Sub-dermal Contraceptive Implants (IMPLANON NXT)

National Guidelines

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Department of Women & Child Health
Directorate General of Primary Health Care
Sub-dermal Contraceptive Implants

( Implanon NXT)

National Guidelines
INTRODUCTION

The birth spacing program has started in October 1994 with the provision of four contraceptive methods. In 1996 intrauterine contraceptive device (IUCD) has been added as a fifth method. In the current five-year plan (2011-2015) for health development, Ministry of Health has planned to expand birth spacing program, through adding a new contraceptive method to currently provided birth spacing methods and encourage women to use long-acting methods. That new method is sub-dermal contraceptive implant.

Sub dermal contraceptive implant research and development began at the Population Council laboratories in New York in 1966. The development of contraceptive implants was made possible by the discovery of silicone and its bio-compatibility in the human body. Silastic tubes with sealed ends and filled with steroids provided a sustained release of the steroids in vitro over months; these models were the precursors of today’s contraceptive implants. This technology has resulted in the development and patenting of Norplant and Norplant-2 (Jadelle) by the Population Council.

These guidelines cover many subjects relevant to the Implanon NXT birth spacing method. They include information about the method itself, such as definition, mechanism of action, shelf life, indications, health benefits, advantages, disadvantages and side effects. Assessment of the client is also included and a detailed description of Implanon NXT insertion and removal. In addition, Management of problems that may arise is included. Medical eligibility criteria for Implant adopted by WHO in 2015, are included in the last section of the guidelines.

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ACKNOWLEDGMENT

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DEFINITION
Implanon NXT is a hormone-releasing contraceptive method for women used to prevent pregnancy for up to 3 years. The implant is a radio-opaque, flexible plastic rod about the size of a matchstick that contains a progestin hormone called etonogestrel, preloaded in a sterile disposable applicator. The implant is inserted subdermal just under the skin of the inner side of the upper arm. Implanon NXT does not contain estrogen. All health care providers should receive instruction and training prior to performing insertions and/or removal of Implanon NXT.

EFFECTIVENESS
Implanon NXT is one of the most effective and long lasting methods. Over 3 years of Implanon NXT use there is chance of less than 1 pregnancy per 100 women (1 per 1,000 women).

MECHANISM OF ACTION
The contraceptive effect of Implanon NXT is achieved by:
1. Preventing ovulation.
2. Preventing sperm penetration by altering the cervical mucus.
3. Possibly preventing implantation by thinning the endometrium.

SHELF LIFE
Store Implanon NXT at 25°C; short outing permitted to 15°-30°C. Protect from light. Avoid storing Implanon NXT in direct sunlight or at temperatures above 30°C. Use before expiry date printed on its plaster.

INDICATIONS
Nearly all women can use implants safely and effectively. It can be even used for the followings:
• Multiparous or Nulliparous.
• Clients of any age, including adolescents and women over 40 years old.
• Have just had an abortion, miscarriage, or ectopic pregnancy.
• Women who smoke cigarettes, regardless of their age or a number of cigarettes smoked.
• Breastfeeding mothers (starting as soon as 6 weeks after childbirth).
• Have history of anemia or current anemia.
• Have varicose veins.
• Are infected with HIV, whether or not on antiretroviral therapy.

HEALTH BENEFITS
Helps to protect against:
• Risks of pregnancy.
• Symptomatic pelvic inflammatory disease.
• Iron-deficiency anemia
ADVANTAGES

- Do not require the user to do anything once after insertion.
- Prevent pregnancy very effectively.
- Are long-lasting (up to 3 years). *(In case of obese women with BMI >30 up to 2.5 years)*
- Complete return of fertility on removal.
- Do not interfere with sex.
- Women can begin using implants without:
  - Pelvic examination.
  - Blood tests or other routine laboratory tests.
  - Cervical cancer screening.
  - Breast examination (unless there is a positive history that necessitates examination).
  - However, as per the national guidelines, clinical breast examination should be done to all birth spacing clients.

DISADVANTAGES

- Require specifically trained provider to insert and remove. It is considered a minor surgical procedure.
- A woman cannot start or stop the method by herself.
- Changes in bleeding pattern are common, but not harmful. Typically, prolonged irregular bleeding over the first year, and then lighter, *infrequent bleeding.*
- Relatively expensive method.

SIDE EFFECTS:

Implanon NXT users are more likely to have oligomenorrhea or Amenorrhea than irregular bleeding.

**Changes in bleeding patterns, includes:**

- **First several months:** Spotting, oligomenorrhea, amenorrhea, or menometrorrhagia.
- **After about one year:** More regular menses or infrequent changes in bleeding pattern.

**Other side effects**

- Headaches, Abdominal pain.
- Mood changes, Nausea.
- Breast tenderness, dizziness.
- Acne (can improve or worsen)
- Weight change
- Other possible physical changes: Enlarged ovarian follicle
ASSESSMENT OF CLIENT FOR CONTRACEPTIVE IMPLANTS USE

History

After asking the client about the standard birth spacing history taking questions as personal history, obstetric history, and menstrual history, ask her the questions below about known medical conditions. If she answers “no” to all of the questions, then she can have implants inserted if she wants. If she answers “yes” to a question, follow the instructions. In some cases, she can still start using implants.

