T 380A lies in contact with the fundus. (Maintain sterile technique). The objective is to have high fundal placement of the copper which has a greater effect in preventing pregnancy. The movable blue flange should be at the cervix and the blue flange in the horizontal plane. Do not force insertion.

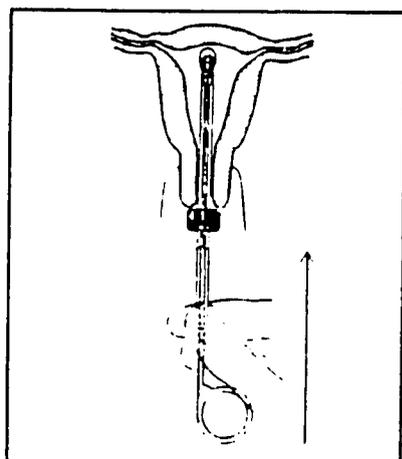


FIGURE 5

- Release the Copper T 380A by withdrawing the insertion tube no more than 1/2 inch while the solid rod is not permitted to move. This releases the arms of the "T".

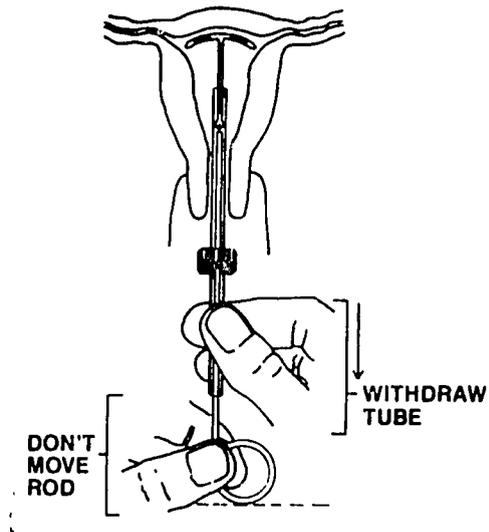


FIGURE 6

- After the arms are released, the inserter tube should be moved upward until the resistance of the fundus is reached. This assures placement of the T at the highest possible position in the endometrial cavity (fundus).

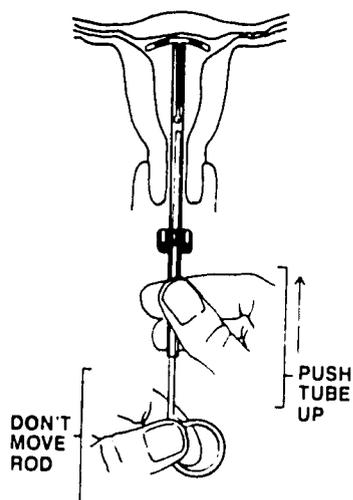


FIGURE 7

- Withdraw the solid rod while holding the insertion tube stationary.

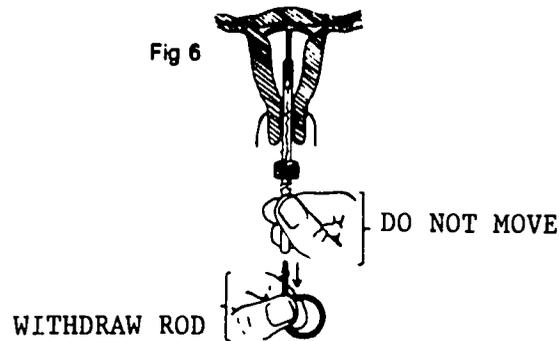


FIGURE 8

- Withdraw the insertion tube from the cervix. Be sure a sufficient length of the threads is visible (1 in. or 2.5 cm) to facilitate checking for the presence of the Copper T 380A.

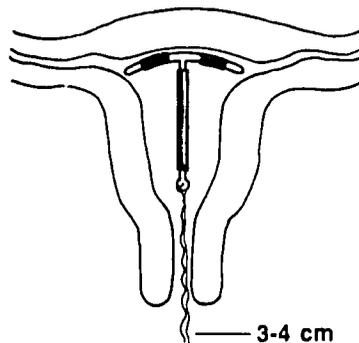


FIGURE 9

10. Remove the tenaculum slowly and apply pressure with a gauze or cotton ball continuously if application site bleeds. Clean excess blood from vagina. Remove speculum. Give patient a sanitary pad and make patient comfortable.
11. Put used IUD instruments into a separate receptacle or large basin containing disinfectant solution (prepared according to manufacturers directions), immediately after use to prevent contamination of clean working areas. (nurse)
12. Give post-insertion instructions to the client including common side-effects, danger signs and how to check for threads. Reassure the client. Social worker will also counsel the client.
13. Provide written information on type of IUD inserted, follow-up visit and date of removal (four years).

