



جامعة المستقبل  
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# Family planning

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## **Family Planning and the Nurse's Role:**

**1.Education:** Nurses provide accurate information about contraceptive methods, their effectiveness, and how they work.

**2.Guidance:** Nurses help individuals or couples understand their options and make informed decisions based on their circumstances and preferences.

**3.Discussing Advantages and Disadvantages:** Nurses ensure individuals are aware of the benefits and potential risks or side effects of each family planning method.

**4.Informing About Side Effects:** Nurses educate about common side effects and provide advice on how to manage them.

**5.Discussing Long-term Effects:** Nurses ensure individuals understand the long-term implications of their chosen method, such as effects on fertility or health.

Ultimately, while nurses provide crucial support, the decision on family planning methods is left to the individuals or couples, enabling them to make choices that align with their values and goals.

## **Considerations in Contraception:**

**1.Optimum Timing Between Pregnancies:** The recommended interval between pregnancies is 18 to 24 months to reduce health risks for both the mother and child, promoting better outcomes.

**2.Effectiveness and Failure of Contraceptive Methods:** Contraceptive methods are not foolproof, and the likelihood of pregnancy varies by method. Failure can result from inherent limitations of the method or improper use (e.g., missed doses or incorrect usage).

**3.Patient Education and Correct Use:** Nurses play a key role in educating patients on the proper use of contraceptives to minimize failure. For example, ensuring individuals understand the importance of taking birth control pills at the same time every day is crucial for effectiveness.

By providing guidance and support, nurses help ensure that pregnancies are well-timed, wanted, and contribute to the health of both the mother and child.

## **Healthy People 2030 Goals on Contraception and the Nurse's Role:**

**1.Reduce Unintended Pregnancies:** Healthy People 2030 aims to reduce unintended pregnancies to no more than 30% of all pregnancies. This requires improving access to family planning services, education, and contraception options.

**2.Reduce Unintended Pregnancies Despite Contraceptive Use:** The goal is to reduce the percentage of women who experience an unintended pregnancy despite using contraception to no more than 7%. This highlights the need for both selecting the right method and using it correctly.

**Nurse's Role:** Nurses are crucial in offering guidance on appropriate contraceptive methods, ensuring correct usage, and providing ongoing support and education. They must also address factors contributing to contraceptive failure, such as inconsistent use, and help patients overcome barriers to adhering to their contraceptive regimen.

**Family planning methods can be classified into several categories based on their mechanism of action, duration, and effectiveness.**

### **1. Temporary (Reversible) Methods**

These methods can be stopped and reversed, allowing individuals to conceive once the method is discontinued.

• **Hormonal Methods:** These alter a woman's hormones to prevent ovulation or alter the cervical mucus to prevent sperm from reaching the egg.

- **Birth control pills** (oral contraceptives)
- **Contraceptive patch**
- **Injectable contraceptives** (e.g., Depo-Provera)
- **Contraceptive implants**
- **Vaginal rings**

• **Barrier Methods:** These physically prevent sperm from entering the uterus.

- **Condoms** (male and female)
- **Diaphragms**
- **Cervical caps**
- **Spermicides** (chemical barriers that kill sperm)

• **Intrauterine Devices (IUDs):** Small devices inserted into the uterus that prevent pregnancy by disrupting the fertilization process.

- **Copper IUD**
- **Hormonal IUD**

•**Fertility Awareness Methods:** These involve tracking the menstrual cycle to identify fertile days, during which couples either avoid intercourse or use barrier methods.

- **Calendar method**
- **Basal body temperature method**
- **Cervical mucus method**

•**Emergency Contraception:** Used after unprotected sex to prevent pregnancy.

- **Morning-after pill**
- **Copper IUD (used as emergency contraception)**

## **2. Permanent (Irreversible) Methods**

These methods are intended to permanently prevent pregnancy.

•**Sterilization for Women:**

- **Tubal ligation** (also known as "tubes tied"): A surgical procedure in which the fallopian tubes are blocked or sealed.
- **Essure** (no longer available in some regions): A device that blocks the fallopian tubes.

•**Sterilization for Men:**

- **Vasectomy:** A surgical procedure in which the vas deferens (tubes that carry sperm) are cut, sealed, or blocked.