1. Are you breastfeeding a baby less than 6 weeks old?  
   ❑ NO ❑ YES  
   She can start using implants as soon as 6 weeks after childbirth (see if she is fully or nearly fully breastfeeding or Partially breastfeeding).

2. Do you have severe cirrhosis of the liver, a liver infection, or liver tumor?  
   ❑ NO ❑ YES  
   If she reports serious active liver disease (jaundice, severe cirrhosis, liver Tumor), do not provide implants. Help her choose a method without hormones.

3. Do you have a serious problem now with a blood clot in your legs or lungs?  
   ❑ NO ❑ YES  
   If she reports a current blood clot (not superficial clots), and she is not on Anticoagulant therapy, do not provide implants. Help her choose a method without Hormones.

4. Do you have vaginal bleeding that is unusual for you?  
   ❑ NO ❑ YES  
   If she has unexplained vaginal bleeding that suggests pregnancy or an underlying medical condition, implants could make diagnosis and monitoring of any treatment more difficult. Help her choose a method to use while being evaluated and treated (not progestin-only injectable, or a copper-bearing or hormonal IUD). After treatment, re-evaluate for the use of implants.

5. Do you have or have you ever had breast cancer?  
   ❑ NO ❑ YES  
   Do not provide implants. Help her choose a method without hormones. Be sure to explain the health benefits and risks and the side effects of the method that the client will use. Also, point out any conditions that would make the method inadvisable, when relevant to the client.

Examination

<table>
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<tr>
<th>General examination</th>
<th>Systemic examination</th>
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</thead>
<tbody>
<tr>
<td>Pulse - Blood pressure - Weight</td>
<td>Cardiovascular (legs for DVT)</td>
</tr>
<tr>
<td>Pallor and signs of SLE</td>
<td>Abdominal (liver enlargement &amp;tenderness)</td>
</tr>
<tr>
<td>Jaundice</td>
<td>Pelvic examination (only if indicated)</td>
</tr>
<tr>
<td>Breast examination</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Investigations

| Urine test, if pregnancy suspected          | Antiphospholipid antibodies if she is suspected |
| CBC if anemic                               |                                                |
| Pap smear, if indicated                     |                                                |
| Breast & liver ultrasonography, if indicated|                                                |
USING CLINICAL JUDGMENT IN SPECIAL CASES

Usually, a woman with any of the conditions listed below should NOT use implants. In special circumstances, however, when other more appropriate methods are not available or acceptable to her, a qualified provider who can carefully assess a specific woman’s condition and the situation may decide that she can use implants. The provider needs to consider the severity of her condition and, for most conditions, whether she will have access to follow-up.

- Breastfeeding less than 6 weeks since giving birth (considering the risks of another pregnancy and that a woman may have limited further access to implants)
- An acute blood clot in deep veins of legs or lungs.
- Unexplained vaginal bleeding before evaluation for possible serious underlying condition.
- Had breast cancer more than 5 years ago, and it has not returned.
- Severe liver disease, infection, or tumor.
- Systemic lupus erythematos with positive (or unknown) antiphospholipid antibodies.

CONTRAINDICATIONS

Implanon NXT should not be used in women who have:

- Known or suspected pregnancy.
- Current or past history of thrombosis or thromboembolic disorders.
- Liver tumors, benign or malignant, or active liver disease.
- Undiagnosed abnormal uterine bleeding.
- Known, suspected or personal history of breast cancer, or other current or past history of progestin-sensitive tumors.
- Allergic reaction to any of the components of Implanon NXT.
METHOD PROVISION AND INSTRUCTIONS FOR METHOD USE

A. INITIATING CONTRACEPTION WITH IMPLANON NXT

IMPORTANT:
Rule out pregnancy before inserting the implant.

Timing of insertion depends on the woman’s recent contraceptive history, as follows:

- **No preceding hormonal contraceptive use in the past month**
  Implanon NXT should be inserted between Day 1 (first day of menstrual cycle) and Day 5 of the menstrual cycle, even if the woman is still bleeding. If inserted as recommended, back-up contraception is not necessary. If deviating from the recommended timing of insertion, the woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.

- **Switching contraceptive method to Implanon NXT**
  a. **From Combined hormonal contraceptives**: Implanon NXT should preferably be inserted on the day after the last active tablet of the previous combined oral contraceptive. At the latest, Implanon NXT should be inserted on the day following the usual tablet-free or placebo tablet interval of the previous combined hormonal contraceptive. If inserted as recommended, back-up contraception is not necessary. If deviating from the recommended timing of insertion, the woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.

  b. **From Progestin-only contraceptives**: There are several types of progestin-only methods Implanon NXT should be inserted as follows:
     a. **Injectable Contraceptives**: Insert Implanon NXT on the day the next injection is due.
     b. **Minipill**: a woman may switch to Implanon NXT on any day of the month. Implanon NXT should be inserted within 24 hours after taking the last tablet. If Implanon NXT inserted as recommended, back-up contraception is not necessary. If deviating from the recommended timing of insertion, the woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.