**NOTE:**

- Sterile gloves are not required to insert a Copper T under sterile conditions if you prepare the Copper T for insertion (arms of T folded into inserted tube) while it is inside the package. However, if there is any difficulty in doing this, you will have to completely open the package and use sterile gloves to fold the arms of the T into the inserter and prepare for insertion.
  
- Remember also to wash hands with soap and water between patients and before and after IUD insertion to minimise the risk and spread of infection.

IUD EARLY WARNING SIGNS

The English word "PAINS" reminds the provider of the IUD early warning signs:

- P - Period late (pregnancy), abnormal spotting or bleeding.
- A - Abdominal pain, pain with intercourse.
- I - Infection exposure (gonorrhoea etc.), abnormal discharge.
- N - Not feeling well, fever, chills.
- S - String missing, shorter or longer.

Client should immediately come to clinic if she has any of these signs.

IUD REVISIT      (Physician)  
                              (Social worker - counselling)

1. First routine revisit is in 3 months.
2. Obtain history of reaction to IUD, side-effects, problems and concerns, amount of bleeding.
3. Do pelvic exam (bimanual and speculum) to confirm presence of IUD and rule out any problems or abnormalities (no charge for this examination).
4. Review early warning signs.
5. Make appointment for next visit in 6 months.
6. Accurately complete record and report forms. (all relevant staff)

ROUTINE FOLLOW-UP VISITS (every six months - physician)  
(counselling - social worker)

1. Obtain history of reaction to IUD, side-effects, problems and concerns. If suspect anemia do a hemoglobin test, and if there is a drop of 10% from the previous test or the hemoglobin percentage is less than 70% (10.4 gms), the IUD should be removed. Consider iron supplementation to increase iron levels.
2. Annual complete physical examination every 12 months and laboratory investigations including self-breast examination. Patient will pay for this examination which includes blood pressure and weight.
3. Extra clinic visits may be necessary depending on needs of patient - pain, bleeding, expulsion (partial or complete), suspected pregnancy, missed menses, desire for removal, change of method, desires pregnancy, can't feel thread etc. These visits will be free of charge.
4. Review early warning signs. (see page 26)
5. Make appointment for next visit in 6 months.
6. Accurately complete record and report forms. (all relevant staff)

IUD REMOVAL

1. For routine removal it is preferable to remove the IUD during the first five days of menstruation because it is easier then. However, it can be removed any time during the cycle.
2. Look for the thread, grasp thread close to cervix with forcep and remove IUD slowly. If the IUD does not come out easily, hold the sterile sound in the uterus for 30 seconds; then slowly rotate the sound 90 degrees and remove IUD. Using a tenaculum to steady the cervix and straighten anteversion or retroversion may also assist removal.
3. If the strings are not visible gently explore cervical canal no more than one inch (length of canal) with narrow sterile forceps to try to find the string.
4. If strings are not located, before further investigation it is necessary to rule out pregnancy first by history and physical exam, or by a pregnancy test. If it is determined that there is no pregnancy, then:
  - clean the cervix with povidone solution
  - apply the tenaculum
  - gently explore the uterine cavity with alligator forceps (with which the strings of the IUD itself may be grasped), a hook or a Novak curette and slowly and gently remove IUD.
5. If IUD still cannot be located refer to GYN clinic for sonography, X-Ray, or hysteroscopy. The IUD may have been expelled; it may be in

the uterus; or may be in the abdominal cavity. If the client is not an HIO beneficiary, she will pay according to HIO economical fees for these investigations.

6. If it has been a difficult removal, it may be necessary to give analgesic and prophylactic antibiotic therapy, e.g., doxycycline 200 mg followed by 100 mg 12 hours later. The patient will buy the antibiotic and return to the clinic in one week.
7. Accurately complete record and report forms. (all relevant staff)

#### PREGNANCY WITH IUD IN UTERO

Pregnancy is one of the most serious complications, that can occur with an IUD in place. The IUD should be removed in a pregnant patient. The combination of infection and pregnancy is potentially fatal for an IUD user. The clinician must remember that a high percentage of pregnancies with IUDs in place are ectopic. Intrauterine pregnancies are prevented more effectively by IUDs than are ectopic pregnancies.