## **Natural Methods and Permanent Abstinence:**

### **3. Natural Methods:**

These methods rely on natural fertility patterns without medical intervention:

- **Withdrawal Method (Coitus Interruptus):** The male partner withdraws before ejaculation to prevent sperm from entering the vagina.
- **Lactational Amenorrhea Method (LAM):** Based on natural infertility during exclusive breastfeeding, typically effective for the first six months postpartum.

### **4. Permanent Abstinence:**

- **Abstinence:** Involves refraining from all forms of sexual intercourse to avoid the risk of pregnancy.

Each method has specific advantages, disadvantages, and effectiveness rates. The choice of method depends on factors such as personal preferences, health conditions, convenience, cost, and cultural or religious beliefs. Healthcare providers, including nurses, play a vital role in educating and supporting individuals and couples in making informed family planning decisions.

### **3. Advantages of Natural Family Planning (NFP):**

- Acceptable to Most Religions:** Many religions support NFP because it does not involve artificial contraception methods that may interfere with natural processes.
- No Hormones or Devices:** NFP does not require the use of hormonal contraceptives or medical devices, making it an attractive option for individuals who prefer to avoid side effects or have personal or religious beliefs against these methods.
- Reversible:** Since NFP relies on tracking natural fertility signs, it can be used to either prevent or increase the likelihood of pregnancy depending on the couple's desire for children.

### **4. Challenges of Natural Family Planning:**

- Extensive Tracking:** NFP requires significant effort to track menstrual cycle changes, basal body temperature, and cervical mucus patterns. This process can be time-consuming and demands high motivation and consistency.
- Motivation and Commitment:** For NFP to be effective, both partners must be committed to accurately tracking signs and abstaining from intercourse or using barrier methods during the fertile window.
- Lower Effectiveness:** NFP generally has lower effectiveness compared to other contraceptive methods, especially if the woman has an irregular cycle or fails to track fertility signs consistently.

### **5. Effectiveness of Natural Family Planning:**

- Perfect Use:** With perfect use (consistent and correct application), the failure rate is about 1-5%, meaning 1-5 out of 100 couples using NFP will experience an unintended pregnancy each year.
- Typical Use:** With typical use (which includes inconsistent tracking or incorrect



## **Key Points about Natural Family Planning (NFP):**

**1.Abstinence During Fertile Window:** Couples must abstain from intercourse during the woman's fertile window, which includes several days leading up to ovulation and the day of ovulation itself. This requires significant commitment and may be challenging due to the extended periods of abstinence needed.

**2.Methods for Predicting Fertility:** To improve the accuracy of NFP and reduce failure rates, women typically use a combination of methods to predict their most fertile days. Combining methods increases the predictive value and effectiveness compared to using any single method alone.

These methods require active participation from both partners, consistent monitoring, and a high level of commitment for successful pregnancy prevention.

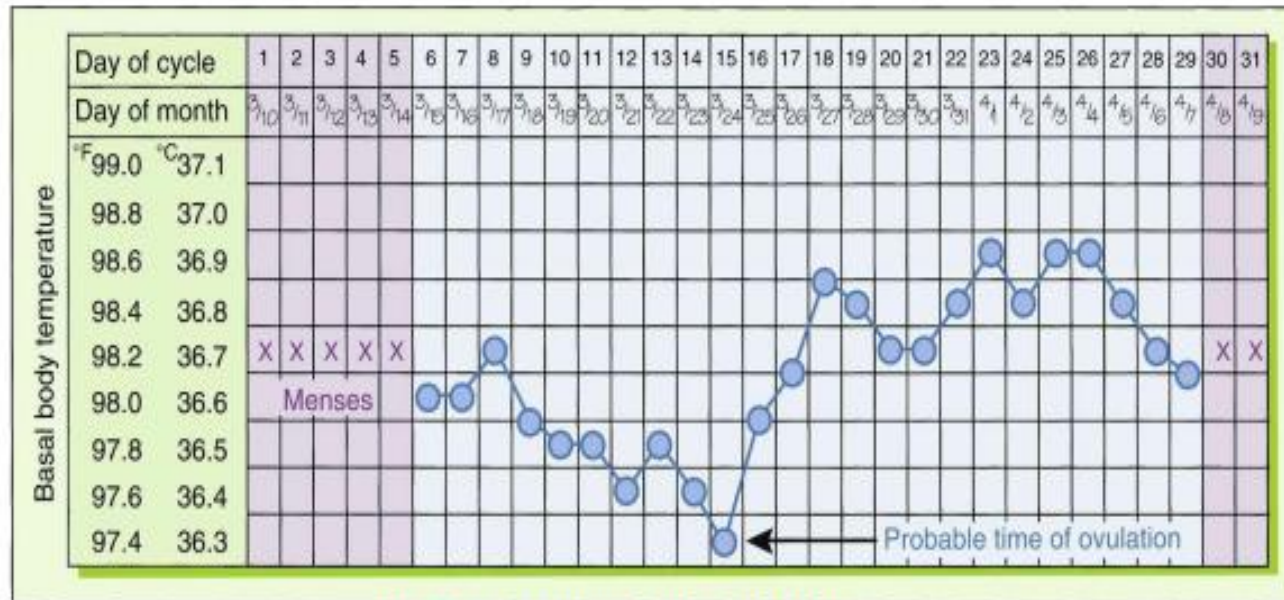
The four main methods used to predict fertility are:

### 1. Basal Body Temperature (BBT) Method:

1. **How It Works:** The **basal body temperature (BBT)** is the body's temperature at rest, taken immediately upon waking before any activity. After ovulation, the **BBT rises slightly** (around 0.2° C or 0.4° F) and stays elevated until the start of the next menstrual period.
2. **Identifying Ovulation:** This method is helpful for **confirming that ovulation has already occurred**, as the temperature rise happens **after ovulation**. The rise in temperature is caused by the hormonal changes (particularly progesterone) that occur post-ovulation.
3. **Combining Methods:**

Since BBT only provides information **after ovulation** has occurred, many women combine it with other methods to more accurately predict the fertile period:

- **Cervical Mucus Method:** Tracking changes in cervical mucus can help identify the days leading up to ovulation, when the mucus is most fertile and provides an ideal environment for sperm survival.
- **Calendar Method:** Using a calendar to track the length of menstrual cycles can help estimate the most fertile days based on past cycle data.
- **Symptothermal Method:** This is a combination of several fertility awareness methods, including BBT, cervical mucus changes, and other symptoms like ovulatory pain or changes in the cervix position, to predict ovulation more accurately.



**FIG. 11.2 Basal Body Temperature Chart.**

By taking and recording her temperature, the woman can determine the probable time of ovulation.

The **Basal Body Temperature (BBT)** method is a key component of Natural Family Planning (NFP) that involves tracking subtle temperature changes during the menstrual cycle.

- How BBT Works:** A **basal thermometer** measures small temperature changes, often to the nearest 0.1°C (0.2°F), to detect the slight rise that occurs after ovulation. Some digital thermometers have a memory feature that stores readings and displays the temperature pattern.

- Charting BBT:** The woman measures her temperature each morning before getting out of bed and records it on a chart or app. Typically, the BBT rises about 0.2°C (0.4°F) after ovulation and stays elevated until the next menstrual cycle. Ovulation is confirmed when the BBT remains elevated for at least 3 days, typically in the second half of the cycle, after ovulation has occurred.

### 3- Identifying Ovulation:

1. The primary purpose of tracking BBT is to **confirm ovulation** (after it has occurred). If the temperature remains elevated for 14 days or more, it's an indication that ovulation has likely taken place.
2. However, the **critical window for fertility** (the day before ovulation) cannot be pinpointed using BBT alone because the temperature rise happens **after** ovulation, not before.

Several factors can interfere with the accuracy of Basal Body Temperature (BBT) readings:

**1.Poor Sleep:** Inconsistent or insufficient sleep can cause fluctuations in BBT, making it hard to detect a clear pattern.

**2.Illness:** Fever or infection can artificially raise body temperature, leading to inaccurate readings.

**3.Jet Lag:** Traveling across time zones can disrupt the body's circadian rhythm and cause temperature fluctuations, affecting BBT consistency.

**4.Late Sleep or Sleep Disturbances:** Irregular sleep patterns or late sleep can cause variations in BBT due to disrupted temperature regulation.

**5.Alcohol Consumption:** Alcohol can interfere with sleep quality and thermoregulation, altering body temperature.

**6.Environmental Factors:** Use of electric blankets or sleeping in a heated environment can artificially increase body temperature, leading to unreliable BBT readings.

These factors can make it difficult to accurately interpret the BBT chart and predict ovulation.

The **Cervical Mucus Method**, also known as the **Billings Method**, is a natural family planning technique based on observing changes in cervical mucus throughout the menstrual cycle.