- **Following abortion or miscarriage**
  a. **First trimester**: Implanon NXT should be inserted within 5 days following a first-trimester abortion or miscarriage.
  b. **Second trimester**: Insert Implanon NXT between 21 to 28 days following second-trimester abortion or miscarriage. If inserted as recommended, back-up contraception is not necessary. If deviating from the recommended timing of insertion, the woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.
Following Postpartum

a. **Not Breastfeeding**: Implanon NXT should be inserted between 21 to 28 days postpartum. If inserted as recommended, back-up contraception is not necessary. If deviating from the recommended timing of insertion, the woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.

b. **Breastfeeding**: Implanon NXT should be inserted at 6 weeks postpartum. (To avoid the theoretical risk of the hormone on babies with immature liver). The woman should be advised to use a barrier method until 7 days after insertion. If intercourse has already occurred, pregnancy should be excluded.
B. INSERTION OF IMPLANON NXT

The basis for successful use and subsequent removal of Implanon NXT is a correct and careful performance sub-dermal insertion of the implant in accordance with the instructions. Both the health care provider and the woman should be able to feel the implant under the skin after placement.

All healthcare providers performing insertions and/or removals of Implanon NXT should receive instructions and training prior to insertion or removal of the implant.

PREPARATION

Before insertion of Implanon NXT, the healthcare provider should confirm that:

a. The woman is neither pregnant nor has any other contraindication for the use of Implanon NXT.
b. The woman has performed a medical history and physical examination.
c. The woman counseled about the benefits and risks of Implanon NXT.
d. The woman has reviewed and completed a verbal consent to be maintained with the woman’s chart.
e. The woman does not have allergies to the antiseptic and anesthetic to be used during insertion.

INSERTION OF IMPLANON NXT UNDER ASEPTIC CONDITIONS

The following equipments are needed for the implant insertion:

1. An examination table for the woman to lie on
2. Sterile surgical drapes, sterile gloves, antiseptic solution (preferred Betadine solution), permanent marker
3. Local anesthetic, needles, and syringe
4. Sterile gauze, adhesive bandage, pressure bandage

Figure 1: An applicator and its parts are shown below

![Slider](image)

![Protective cap](image)

![Needle](image)
INSERTION PROCEDURE

Step (1):
Ask the woman to lie on her back on the examination table with her non-dominant arm flexed at the elbow and externally rotated so that her wrist is parallel to her ear or her hand is positioned next to her head (Figure 2).

Step (2):
Identify the insertion site, which is at the inner side of the non-dominant upper arm about 8-10 cm (3-4 inches) above the medial epicondyle of the humerus (Figure 3). The implant should be inserted sub-dermally just under the skin to avoid the large blood vessels and nerves that lie deeper in the subcutaneous tissue in the sulcus between the triceps and biceps muscle, (Figure 3).
Step (3):
Make two marks with a permanent marker: first, mark the spot where the etonogestrel implant will be inserted, and second, mark a spot a few centimeters proximal to the first mark (Figure 4). This second mark will later serve as a direction guide during insertion.

Figure (4)

Step (4):
Clean the insertion site with an antiseptic solution.

Step (5):
Anesthetize the insertion area (for example, with anesthetic spray or by injecting 2 ml of 1% lidocaine just under the skin along the planned insertion tunnel).

Step (6):
Remove the sterile pre-loaded disposable Implanon NXT applicator carrying the implant from its blister. Keep the Implanon NXT needle and rod sterile. The applicator should not be used if sterility is in question. If contamination occurs, use a new package of Implanon NXT with a new sterile applicator.
Step (7):
Hold the applicator just above the needle, at the textured surface area. Remove the transparent protection cap by sliding it horizontally in the direction of the arrow away from the needle (Figure 5). If the cap does not come off easily, the applicator should not be used. You can see the white colored implant by looking into the tip of the needle. Do not touch the grey slider until you fully inserted the needle subdermally, as it will retract the needle and prematurely release the implant from the applicator.

Figure (5)

Step (8):
With your free hand, stretch the skin around the insertion site with thumb and index finger, (figure 6).

Step (9):
Puncture the skin with the tip of the needle angled about 30° (Figure 7).

Figure (7)
Step (10):
Lower the applicator to a horizontal position. While lifting the skin with the tip of the needle (Figure 8), slide the needle to its full length. You may feel a slight resistance, but do not exert excessive force. If the needle is not inserted to its full length, the implant will not be inserted properly. You can best see the movement of the needle if you are seated and are looking at the applicator from the side and NOT from above. In this position, you can clearly see the insertion site and the movement of the needle just under the skin.

![Figure (8)](image)

Step (11):
Keep the applicator in the same position with the needle inserted to its full length. If needed, you may use your free hand to keep the applicator in the same position during the following procedure. Unlock the purple slider by pushing it slightly down. Move the slider fully back until it stops (Figure 9). The implant is now in its final sub dermal position, and the needle is locked inside the body of the applicator. The applicator can now be removed. If the applicator is not kept in the same position during this procedure or if the purple slider is not completely moved to the back, the implant will not be inserted properly.

![Figure (9)](image)
Step (12):
Always verify the presence of the implant in the woman’s arm immediately after insertion by palpation. By palpating both ends of the implant, you should be able to confirm the presence of the 4 cm rod (Figure 10).

![Figure 10](image)

If you cannot feel the implant or are in doubt of its presence;
• Check the applicator. The needle should be fully retracted and only the grey tip of the obturator should be visible.
• Use other methods to confirm the presence of the implant.
Suitable methods are:
  o Two-dimensional X-ray,
  o X-ray computerized tomography (CT scan),
  o Ultrasound scanning (USS) with a high-frequency linear array transducer(≥10 MHz)
  o Magnetic Resonance Imaging (MRI).