1. Remove IUD immediately if pregnancy diagnosed and strings are visible at the cervical os. Remove with gentle slow traction.
2. Inform client that she has a 25% chance of having a spontaneous miscarriage. (If IUD is left inside she has a 50% chance of losing the pregnancy in addition to chance of infection).
3. After removal return to clinic if she should have bleeding, cramping, or signs of infection.
4. Discuss future child spacing preference with the couple and the most suitable contraceptive.
5. If the strings are not visible, refer patient to prenatal clinic. Inform her of IUD danger signs of pregnancy and infection which often present as flu-like symptoms such as not feeling well, fever, chills, myalgias and headaches. Think of "SEPSIS" and not "FLU", a potentially serious complication. She should immediately come to the HIO facility for assessment.

## CRAMPING AND PAIN IN THE IUD USERS<sup>10</sup>

When evaluating pelvic pain in a woman with an IUD in place, it is essential to rule out the possibility of an ectopic pregnancy. Vaginal discharge is an early warning symptom that may signal more serious infectious complications.

### Cramping and pain may be caused by or associated with

### What to do ...

Sounding the uterus during the process of insertion.

Sound slowly, gently; use smaller sound if meeting resistance.

Cramping immediately after insertion, for day or so thereafter, or during first menses.

If severe, may need IUD removal: if mild, provide analgesic or prostaglandin inhibitor. For example, indocid or biarison.

Partial expulsion of an IUD.

Remove IUD. If no infection or pregnancy, may insert another IUD.

Pelvic inflammatory disease.

Remove IUD, treat infection, and wait 3 months before considering insertion of another IUD. Provide alternative contraception.

Severe post-insertion pain, vasovagal reaction, syncope, seizures, and even cardiac arrest (very rare).

Give atropine 0.4 or 0.5 mg IM; pain medication; maintain cardiac output; remove IUD if necessary.

Spontaneous miscarriage.

Diagnose pregnancy, remove IUD, evacuate uterus, rule out ectopic pregnancy.

Ectopic pregnancy.

Refer for immediate surgery.

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<sup>10</sup> Adapted from Hatcher et al, p. 325.

## IUD WITH PELVIC INFLAMMATORY DISEASE<sup>11</sup>

1. If the client is hospitalised and receiving I.V. antibiotics, it is recommended to wait 24 hours after initiating the I.V. treatment before removing the IUD.
2. Combined drug therapy is recommended in all cases because the full bacterial etiology of PID is generally polymicrobial. If the client is being treated as an out-patient, the risk of losing the patient to follow-up (or delay in follow-up) overrides other considerations. Therefore, the IUD should be removed immediately.

3. **FOR HOSPITALISED PATIENTS TREAT WITH :**

Doxycycline 100 mg IV twice daily. After discharge, continue doxycycline 100 mg orally twice daily to complete at least 10 to 14 days of therapy.

**PLUS**

Cefoxitin 2.0 gm IV four times daily for at least 4 days and at least 2 days after the patient's fever subsides.

4. **FOR AMBULATORY PATIENTS TREAT WITH :**

Doxycycline 100 mg orally twice daily for 7 days

PLUS one of the following

- a. ceftriaxane 250 mg IM,  
or
  - b. cefoxitin 20 gm IM,  
or
  - c. amoxicillin 3.0 gm orally with probenecid 1 gm orally,  
or
  - d. ampicillin 3.5 gm orally with probenecid 1 gm orally,  
or
  - e. aqueous procaine penicillin G 4.8 million units IM at 2 sites with probenecid 1 gm orally.
5. Do culture and sensitivity test, but initiation of antibiotics should not be delayed until results are obtained. Antibiotic therapy can be altered depending on C&S results.
  6. Treat husband with tetracycline 500 mgm, 4 times a day for 7 days.

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<sup>11</sup> Adapted from Hatcher et al, p. 116.

7. Patient returns for evaluation 2 days after initiating antibiotic therapy.
8. Patient returns for follow-up and re-examination again 7 days after treatment regimen has been completed.
9. Couple avoids sexual activity until both are cured.
10. Advise the client to choose another method for child spacing.
11. Advise couple to use condoms to prevent future infections.
12. Accurately complete record and report forms. (all relevant staff)

## VI. CONDOMS

Condoms act as mechanical barriers by preventing sperm from entering the vagina when placed over the erect penis. They are made of rubber (latex) or processed collagenous tissue from the caecum of lamb intestines (skin). Condoms also differ in shape, thickness, and whether lubricant and/or spermicides are present. The spermicide (Nonoxynol-9) may be present in the outside or inside of the condom and acts to kill the sperm.

The condom is moderately effective in preventing pregnancy. First year failure rates among typical users average about 12%. Effectiveness depends on motivation and whether it is used with every act of intercourse, and the correct application and removal during use. Effectiveness of the condom is increased if a spermicide such as foam or VFTs are used with the condom.