•**Cervical Mucus Changes:** Estrogen and progesterone influence the cervix, causing the character and amount of mucus to vary during the cycle.

- **After menstruation**, the mucus is thick, sticky, and white.
- **As ovulation approaches**, the mucus becomes thin, clear, and slippery to help sperm travel into the cervix. This mucus can be stretched (up to 6 cm or more) and has an egg-white consistency, known as **spinnbarkeit**.
- **After ovulation**, the mucus thickens again.

•**Factors Affecting Accuracy:** The accuracy of cervical mucus observations can be influenced by factors such as **antihistamines**, **vaginal infections**, **contraceptive foams or gels**, **sexual arousal**, and **recent intercourse**.

•**Use in Irregular Cycles:** The Billings Method is useful for women with **irregular cycles**, as it focuses on changes in mucus rather than cycle length, helping to identify fertile and infertile days.

This method helps with both **fertility awareness** and **natural family planning** by tracking these noticeable changes in vaginal mucus.

The **Calendar (Rhythm) Method** is a natural family planning technique based on tracking a woman's menstrual cycles to predict ovulation.

- How It Works:** The woman charts her menstrual cycles for several months. If her cycles are regular, she can estimate when ovulation will occur, typically **14 days before the next period**. In a 28-day cycle, ovulation would occur around day 14, while in a 32-day cycle, it would occur around day 18.

- Fertile Window:** A woman is considered fertile **5 days before ovulation and 1 day after ovulation**. Barrier methods (like condoms) can be used during this window to prevent pregnancy.

- Effectiveness:** The calendar method is most effective for women with **regular menstrual cycles**, as irregular cycles make it more difficult to predict ovulation accurately.

This method relies on cycle pattern observation and is suitable for couples looking to use natural family planning when cycles are consistent.



**Temporary Contraception** refers to methods of birth control that **prevent pregnancy for a limited time** and can be **reversed** when the couple decides to conceive.

- **Abstinence** is 100% effective in preventing pregnancy and sexually transmitted infections (STIs), but it is often not a preferred choice for most couples, as sexual relationships are important for their quality of life.

- **Reversible Methods** allow individuals or couples to prevent pregnancy while maintaining the ability to conceive when they choose. These methods can be discontinued, leading to a return of fertility.

Temporary contraception options provide flexibility for couples to plan their families while avoiding pregnancy in the short term.

**Hormonal Contraceptives** work by utilizing hormones to prevent pregnancy through various mechanisms:

- **Prevent Ovulation:** Hormonal contraceptives stop the release of an egg from the ovaries.
- **Thicken Cervical Mucus:** They make the cervical mucus thicker, making it difficult for sperm to penetrate the cervix.
- **Alter the Endometrium:** They make the uterine lining less receptive to a fertilized egg, preventing implantation.

However, **hormonal contraceptives do not protect against STIs.**

### **Oral Contraceptives (The Pill):**

- **Effectiveness:** Oral contraceptives are a **highly effective** and **reversible** form of birth control.
- **Types:**
  - **Combined Hormonal Pills:** Contain both **estrogen and progestin**.
  - **Progestin-Only Pills ("Minipill"):** Contain only **progestin**.
- **Considerations:**
  - **Progestin-Only Pills:** Should be avoided by **postpartum Hispanic women with gestational diabetes who are breastfeeding** due to the increased risk of developing **type 2 diabetes** later on.
  - **Combined Hormonal Pills:** Can generally be started around **3 weeks after delivery**, while **progestin-only pills** are safer for breastfeeding mothers as they have a positive effect on lactation.

Oral contraceptives offer a convenient, effective method for preventing pregnancy but do not offer STI protection.



**FIG. 11.3 Contraceptives.**

Common types of contraceptives: condoms, diaphragms, oral contraceptives, transdermal patch, and parenteral contraceptives.

**Oral contraceptives** require a **prescription** and involve several steps before use:

**1. Medical History:** The woman's **health history** is reviewed to identify any potential contraindications or risks associated with hormonal contraceptives.

**2. Physical Examination:** The woman will undergo a **physical examination**, which includes:

- 1. Breast exam:** To check for abnormalities.
- 2. Pelvic exam:** To assess reproductive health.
- 3. Pap test:** To screen for cervical abnormalities or infections.