Till the presence of the implant has been verified, the woman should be advised to use a non-hormonal contraceptive method, such as condoms.

Step (13):
Place a small adhesive waterproof bandage over the insertion site. Request that the woman palpates the implant.
Step (14):
Apply a pressure bandage with sterile gauze to minimize bruising. The woman may remove the pressure bandage in 24 hours and the small bandage over the insertion site after 3 to 5 days.

Figure (10)

Step (15):
Complete the USER CARD and give it to the woman to keep. Also, complete the PATIENT CHART LABEL and affix it to the woman’s medical record.

Step (16):
The applicator is for single use only and should be disposed of in accordance with the Center for Disease Control and Prevention guidelines for handling of hazardous waste.
PRACTICAL COMPLICATIONS OF INSERTION

Non-insertion
Implanon NXT has inbuilt safety features to reduce the risk of non-insertion, but it is still important to check for the presence of the implant in the applicator and to palpate the skin after insertion. The applicator should be checked immediately at the end of the insertion procedure. The needle should be fully retracted and only the grey tip of the obturator should be visible.

Deep insertion
The correct way of insertion of implant should be situated subdermally (subcutaneously), just under the skin. Significant migration of the implant is not thought to occur when an implant has been correctly inserted; therefore, deep implant insertions are more likely a result of the insertion technique. If an implant is inserted too deeply, it may be difficult to remove and/or locate, and there is greater potential for neurovascular injury, infection, and scar formation.

Nerve or vascular injury
Implanon NXT- states that the implant should be inserted at the inner side of the upper arm to avoid the large blood vessels and nerves that lie deeper in the connective tissue between the Biceps and triceps muscles.
REMOVAL OF IMPLANON NXT

A. PREPARATION

Before initiating the removal procedure, the healthcare provider should carefully read the instructions for removal and consult the USER CARD and/or the PATIENT CHART LABEL for the location of the implant. The exact location of the implant in the arm should be verified by palpation. If the implant is not palpable, ultrasound with a high-frequency linear array transducer (10 MHz or greater) or magnetic resonance Imaging (MRI) can be performed to verify its presence. A non-palpable implant should always be first located prior to removal. Suitable methods for localization include ultrasound with a high-frequency linear array transducer (10 MHz or greater) or magnetic resonance Imaging (MRI). If these imaging methods fail to locate the implant, an etonogestrel blood level determination can be used for verification of the presence of the implant.

After localization of a non-palpable implant, consider conducting removal with ultrasound guidance. There have been occasional reports of migration of the implant; usually this involves a minor movement relative to the original position. This may complicate localization of the implant by palpation, ultrasound or magnetic resonance imaging, and removal may require a larger incision and more time.

Exploratory surgery without knowledge of the exact location of the implant is strongly discouraged.

Removal of deeply inserted implants should be conducted with caution in order to prevent injury to deeper neural or vascular structures in the arm and be performed by healthcare providers familiar with the anatomy of the arm.

Before removal of the implant, the health care provider should confirm that:
• The woman does not have allergies to the antiseptic or anesthetic to be used.
• Remove the implant under aseptic conditions.

The following equipments are needed for removal of the implant:
  o An examination table for the woman to lie on
  o Sterile surgical drapes, sterile gloves, antiseptic solution, permanent marker (optional)
  o Local anesthetic, needles, and syringe
  o Sterile scalpel, forceps (straight and curved mosquito)
  o Skin closure(steri strips), sterile gauze, an adhesive bandage, and pressure bandages.
B. REMOVAL PROCEDURE

Step (1):
Clean the site where the incision will be made and apply an antiseptic. Locate the implant by palpation and mark the distal end (end closest to the elbow), for example, with a permanent marker (Figure 11).

Step (2):
Anesthetize the arm, for example, with 0.5 to 1 ml 1% lidocaine at the marked site where the incision will be made (Figure 12). Be sure to inject the local anesthetic under the implant to keep it close to the skin surface.

Step (3):
Push down the proximal end of the implant (Figure 13) to stabilize it; a bulge may appear indicating the distal end of the implant. Starting at the distal tip of the implant, make a longitudinal incision of 2 mm towards the elbow.
Step (4):
Gently push the implant towards the incision until the tip is visible. Grasp the implant with forceps (preferably curved mosquito forceps) and gently remove the implant (Figure 14).

![Figure (14)](image)

Step (5):
If the tip of the implant does not become visible in the incision, gently insert a forceps into the incision (Figure 15). Flip the forceps over into your other hand (Figure 16).

![Figure (15)](image)  [Figure (16)](image)

Step (6):
If the implant is encapsulated, make an incision into the tissue sheath and then remove the implant with the forceps (Figures 16 and 17).

![Figure (17)](image)  [Figure (18)](image)
Step (7):
With a second pair of forceps carefully dissect the tissue around the implant and grasp the implant (Figure 19). The implant can then be removed.

![Figure 19](image)

Step (8):
Confirm that the entire implant, which is 4 cm long, has been removed by measuring its length (Figure 20).

![Figure 20](image)

Step (9):
After removing the implant, close the incision with a Steri-strip and apply an adhesive bandage (Figure 21).