Latex condoms play a major role in minimising the transmission of STDs including the AIDS virus as well as decreasing the likelihood of infertility. They may also decrease the development or cause the regression of early cancerous or precancerous changes of cervical epithelial cells (CIN - cervical intraepithelial neoplasia).

Women at risk for acquiring STDs, especially during pregnancy, should encourage partners to use latex condoms in order to protect themselves and their baby.

### CONTRAINDICATIONS

1. Some men cannot maintain an erection when a condom is used.
2. Some individuals are allergic to rubber or spermicide in the condom.

### NEW ACCEPTORS

(social worker/physician)

1. Give instructions on client use, emphasizing that they must be used with every act of intercourse, put on when the penis is erect, and removed carefully immediately following ejaculation.
2. Advise patient that for extra protection a backup method (VFTs) may be used.
3. Condoms need to be kept in a cool, dry place and examined for breakage prior to use.
4. Give client 12 strips of condoms and instructional pamphlet.
5. Encourage clients to return to clinic at anytime for condom resupply and/or family planning counselling.
6. Accurately complete record and report forms.

Condoms should be stored in a cool, dry place. They should not be kept in a wallet or hot place, as heat, even body heat, may cause the rubber to weaken. If kept dry, sealed and away from heat, sunlight and fluorescent light, they will last probably five years.

#### HOW TO USE CONDOMS

1. Check to make sure there are no tears or damage to the condom.
2. Put condom on penis when erect and before inserting penis into the vagina.
3. Roll the rim of the condom gently all the way to the base of the penis. Leave about 1/2" of empty space at the tip of the condom. Squeeze the tip to remove air at the tip of the condom to catch the semen.
4. Withdraw penis immediately after ejaculation; hold the top of the condom at the base of the penis to prevent leakage of sperm into vagina.
5. Discard condom; it is only used once.

## VII. VAGINAL FOAMING TABLETS (VFTs)

Vaginal foaming tablets are spermicides that prevent pregnancy by directly killing sperm and acting as a cover to prevent introduction of sperm through the cervix. They are made up of two parts: a spermicide that kills the sperm; and an inactive base (foam) which holds the spermicide in the vagina against the cervix and acts as a barrier to the movement of the sperm. It is important for clients to be told by HIO service providers that VFTs are inserted into the vagina, and not taken by mouth. Other vaginal spermicides are foams, jellies and creams.

Vaginal foaming tablets are fairly ineffective at preventing pregnancy when used by the typical woman. The first year failure rate is about 21%. The most common patient error is failure to use the method with every act of intercourse. Among perfect users the failure rate is about 3%. Therefore, client understanding of how to use the method plays an important role in effectiveness. In addition, vaginal spermicides are detergents that kill many organisms that cause STDs including gonorrhea, trichomonas, and chlamydia. Women who use spermicides are less likely to develop pelvic inflammatory disease.

### CONTRAINDICATIONS

1. Allergy to spermicidal tablets.
2. Unable to remember to use spermicidal tablets with each act of intercourse.
3. Personal feeling about touching herself or a physical disability that prevents her from properly inserting the tablets.

### HOW TO USE VFTs

1. The foaming tablet is inserted deep into the vagina, near the cervix.
2. The tablet must be moistened and inserted not more than 30 minutes before intercourse.
3. It takes 10-15 minutes for the tablet to melt in the vagina; intercourse should occur after the tablet has had time to melt.
4. Every act of intercourse requires insertion of another tablet.
5. Do not douche for eight hours after intercourse.
6. The effectiveness of VFTs increases to as much as 98% if the male uses a condom at the same time.

### NEW ACCEPTORS

1. History taking, physical examination and laboratory testing.
2. Instruct client on correct use of method, that is, insert VFT 10-15 minutes before intercourse so that it has time to melt in the vagina and insert VFT again with every act of intercourse. Do not douche for at least eight hours after intercourse. (social worker)
3. Encourage use of condom with VFT to promote contraceptive effectiveness. (social worker)
4. Give 6 packs of VFTs and instructional pamphlet.
5. Give return appointment in three months.
6. Accurately complete record and report forms.

### CONTINUING USERS

1. Discuss concerns, problems, satisfaction with VFT. (social worker)
2. Ask client to state how she uses VFT. Correct any errors in use. (social worker)
3. Give 12 packs of VFTs.
4. Return appointment in 6 months.
5. Annual physical examination, laboratory testing, health history update. Non-HIO beneficiaries will pay for examination.
6. Accurately complete record and report forms.