**3. Ongoing Monitoring:** After starting oral contraceptives, the woman should have a **yearly physical examination**, including:

- 1. Regular Pap tests** to monitor cervical health.
- 2. Breast exams** for early detection of issues.
- 3. Blood pressure checks** to monitor for any changes that could indicate potential side effects of the medication.

These steps ensure the safe and effective use of oral contraceptives, with regular monitoring to maintain overall health.

## **Contraceptive Regimens: Monthly Contraception**

**Combination Oral Contraceptives (OCs)** are available in **21-pill** or **28-pill** packs, each with a specific regimen for daily use:

### **1. 21-Pill Pack:**

1. The woman takes **one pill daily for 21 days**, at the same time each day.
2. After 21 days, she stops taking the pills for **7 days**, during which menstruation occurs.

### **2. 28-Pill Pack:**

1. The woman takes **one pill daily for 28 days**.
2. The **last 7 pills** are **inert (inactive)** but help maintain the habit of taking a pill each day. Menstruation occurs during this 7-day period when no active pills are taken.

### **Multiphasic Pills:**

•Some oral contraceptives are **multiphasic**, meaning the **estrogen and progestin content changes** throughout the cycle to mimic natural hormonal fluctuations.

**Extended-Dose Contraception** (also known as **induced amenorrhea**) is a regimen designed to reduce or eliminate menstrual periods for extended periods.

- How It Works:** The woman takes **active hormones** for **84 days** continuously, followed by **7 days** of hormone-free placebo pills. This results in a **menstrual period every 3 months**.

- Alternative Regimens:** Some other oral contraceptive regimens can extend menstruation to just **once a year**, with no planned withdrawal bleeds.

- Spotting or Breakthrough Bleeding:** Some women may experience **spotting** or **breakthrough bleeding** during the first few months of using the extended-dose regimen, typically around **3 days a month**, as their bodies adjust to the new cycle.

#### **Benefits:**

- No health benefits have been found in monthly menstruation, so extended-dose contraception offers a way to reduce the frequency of periods without health risks.

## Side Effects and Contraindications of Oral Contraceptives (OCs)

### Common Side Effects:

- Nausea
- Headache
- Breast tenderness
- Weight gain
- Spotting between periods or amenorrhea (absence of periods)

These side effects often decrease after a few months of use and are less common with **low-dose OCs**.

### Contraindications:

Women with the following conditions should **avoid OCs** or use them with caution:

- 1.**Thromboembolic disorders** (e.g., history of blood clots)
- 2.**Cerebrovascular accidents** (e.g., stroke) or **heart disease**
- 3.**Estrogen-dependent cancers** (e.g., breast cancer)
- 4.**Heavy smoking** (more than 15 cigarettes a day for women over 35 years old).

The pill is **safe for women over 35** if they do not smoke.

- 5.**Impaired liver function**
- 6.**Confirmed or possible pregnancy**
- 7.**Undiagnosed vaginal bleeding**

For women with these conditions, it's important to consider alternative contraceptive methods.

## Contraception After Abortion and Delivery

### •Post-Abortion:

After an abortion, the first menstrual bleeding is usually preceded by ovulation, so **contraception should begin immediately** to prevent pregnancy.

### •Postpartum:

After a **term delivery**, there is an increased risk of **thromboembolism** (blood clots), so **contraception is generally started 3 to 4 weeks postpartum**.

### •Breastfeeding Considerations:

- **Combination OCs** (estrogen and progestin) may reduce **breast milk production**, so they are typically **contraindicated** for breastfeeding women until lactation is well established.
- Women who **breastfeed at least 10 times per day** usually do not ovulate for the first **10 weeks postpartum**, but breastfeeding alone is not a reliable method of contraception.
- **Progestin-only OCs** (the "minipill") can be used in breastfeeding women until menstruation returns, as they do not affect milk supply.



## **Memory Jogger:**

### **Warning Signs to Report When Taking OCs**

Women taking oral contraceptives should immediately report the following warning signs, which could indicate serious health risks:

**1. Severe Abdominal Pain**

**2. Chest Pain, Difficulty Breathing (Dyspnea), or Bloody Sputum**

**3. Severe Headache, Weakness, or Numbness in Extremities**

**4. Eye Problems** (e.g., Blurred Vision, Double Vision, Vision Loss)

**5. Severe Leg Pain or Swelling**

**6. Speech Disturbance**

These symptoms may indicate serious complications, such as **blood clots**, **stroke**, or **heart problems**, and require urgent medical attention.