![Figure 21](image)
Step (10):
Apply a pressure bandage with sterile gauze to minimize bruising. The woman may remove the pressure bandage in 24 hours and the small bandage in 3 to 5 days (Figure 22).

REPLACING IMPLANON NXT
Immediate replacement can be done after removal of the previous implant and is similar to the insertion procedure described in the section of the Insertion of Implanon NXT.
The new implant may be inserted in the same arm, and through the same incision from which the previous implant was removed. If the same incision is being used to insert a new implant, anesthetize the insertion site [for example, 2 ml lidocaine (1%)] just under the skin along the ‘insertion canal.’ Follow the subsequent steps in the insertion instructions.

RESUSCITATION
As with all procedures, there is a risk of collapse due to a vasovagal reaction or anaphylaxis. So it recommends to keep essential drugs and equipment for resuscitation beside the procedure.

WHEN TO RETURN
Assure every client that she is welcome to come back anytime—for example, if she has problems, questions, or wants another method; she has a major change in health status, or she thinks she might be pregnant.
Also, if:
• She has pain, heat, pus, or redness at the insertion site that becomes worse or does not go away, or she sees a rod coming out.
• She has gained a lot of weight. This may decrease the length of time her implants remain highly effective.
• General health advice: Anyone who suddenly feels that something is seriously wrong with her health should immediately seek medical care from a nurse or doctor. Her contraceptive method is most likely not the cause of the condition, but she should tell the nurse or doctor what method she is using.

COMPLICATIONS

➢ **Uncommon complications:**
  • **Infection at insertion site**
    Most infections occur within the first 2 months after insertion.
  • **Difficult removal**
    Rare if properly inserted and the provider is skilled for removal.

➢ **Rare complications:**
  • **Expulsion of implant**
    (Expulsions most often occur within the first 4 months after insertion).
  • **Ovarian Cysts**
    If follicular development occurs, atresia of the follicle is sometimes delayed, and the follicle may continue to grow beyond the size it would attain in a normal cycle. Generally, these enlarged follicles disappear spontaneously. On rare occasion, surgery may be required.
  • **Depressed Mood**
    Women with a history of depressed mood should be carefully observed. Consideration should be given to removing Implanon NXT in patients who become significantly depressed.

**Note:** Some women get bruises at the site of insertion which usually resolves within a week after insertion.
PATIENT COUNSELING INFORMATION

“See FDA-Approved Patient Labeling (Patient Information)”

- Counsel women about the insertion and removal procedure of the Implanon NXT.
- Provide the woman with a copy of the Patient Labeling and ensure that she understands the information in the Patient Labeling before insertion and removal.
- A verbal consent will be taken from the woman and a user card should be filled out and given to the patient after insertion of the Implanon NXT, so that she will have a record of the location of the implant in the upper arm and when it should be removed.
- Counsel women that Implanon NXT does not protect against HIV infection (AIDS) or other sexually transmitted diseases.
- Counsel women that the use of Implanon NXT may be associated with changes in their normal menstrual bleeding patterns so that they know what to expect.

Correcting Misunderstandings (see also Questions and Answers Page 35)

- Stop working once they are removed. Their hormones do not remain in a woman’s body.
- Can stop monthly bleeding, but this is not harmful. It is similar to not having monthly bleeding during pregnancy. Blood is not building up inside the woman.
- Do not make women infertile.
- Do not move to other parts of the body.
- Substantially reduce the risk of ectopic pregnancy.
MANAGING ANY PROBLEM

Problems Reported as Side Effects or Complications
May or may not be due to the method.
Problems with side effects and complications affect women’s satisfaction and use of implants.
They deserve the provider’s attention. If the client reports any side effects or complications, listen to her concerns, give her advice, and, if appropriate, treat.
Offer to help the client choose another method, if she wishes, or if problems cannot be overcome.

1. Irregular bleeding *(bleeding at unexpected times that bothers the client)*
   - Reassure her that many women using implants experience irregular bleeding. It is not harmful and usually becomes less or stops after the first year of use.
   - For modest short-term relief NSAID can be used. Ibuprofen 400mg or Mefenamic Acid 500mg can be used TID after meals for 5 days, when irregular bleeding starts.
   - If symptoms persist, she can try one of the followings:
     - Combined oral contraceptives with the progestin levonorgestrel(COC). one pill to be taken daily for 21 days.
     - Tanexamic acid 1 to 1.5 g, three to four times daily for 3 to 4 days if there is heavy menstrual bleeding.
     - If irregular bleeding continues or starts after several months of regular menses or amenorrhea, or you suspect that something may be wrong for other reasons, consider underlying conditions unrelated to method use.

2. Amenorrhea
Reassure her that some women stop having menses when using implants and this is not harmful. There is no need to lose blood every month. It is similar to those during pregnancy. She is not infertile. Blood is not building up inside her. (Some women are happy to not have menses)

3. Heavy or prolonged bleeding *(twice as much as usual as or longer than 8 days)*
   - Reassure her that some women using implants experience heavy or prolonged bleeding. It is generally not harmful and usually becomes less or stops after a few months.
   - For modest short-term relief, she can try any of the treatments for irregular bleeding, above, starting when there is heavy bleeding. Or
   - Tanexamic Acid 1 to 1.5 g, three to four times daily for 3 to 4 days initiated when the heavy menstrual bleeding continues.
   - Combined NSAID and Tranexamic acid can be used to control severe bleeding if renal function is normal
   - Combined oral contraceptives with 50 μg of Ethinyl estradiol may work better than lower-dose pills.
• To help prevent anemia, suggest she take iron tablets and tell her it is important to eat foods containing iron, such as meat and poultry (especially beef and chicken liver), fish, green leafy vegetables, and legumes (beans, bean curd, lentils, and peas).
• If heavy or prolonged bleeding continues or starts after several months of normal menses or amenorrhea, or you suspect that something may be wrong for other reasons, consider underlying conditions unrelated to method use.