## VIII. BREASTFEEDING AND CONTRACEPTION (Physician)

HIO staff will encourage breastfeeding as a means to promote maternal, infant and child health survival. Breast milk is the best source of nutrition and immunity for the growing infant; lactation promotes maternal health and may delay postpartum return to fertility. However, it is not known how reliable breastfeeding is as a contraceptive.

Research indicates that lactational amenorrhoea or breastfeeding as a primary child spacing method is very effective (98%) if the following three criteria are fully met;

- frequent breastfeeding (every 4-6 hours) on demand 24 hours around the clock and with no or very little supplemental feeding (maintains a high level of prolactin which decreases the level of luteinizing hormone necessary for stimulating ovulation and maintaining the menstrual cycle);
- absence of menses and;
- infant is less than six months old.

At six months postpartum, a breastfeeding client using lactational amenorrhoea as the primary method of contraception must begin using an additional method of family planning to increase contraceptive effectiveness, even if there is still absence of menses and frequent breastfeeding with minimal introduction of feeds.

Most experts recommend that with breastfeeding clients, a complementary child spacing method is necessary and should be initiated six weeks after delivery, particularly in women who desire or must have maximum protection against pregnancy, for example, high risk clients.

### CONTRACEPTIVE OPTIONS FOR BREAST-FEEDING MOTHERS

1. The first choice for breastfeeding mothers should be a non-hormonal method of contraception. The IUD is a very good contraceptive for breastfeeding women. The Copper on the Copper T does not appear to affect the quantity or quality of breast milk. The optimal time for insertion is at six weeks postpartum. Careful, slow and gentle insertion technique must be followed, to prevent uterine perforation which may occur at this time and is common in the postpartum period.

Signs of perforation are:

- loss of resistance to upward pressure of the inserter
- signs of bleeding or hemorrhage
- client complains of sharp, severe, cutting pain

Manage the client by:

- removing the IUD
- signs of shock indicate an intra-abdominal hemorrhage and is a surgical emergency

Spermicides (VFTs) have no effect on breastfeeding and may be used safely. Effectiveness is enhanced if CONDOMS are used in conjunction with foaming tablets.

2. The second choice could be progestin only contraception. The long-acting progestin in the Depo-Provera injection does not suppress lactation and may even increase the duration of lactation. While it is known that DMPA does get into the breast milk in small quantities, no long-term effect on infants is known at this time. It may be administered at six weeks postpartum when lactation has been fully established.

Mini-pills (progestin-only pills) are also a good choice for breastfeeding mothers, in addition to causing fewer hormone related side-effects in clients. In lactating women, the progestin only pill is almost 100% effective in preventing pregnancy. In addition, they do not affect the amount of milk production. It is extremely important that clients on mini-pills take them every day at the same time as effectiveness decreases even if they are taken a few hours late. Mini-pills are not currently available in Egypt.

3. The third choice, although not recommended, is combined oral contraceptives (estrogen and progestin pills) which is not a good contraceptive for lactating women. A number of studies have indicated that the combined pills may suppress lactation, whereas progestin only contraceptives (Depo Provera and mini-pills) increase milk production. However, if other methods are inappropriate or unavailable, a low-dose combined pill may be used as a last choice.

CLIENT MANAGEMENT

1. Discuss contraceptive alternatives with client. Inform her of risks of pregnancy if three criteria are not rigidly adhered to when she intends to use lactational amenorrhoea as the primary child spacing method for six months. High risk clients and those desiring no pregnancy should be provided with a complementary method at six weeks postpartum. Assist her to choose the most appropriate method based on history, physical examination, laboratory testing, and her preference.
2. Give follow-up visit depending on contraceptive method chosen.
3. Instruct clients that are using lactational amenorrhoea as the primary child spacing method that if frequency of breastfeeding is decreased, and/or there is introduction of feeds, and/or menses appears, and/or client is almost six months postpartum, she will not have lactational protection against pregnancy and must return to clinic for contraception.
4. Provide instructional material on breastfeeding and on chosen method.
5. Accurately complete record and report forms.

## IX. MANAGEMENT OF GYNECOLOGICAL CONDITIONS (Physician)

At the present time, HIO subproject family planning clinics do not have microscopes, and therefore common vaginal discharges cannot be examined by wet smear. Persistent or recurrent cases that do not respond adequately to treatment, can be referred to the HIO laboratory or gynecological clinic for appropriate laboratory and other investigations.