## **Extended-Dose Oral Contraceptives:**

•**Benefit:** Extended-dose oral contraceptives have been effectively used to **minimize bloating, fluid retention**, and the symptoms of **premenstrual dysphoric disorder (PMDD)**, which are often associated with regular oral contraceptives.

## **Medications That Can Reduce the Effectiveness of OCs:**

Some medications may interfere with the effectiveness of oral contraceptives, including:

**1.Antibiotics** (e.g., **ampicillin, tetracycline**)

**2.Anticonvulsants**

**3.Rifampin** (an antibiotic)

**4.Barbiturates** (sedatives)

Women taking these medications may need additional forms of contraception or should consult their healthcare provider for guidance.

## **Nursing Care for Oral Contraceptive Users - Summary**

Women using oral contraceptives (OCs) require thorough education to ensure effective use and understanding of the method. Key teaching points include:

- 1.How to Take the Pill:** Explain the correct daily regimen and any specific instructions for the type of OC.
- 2.Missed Dose Instructions:** Provide guidance on what to do if a dose is missed.
- 3.Stopping the Pill:** Explain how to prevent pregnancy if she stops using the pill.
- 4.Side Effects:** Inform about common side effects (e.g., nausea, headache) and reassure that these often subside.
- 5.Warning Signs:** Teach symptoms to report immediately, such as severe pain or changes in vision.
- 6.Backup Contraception:** Stress the importance of using barrier methods (e.g., condoms) for additional protection.
- 7.STI Prevention:** Remind that OCs do not protect against STIs, and barrier methods can reduce this risk.

Teaching should be delivered in the woman's **native language**, with **written materials** provided for clarity.

## Hormone Implants and Injectable Contraceptives

### 1. Etonogestrel Implant (Implanon):

- System:** A single-rod implant placed under the skin of the **upper, nondominant arm**.
- Duration:** Provides **3 years** of contraception.
- Bone Mineral Density:** Does not affect bone mineral density.
- Lactation:** Can be used during **lactation**.
- Fertility:** **Rapid return to fertility** once the implant is discontinued.
- Removal:** Implant can be removed in an outpatient clinic using a **local anesthetic**.
- Failure Rate:** Very low, with a typical failure rate of **0.05%**.

### 2. Medroxyprogesterone Acetate (Depo-Provera):

- System:** Injectable form of **slow-release progestin**.
- Duration:** Provides **3 months** of contraception per injection.
- Regimen:** Must be administered every **3 months**. Usage should not exceed **2 years**.
- Action:** Contraceptive action is similar to the **minipill** and **hormone implants**.
- Fertility:** **Fertility returns about 1 year** after stopping the injections.

These hormone-based contraceptive methods offer long-term, highly effective birth control with different options for women based on their preferences and needs.

# Side Effects, Contraindications, and Nursing Care for Hormone Injections

## Side Effects and Contraindications:

### •Common Side Effects:

- **Menstrual irregularities**
- **Breakthrough bleeding**
- **Amenorrhea** (absence of periods)
- These side effects are often the reasons why some women stop using the method.

### •No STI Protection:

Hormone injections do **not** protect against **sexually transmitted infections** (STIs).

### •Typical Failure Rate:

The typical failure rate is **6%**.

## Nursing Care:

### •Education:

- Women should be educated about the potential **side effects** and symptoms to report (e.g., unusual bleeding patterns).
- Emphasize the importance of **returning for regular injections** to maintain a consistent hormone level and prevent pregnancy.

### •Backup Contraception:

- Teach the woman to use **backup contraception** (e.g., condoms) if she decides to stop the injections or is delayed in returning for subsequent injections.

•**Special Considerations:**

- **Seizure Disorders:** Women with seizure disorders can safely use hormone injections without concerns about interactions with their **antiseizure medications**.
- **Coagulation Issues or Sickle Cell Anemia:** Women with these conditions may benefit from hormone injections, as the method **suppresses ovulation** and can help **reduce blood loss** during menstruation.

## Intrauterine Devices (IUDs)

### Types of IUDs:

#### 1. ParaGard (Copper IUD):

1. **Non-hormonal:** Made of copper and plastic, it is effective for up to **12 years**.
2. **Mechanism of Action:** Creates a **hostile environment for sperm**, which impedes sperm transport, preventing fertilization.
3. **Effectiveness:** Greater than **98%** effective.