4. **Ordinary headaches** (non-migrainous)
   • Paracetamol (500–1000 mg), or another pain reliever.
   • Any headache that gets worse or occurs more often during use of implants should be evaluated.

5. **Mild abdominal pain**
   • Ibuprofen (200–400 mg), paracetamol (500–1000 mg), or other pain reliever.
   • Consider locally available remedies.

6. **Acne or Chloasma**
   • If the client wants to stop using implants because of acne, she can consider switching to COCs. Many women’s acne improves with COC use.
   • Chloasma may develop in women with history of choasma gravidarum advise to avoid exposure to the sun or ultraviolet radiation.

7. **Weight change**
   Review diet and counsel as needed.

8. **Breast tenderness**
   • Recommend that she wears a supportive bra (including during strenuous activity and sleep).
   • Try hot or cold compresses.
   • Suggest ibuprofen (200–400 mg), paracetamol (500–1000 mg), or other pain reliever.
   • Consider locally available remedies.

9. **Mood changes or changes in sex drive**
   • Ask about changes in her life that could affect her mood or sex drive, including changes in her relationship with her partner. Give her support as appropriate.
   • Clients who have serious mood changes such as major depression should be referred for care.

10. **Nausea or dizziness**
    Reassure

11. **Pain after insertion or removal**
    • For pain after insertion, check that the bandage or gauze on her arm is not too tight.
    • Put a new bandage on the arm and advise her to avoid pressing for few days.
    • Give her ibuprofen (200–400 mg), paracetamol (500–1000 mg), or other pain reliever.
12. Infection at the insertion site (redness, heat, pain, pus)
- Do not remove the implants.
- Clean the infected area with soap and water or antiseptic.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if the infection does not clear. If the infection has not cleared, remove the implants or refer for removal.
- Expulsion or partial expulsion often follows an infection. Ask the client to return if she notices an implant coming out.

IF Abscess DEVELOPED (pocket of pus under the skin due to infection)
- Clean the area with antiseptic.
- Cut open (incise) and drain the abscess.
- Treat the wound.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if she has heat, redness, pain, or drainage of the wound. If the infection is present when she returns, remove the implants or refer for removal.

13. Expulsion (when one or more implants begin to come out of the arm)
- Rare. Usually occurs within a few months of insertion or with infection.
- If no infection is present, replace the expelled rod or capsule through a new incision near the other rods or capsules, or refer for replacement.

14. Severe pain in lower abdomen
Abdominal pain may be due to
- Surgical problems,
- Gynecological problems such as:
  - Enlarged ovarian follicles or cysts.
    - A woman can continue to use implants during evaluation.
    - There is no need to treat enlarged ovarian follicles or cysts unless they grow abnormally large, twist, or burst. Reassure the client that they usually disappear on their own.
    - To be sure the problem is resolved, see the client again in 6 weeks, if possible.
  - Ectopic pregnancy, which is rare and not caused by implants, but it can be life-threatening. In the early stages of ectopic pregnancy, symptoms may be absent or mild, but eventually they will become severe. Following symptoms and signs increase the suspicion of ectopic pregnancy
    - Unusual abdominal pain or tenderness
    - Abnormal vaginal bleeding or no monthly bleeding—especially if this is a change from her usual bleeding pattern, Light-headedness or dizziness, fainting

If ectopic pregnancy or other serious health condition is suspected, escort the patient for immediate diagnosis and care.
15. Impalpable Implant

Women with an impalpable implant should be advised to use additional precautions, or avoid intercourse until the presence of an implant is confirmed. The location of an impalpable or deep implant should be identified before exploratory surgery. (Figure 18)

Management of impalpable implant

![Diagram of impalpable implant management](image)
New Problems DURING USE That May Require Switching Methods

May or may not be due to the method:

1. **Unexplained vaginal bleeding** (that suggests a medical condition, not related to the method)
   - Refer or evaluate by history and pelvic examination. Diagnose and treat as appropriate.
   - If no cause of bleeding can be found, consider stopping implants to make diagnosis easier. Provide another method of her choice to use until the condition is evaluated and treated (not progestin-only injectables, or a copper-bearing or hormonal IUD).
   - If bleeding is caused by sexually transmitted infection or pelvic inflammatory disease, she can continue using implants during treatment.

2. **Migraine headaches**
   - If she has migraine headaches without aura, she can continue to use implants if she wishes.
   - If she has migraine aura, remove the implants. Help her choose a method without hormones.

3. **Certain serious health conditions (suspected blood clots in the deep veins of the legs or lungs, serious liver disease, or breast cancer).**
   - Remove the implants or refer for removal.
   - Give her a backup method to use until her condition is evaluated.
   - Refer for diagnosis and care, if not already under care.