### TRICHOMONAS VAGINITIS

1. Clinical diagnosis: Patient usually complains of vaginal discharge, vulvar irritation, itching, and dyspareunia. Urinary frequency and dysuria are common. Speculum examination shows profuse watery discharge. Discharge usually has small air bubbles. Small punctate hemorrhagic areas are seen on the cervix and vaginal wall giving a "strawberry" appearance.
2. Microscopic diagnosis: Place a drop of normal saline on a glass slide. Add a drop of vaginal discharge. Examine multiple fields. Large mobile organisms with tails (flagellates) are diagnostic.
3. Treatment: Treat with metronidazole 2 gms orally in a single dose. Always give the husband the same therapy of metronidazole 2 gms orally.

Metronidazole should not be prescribed in the following circumstances:

- active central nervous system disease
- anticoagulant therapy
- breastfeeding
- pregnancy

Clients should be counseled against alcohol consumption during treatment because it can cause marked nausea.

Amoxicillin 500 mg tid as a treatment of second choice (used for those patients which have the above-named conditions which contraindicate use of metronidazole).

4. If differential diagnosis between trichomonas vaginitis and bacterial vaginosis is unclear, treat with metronidazole 500 mg bid for 7 days (client and husband) since this regime is therapeutic for both infections.
5. Inform client :
  - to avoid intercourse during treatment;
  - to avoid douching; it can irritate the vaginal lining and increase vulnerability to infection;
  - to maintain personal hygiene by washing and cleaning regularly, and avoid perfumed soaps and deodorants in the genital areas. If the genital area is kept clean, dry and healthy, her chance for acquiring infections is reduced. She should wear cotton pants

(absorbs moisture) and avoid tight-fitting underpants and clothing because they tend to hold in moisture which promotes growth of microorganisms;

- to use all medication in order to gain maximum benefit. Instruct her about the condition--cause, complications, and side-effects;
- to use condoms to prevent future infections.

CANDIDIASIS (CANDIDA ALBICANS, MONILIA)

1. Clinical diagnosis: Symptoms of monilia vaginitis are similar to those of trichomonal infections, namely vulvar irritation and itching, urinary frequency, and dyspareunia. However, physical findings are quite different. The vulva is swollen and often red. The vagina is often dry. The discharge is thick and usually white to gray-green in color.
2. Microscopic diagnosis: A drop of exudate should be placed on a slide with a drop of potassium hydroxide (KOH) or normal saline. Multiple fields should be examined. Branching or clumped hyphae are seen.
3. Treatment: Give patient miconazole nitrate vaginal cream 100 mgs intravaginally HS for 7 days. (Do not prescribe miconazole to pregnant women in the first trimester.)

Nystatin is a treatment of second choice. Prescribe Nystatin vaginal suppositories 100,000 units bid for 14 days.

4. In recurrent or persistent cases rule out diabetes, pregnancy, and frequent use of antibiotics which can promote the development of monilia. Refer to appropriate clinic.

BACTERIAL VAGINOSIS (also known as HAEMOPHILUS VAGINALIS, CORYNEBACTERIUM VAGINALIS and GARDNERELLA VAGINALIS)

1. Clinical diagnosis: Vaginal discharge is gray and homogenous. It often has air bubbles in it causing a frothy appearance. It has a "fishy" or amine odor. The client may be aware of an undesirable odor, especially at the time of sexual intercourse. Many clients are asymptomatic.
2. Microscopic diagnosis: Place a drop of discharge on a slide with a drop of normal saline. Vaginal epithelial cells display a characteristic stippled or granulated appearance. This appearance is caused by the adherence of bacteria on the surface of the epithelial cells. These cells are referred to as "clue" cells. Note that culture techniques usually fail to identify this fastidious organism. Diagnosis is best made by clinical and microscopic evaluation.
3. Treatment: Give metronidazole 500 mg bid for seven days. Always treat the husband with the same regimen -- metronidazole 500 mg bid for seven days. Advise client to refrain from intercourse until both she and her husband have concluded the course of therapy.
4. Advise client to use condoms to prevent future infections.

GONORRHOEA

1. Clinical diagnosis: The client's symptoms are usually those of malaise and low-grade fever. Urinary frequency and dysuria are common symptoms. Client may complain of vaginal discharge. Examination reveals profuse purulent discharge from the cervical canal. The labia may be swollen and a similar purulent discharge may be seen in the urethral meatus.
2. Microscopic and laboratory diagnosis: Presumptive diagnosis can be made with the microscopic identification of gram-negative intracellular diplococci. Definitive diagnosis requires culture.
3. Treatment: About one-fourth of men and two-fifths of women with gonococcal infection **ALSO HAVE** chlamydial infection. It is recommended that both a single dose of penicillin (provided client is not allergic to penicillin, then give alternate medication) and one week of tetracycline should be prescribed to treat both gonorrhoea and chlamydia. If untreated, 40% with cervical gonorrhoea develop PID and are at risk for involuntary sterility and pelvic abscess. Men are at risk for epididymitis, sterility, urethral stricture and infertility.