4. **Heart disease due to blocked or narrowed arteries (ischemic heart disease) or stroke**
   - A woman who has one of these conditions can safely start implant. If, however, the condition develops while she is using implants:
     - Remove the implants or refer for removal.
     - Help her choose a method without hormones.
     - Refer for diagnosis and care, if not already under care.

5. **Suspected pregnancy**
   - Assess for pregnancy, including ectopic pregnancy.
   - Remove the implants or refer for removal.
   - There are no known risks to a fetus conceived while a woman has implants in place.
QUESTIONS AND ANSWERS ABOUT IMPLANTS

1. Do users of implants require follow-up visits?
   No. Routine periodic visits are not necessary for implant users. Annual visits may be helpful for other preventive care, but they are not required. Of course, women are welcome to return at anytime with questions.

2. Can implants be left permanently in a woman’s arm?
   Leaving the implants in place beyond their effective lifespan is generally not recommended if the woman continues to be at risk of pregnancy. The implants themselves are not dangerous, but as the hormone levels in the implants drop, they become less and less effective.

3. Do implants cause cancer?
   No. Studies have not shown increased risk of any cancer with the use of implants.

4. How long does it take to become pregnant after the implants are removed?
   Women who stop using implants can become pregnant as quickly as women who stop non-hormonal methods. Implants do not delay the return of a woman’s fertility after they are removed. The bleeding pattern a woman had before she used implants generally returns after they are removed. Some women may have to wait a few months before their usual bleeding pattern returns.

5. Do implants cause birth defects? Will the fetus be harmed if a woman accidentally becomes pregnant with implants in place?
   No. Good evidence shows that implants will not cause birth defects and will not otherwise harm the fetus if a woman becomes pregnant while using implants or accidentally has implants inserted when she is already pregnant.

6. Can implants move around within a woman’s body or come out of her arm?
   Implants do not move around in a woman’s body. The implants remain where they are inserted until they are removed. Rarely, a rod may start to come out, more often in the first 4 months after insertion. This usually happens because they were not inserted well or because of an infection where they were inserted. In these cases, the woman will see the implants coming out. Some women may have a sudden change in bleeding pattern. If a woman notices a rod coming out, she should start using a backup method and return to the clinic at once.
7. Do implants increase the risk of ectopic pregnancy?

No. On the contrary, implants greatly reduce the risk of ectopic pregnancy. Ectopic pregnancies are extremely rare among implant users. The rate of ectopic pregnancy among women with implants is 6 per 100,000 women per year. The rate of ectopic pregnancy among women in the United States using no contraceptive method is 650 per 100,000 women per year. On the very rare occasions that implant fail and pregnancy occurs, 10 to 17 of every 100 of these pregnancies are ectopic. Thus, the great majority of pregnancies after implants fail are not ectopic. Still, ectopic pregnancy can be life-threatening, so a provider should be aware that ectopic pregnancy is possible if implants fail.

8. How soon can a breastfeeding woman start a progestin-only method—implants, progestin-only pills or injectable, or LNG-IUD?

WHO guidance calls for waiting until at least 6 weeks after childbirth to start a progestin-only contraceptive (4 weeks for the LNG-IUD).

9. Should women with high BMI avoid implants?

No. These women should know, however, that studies of Implanon NXT have not found that weight decreases effectiveness within the lifespan approved for this type of implant.

10. What should be done if an implant user has an ovarian cyst?

The great majority of cysts are not true cysts but actually fluid-filled structures in the ovary (follicles) that continue to grow beyond the usual size in a normal menstrual cycle. They may cause some mild abdominal pain, but they only require treatment if they grow abnormally large, twist, or burst. These follicles usually go away without treatment.

11. Can a woman work soon after having implants inserted?

Yes, a woman can do her usual work immediately after leaving the clinic as long as she does not bump the insertion site or get it wet.

12. Must a woman have a pelvic examination before she can have implants inserted?

No. Instead, asking the right questions can help the provider be reasonably certain she is not pregnant. No condition that can be detected by a pelvic examination rules out the use of implants.
MEDICAL ELIGIBILITY CRITERIA FOR IMPLANT (Adopted from WHO MEC 2015)

<table>
<thead>
<tr>
<th>MEC Categories For Contraceptive Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A condition for which there is no restriction for the use of the contraceptive method</td>
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<tr>
<td>2 A condition where the advantages of using the method generally outweigh the theoretical or proven risks</td>
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<tr>
<td>3 A condition where the theoretical or proven risks usually outweigh the advantages of using the method</td>
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<td>4 A condition which represents an unacceptable health risk if the contraceptive method is used.</td>
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<tr>
<td>Condition</td>
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<tr>
<td>Age</td>
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<tr>
<td>Anemias</td>
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<td>Benign ovarian tumors (including cysts)</td>
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<td>Breast disease</td>
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<td>Breastfeeding (Postpartum)</td>
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<tr>
<td>Cervical cancer</td>
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<td>Cervical ectropion</td>
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<td>Cervical intraepithelial neoplasia</td>
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<td>Cirrhosis</td>
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<tr>
<td>Deep venous thrombosis (DVT) / Pulmonary embolism (PE)</td>
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<td>Depressive disorders</td>
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<td>Condition</td>
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<tr>
<td>Endometrial cancer‡</td>
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<td>Endometrial hyperplasia</td>
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<td>Epilepsy‡</td>
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<tr>
<td>Gallbladder disease</td>
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<tr>
<td>a) Symptomatic</td>
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<tr>
<td>(i) treated by cholecystectomy</td>
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<tr>
<td>(ii) medically treated</td>
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<tr>
<td>(iii) current</td>
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<tr>
<td>b) Asymptomatic</td>
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<tr>
<td>Gestational trophoblastic disease</td>
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<tr>
<td>a) Decreasing or undetectable β-hCG levels</td>
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<td>b) Persistently elevated β-hCG levels or malignant disease‡</td>
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<tr>
<td>Headaches</td>
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<td>a) Non-migrainous</td>
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<td>b) Migraine</td>
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<tr>
<td>ii) without aura, age ≥35</td>
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<tr>
<td>iii) with aura, any age</td>
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<tr>
<td>History of bariatric surgery ‡</td>
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<td>a) Restrictive procedures</td>
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<td>b) Malabsorptive procedures</td>
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<tr>
<td>History of cholestasis</td>
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<td>a) Pregnancy-related</td>
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<td>b) Past COC-related</td>
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<td>History of high blood pressure during pregnancy</td>
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<td>History of pelvic surgery</td>
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<td>HIV infected (see also Drug Interactions)‡</td>
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<td>AIDS (see also Drug Interactions)‡</td>
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<td>Hyperlipidemias</td>
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<td>Clinically well on therapy</td>
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<td>Hypertension</td>
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<td>b) Elevated blood pressure levels</td>
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<td>(properly taken measurements)</td>
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<tr>
<td>(i) systolic 140-159 or diastolic 90-99</td>
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<td>(ii) systolic ≥160 or diastolic ≥100‡</td>
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<tr>
<td>c) Vascular disease</td>
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<tr>
<td>Inflammatory bowel disease</td>
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<tr>
<td>(Ulcerative colitis, Crohn’s disease)</td>
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<tr>
<td>Ischemic heart disease‡</td>
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<tr>
<td>Current and history of</td>
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<tr>
<td>Liver tumors</td>
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<td>a) Benign</td>
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<tr>
<td>i) Focal nodular hyperplasia</td>
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<tr>
<td>ii) Hepatocellular adenoma‡</td>
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<tr>
<td>b) Malignant‡</td>
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<tr>
<td>Malaria</td>
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<tr>
<td>Multiple risk factors for arterial cardiovascular disease</td>
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<td>(such as older age, smoking, diabetes and hypertension)</td>
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<td>Obesity</td>
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<td>a) &gt;30 kg/m² body mass index (BMI)</td>
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<td>Condition</td>
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<tr>
<td>Ovarian cancer‡</td>
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<tr>
<td>Parity</td>
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<td>b) Parous</td>
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<tr>
<td>Past ectopic pregnancy</td>
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<tr>
<td>Pelvic inflammatory disease</td>
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<tr>
<td>b) Current</td>
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<tr>
<td>Peripartum cardiomyopathy ‡</td>
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<td>b) Moderately or severely impaired cardiac function</td>
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<tr>
<td>Postabortion</td>
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<td>b) Second trimester</td>
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<tr>
<td>c) Immediately post-septic abortion</td>
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<td>Postpartum (see also Breastfeeding)</td>
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<td>b) 21 days to 42 days</td>
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<td>c) &gt; 42 days</td>
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<td>Pregnancy</td>
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<td>Rheumatoid arthritis</td>
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<td>b) Not on immunosuppressive therapy</td>
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<tr>
<td>Schistosomiasis</td>
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<tr>
<td>b) Fibrosis of the liver ‡</td>
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<td>Severe dysmenorrhea</td>
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<tr>
<td>Sexually transmitted infections (STIs)</td>
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<td>b) Other STIs (excluding HIV and hepatitis)</td>
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<td>c) Vaginitis (including trichomonasvaginalis and bacterial vaginosis)</td>
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<tr>
<td>d) Increased risk of STIs</td>
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<tr>
<td>Smoking</td>
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<td>b) Age ≥ 35, &lt; 15 cigarettes/day</td>
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<td>c) Age ≥ 35, ≥ 15 cigarettes/day</td>
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<td>Solid organ transplantation‡</td>
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<td>b) Uncomplicated</td>
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<td>Stroke‡</td>
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<td>b) Superficial thrombophlebitis</td>
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<tr>
<td>Systemic lupus erythematosus‡</td>
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<td>b) Severe thrombocytopenia</td>
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<td>c) Immunosuppressive treatment</td>
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<td>Condition</td>
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<tr>
<td>Thrombogenic mutations‡</td>
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<td>Thyroid disorders</td>
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<td>Tuberculosis‡ (see also Drug Interactions)</td>
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<tr>
<td>Unexplained vaginal bleeding (suspected for serious condition) before evaluation</td>
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<td>Uterine fibroids</td>
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<td>Valvular heart disease</td>
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<td>Vaginal bleeding patterns</td>
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<td>Viral hepatitis</td>
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<td>Antiretroviral therapy</td>
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* Please see the complete guidance for a clarification to this classification
‡ Condition that exposes a woman to increased risk as a result of unintended pregnancy.
REFERENCES:

- NHS- 2015
- WHO MEC 2015