Prescribe aqueous procaine penicillin G 4.8 million units IM at 2 sites.

Also give probenecid 1 gram orally.

PLUS

Doxycycline 100 mg twice daily for 7 days.

4. Refer to Hatcher, p. 108 for alternative treatment regimens.
5. Always treat the husband. Inform client that:
  - all medication must be completed
  - avoid intercourse until partner is also cured
  - return for check-up 4-7 days after completing medication
  - to use condoms to prevent future infections
6. Give client appointment for return visit 4-7 days after treatment for gonorrhoea culture. (If no cure possibly antibiotic resistant strains.)

#### CHLAMYDIA

Chlamydia infection in tubes and uterus may not cause dramatic symptoms but can cause widespread damage to the reproductive tract resulting in chronic pain, infertility, and neonatal chlamydial infections such as ophthalmia or pneumonia acquired during vaginal delivery. Chlamydial infection during pregnancy increases the incidence of spontaneous abortion, stillbirth, and post-partum fever.

1. Clinical diagnosis: A yellow mucopurulent discharge from the cervix occurs. The patient may not recognise any symptoms.
2. Microscopic or laboratory diagnosis: Visualisation of 10 or more polymorphonuclear leukocytes per microscopic field at magnification of 1000 x provides a presumptive diagnosis. A definitive diagnosis is made through special culture techniques. Gonorrhoea should be excluded.
3. Treatment: Tetracycline 500 mg qid orally for 7-10 days or doxycycline 100 mg bid orally for 7-10 days. Always treat the husband. Counsel client to avoid sexual intercourse until both she and her partner have finished treatment.
4. Advise client to use condoms to prevent future infections.
5. See client for follow-up in 2 weeks (or sooner if symptoms not improving).

## X. INFECTION CONTROL PRACTICES

### HANDWASHING

Handwashing is the most important infection control procedure in a family planning clinic. Its purpose is to prevent the spread of infection from person to person by removing microorganisms from the skin that have been picked up during the day. It is especially important to wash hands between each client; before handling clean, disinfected or sterilised supplies; after handling soiled items or specimens; and before administering injections, inserting IUDs and obtaining blood. If water is not readily available, hands can be cleaned with cotton swabs wet with isopropyl or ethyl alcohol 70%.

### USE OF GLOVES IN INFECTION CONTROL

Clean gloves are used to protect staff from contact with infectious materials during:

- pelvic examination
- contact with any lesions
- handling of contaminated equipment and supplies such as IUD equipment and blood-soiled linen
- cleaning equipment before autoclaving or high-level disinfection

Sterile gloves are used to protect the client from contact with microorganisms on the hands of the staff. Sterile gloves may be used during IUD insertion if the provider is unable to load the arms of the T and maintain sterility of the IUD and the portion of the inserter/plunger entering the uterus.

### STERILISATION OF INSTRUMENTS AND GLOVES

Sterilisation destroys all microorganisms, including endospores. HIO clinics are supplied with autoclaves that sterilise instruments and gloves. Therefore, the following procedures should be followed for instruments and gloves.

#### 1. Used Specula and IUD Equipment

Immediately after using specula and IUD equipment, place the soiled instruments into a basin of disinfectant solution that has been prepared according to the manufacturer's directions. Remove instruments from disinfectant solution when ready to clean them thoroughly.

#### 2. Cleaning Equipment Before Sterilisation

Instruments and gloves must be thoroughly cleaned before autoclaving to ensure maximum results. The person cleaning the gloves or equipment should protect him/herself by wearing clean gloves. After use, the equipment should be rinsed in clean cold water to remove blood, mucus and other materials that may trap the organisms and then scrubbed again with hot water, soap and a brush and then the equipment should be rinsed again. (Re-usable gloves are washed in lukewarm soapy water and rinsed in clean

cold water until no soap remains.) The equipment and gloves are now ready for sterilisation. A separate area in the clinic should be designated for cleaning equipment. A separate sink with running water used only for cleaning clinic equipment is desirable.

### 3. Steam Sterilisation (Autoclave)

After cleaning equipment and supplies, the IUD equipment, forceps for handling sterile items, containers for sterile items, reusable sterile gloves, etc., will be sterilised by steam pressure autoclaving in the HIO project clinics. This method destroys all microorganisms. Equipment is autoclaved after cleaning at 121°C, or 250°F temperature, at 15 pounds of pressure per square inch for 30 minutes. This time does not include the time that is needed to reach the 250°F temperature or the drying and cooling time required afterwards. The specific directions provided for that particular autoclave should be followed. When autoclaving, it is important that:

- items be thoroughly cleaned before autoclaving
- all instruments be open (scissors, tenacula, etc.) in the autoclave
- directions for the operation of the autoclave be completely followed
- equipment and supplies be removed from the autoclave with sterile handling forceps and stored in sterile covered containers

### HIGH-LEVEL DISINFECTION (HLD) BY BOILING or CHEMICAL DISINFECTION

High-level disinfection destroys all microorganisms but not bacterial endospores. High-level disinfection can be achieved by boiling or soaking instruments in various disinfectants.

1. If equipment is required quickly, a high-level of disinfection can be obtained by boiling equipment. After thoroughly cleaning the equipment, BOIL the equipment for TWENTY MINUTES in the container with a lid. Do not add any more items while equipment is boiling. Ensure that the equipment is completely covered with water and it bubbles for 20 minutes. If you are above sea level, additional boiling time is required for water to reach a temperature of 100°C (212°F). As the altitude increases, add 5 minutes boiling time for each 1000 feet (or each 300 metres) above sea level.

After boiling, handle the instruments carefully, so that they are not contaminated. Touch them only with disinfected handling forceps or sterile gloves, store them in dry covered sterile containers only for a few days.

2. High-level disinfectants that may be used for chemical disinfection or soaking instruments are chlorine releasing substances, e.g. (bleach, chlorox), iodophor solutions (iodine), 70% ethyl or isopropyl alcohol, glutaraldehyde (Cidex), hydrogen peroxide and formaldehyde (see table 3).

TABLE 3

## Preparing and Using Chemical Disinfectants

Disinfectant (common solution or brand)	Effective Concentration	How to Dilute	Skin Irritant	Eye Irritant	Respi- ratory Irritant	Corrosive	Leaves Residue	Time Needed for HLD	Time Needed for Sterilization	Shelf Life <sup>1</sup>
Alcohol Ethyl (70%) Isopropyl (70-95%)	70% 70-95%	Use full strength	Yes (can dry skin)	Yes	No	No	No	20-30 minutes	Do not use	Change weekly; daily if heavily used; sooner if cloudy
Iodophors (10% poly- vidone iodine —PVI)	Approximately 0.4% <sup>11</sup>	Add 10% PVI to boiled water to obtain deep orange color	No <sup>a</sup>	Yes	No	Yes	Yes	20-30 minutes	Do not use	Change daily; add PVI to main- tain deep orange if color fades
	2.5% <sup>aa</sup>	1 part 10% PVI to 3 parts water	No <sup>a</sup>	Yes	No	Yes	Yes	20-30 minutes	Do not use	Change daily
Chlorine	0.1% <sup>11</sup> 0.5% <sup>aa</sup>	Dilution procedures vary <sup>o</sup>	Yes	Yes	Yes	Yes	Yes	20-30 minutes	Do not use	Change daily; sooner if cloudy
Formaldehyde (35-40%)	8%	1 part 35- 40% solution to 4 parts boiled water	Yes	Yes	Yes	No	Yes	20-30 minutes	24 hours	Change every 14 days
Glutaraldehyde Cidex™	2%	Use full strength	Yes	Yes	Yes	No	Yes	20-30 minutes	10 hours	Change every 14 days; sooner if cloudy
Sporicidin™		Dilute 1:16 for disinfection; 1:8 with boiled water for sterilization								
Hydrogen Peroxide (30%)	6%	1 part 30% solution to 4 parts boiled water	Yes	Yes	No	Yes	No	30 minutes	Do not use	Change daily; sooner if cloudy

<sup>1</sup> All chemical disinfectants are heat and light sensitive and must be stored appropriately.

<sup>11</sup> Adequate for use with clean equipment and when potable water is available for mixing solutions.

<sup>a</sup> Except in people with allergies to iodophors.

<sup>aa</sup> Can be used with equipment contaminated with organic matter and when nonpotable water must be used for mixing solutions.

<sup>o</sup> See Table 1 for instructions for making chlorine solutions from bleach. See Angle et al., 1989<sup>1</sup> or WHO, 1988<sup>1</sup> for instructions for making chlorine solutions from chlorine-releasing compounds.

Source: adapted from Wenzel, 1987.<sup>4</sup>

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from Tietjen, L. and McIntosh, N. "Infection Control in Family Planning  
Facilities."

## HANDLING FORCEPS

Forceps used to handle sterilised or high-level disinfected items must also be sterilised or disinfected. Pick up sterilised forceps by their handles only and keep the remaining part free from contamination so that it can be used to pick up sterile items.