#### 2. Mirena (Hormonal IUD):

1. Contains a **reservoir of progestin** (levonorgestrel), which is slowly released into the uterine cavity.
2. **Local Action:** Acts locally in the uterus, without increasing blood levels of hormones.
3. **Mechanism of Action:** Thickens cervical mucus, impeding sperm viability, and may prevent ovulation in some cases.
4. **Replacement:** Should be replaced every **3 to 6 years**.

• Both types of IUDs are **reversible** methods, with **rapid return to fertility** after removal.

• **No STI Protection:** IUDs do not protect against sexually transmitted infections.

### Side Effects and Contraindications:

#### • Common Side Effects:

- **Cramping and bleeding:** Likely to occur during and shortly after insertion.
- **Increased menstruation and dysmenorrhea** (painful periods): May lead to removal of the device.

•**Considerations for Women with Heavy Periods:**

- Women who experience **heavier periods** may need **iron supplementation** to address potential anemia.

These devices offer a highly effective and long-lasting contraception option, though some women may experience side effects that influence their decision to keep or remove the IUD.



# Nursing Care for IUD Users

## 1. Education on Side Effects:

1. Teach the woman about potential side effects, including **cramping, bleeding, and heavier periods.**
2. If **iron supplements** are prescribed to address anemia, educate her on how to take them properly.

## 2. Checking IUD Placement:

1. Instruct the woman to **feel for the plastic strings** (tail) that protrude from the vagina and are attached to the IUD. This helps verify that the IUD is still in place.

### 2. Frequency of Checks:

1. For the first **4 weeks**, she should check the strings weekly.
2. After that, she should check monthly.
3. Teach the woman to **report any changes** in the length of the strings (if they are longer or shorter) or if she cannot feel the strings at all, as this may indicate the IUD has shifted or been expelled.

## 3. Signs of Infection:

1. Educate on signs of infection, which should be reported immediately:
  1. **Fever**
  2. **Pain**
  3. **Changes in vaginal discharge**

## 4. Signs of Ectopic Pregnancy:

1. Instruct the woman to report promptly if she experiences signs of **ectopic pregnancy**, such as **severe abdominal pain** or **shoulder pain**, as the risk is higher in women with an IUD.

## **Transdermal Patch (Ortho-Evra)**

- Composition:** The Ortho-Evra patch contains **norelgestromin** (a progestin) and **ethinyl estradiol** (an estrogen).
- Application:** The patch is applied to the **skin** once a week for **3 weeks**, followed by a **1-week patch-free interval** to allow for menstruation.
- Mechanism:** Similar to oral contraceptives, it provides **hormonal contraception** by preventing ovulation, thickening cervical mucus, and altering the uterine lining.
- Effectiveness:** It is **highly effective** for women weighing **less than 90 kg (198 pounds)**.

The patch is an easy-to-use, effective alternative to oral contraceptives, offering a consistent level of hormones throughout the week.

## Vaginal Ring (NuvaRing)

- Description:** The **NuvaRing** is a flexible, one-size vaginal ring that releases **estrogen** and **progestin** locally, directly into the vaginal area.
- Usage:** The ring is worn for **3 weeks** and then removed for a **1-week break** to allow for withdrawal bleeding (similar to a menstrual cycle).
- Effectiveness:** The **typical failure rate** is **9%** with typical use.

## Barrier Methods

### 1. Mechanism:

Barrier methods prevent sperm from entering the woman's cervix by physically blocking the passage. Some methods also include **spermicides** (sperm-killing chemicals) to enhance effectiveness.

### 2. Types of Barrier Methods:

- Condoms** (male and female)
- Spermicidal foams** and **suppositories**
- Diaphragm** and **cervical cap** (inserted before intercourse)

### 3. Protection Against STIs:

- Some barrier methods, like **condoms**, provide protection against sexually transmitted infections (STIs) by creating a barrier to direct contact.

### 4. Application Timing:

- Immediate Application:** Methods like **condoms**, **spermicidal foams**, and **suppositories** must be applied just before intercourse.
- Pre-insertion:** Devices like the **diaphragm** and **cervical cap** can be inserted several hours before intercourse.

## **5. Discomfort and Practical Concerns:**

- **Spermicidal foams and suppositories** can be messy and may drip from the vagina.

- These methods may not be suitable for individuals who are uncomfortable with touching their own bodies or inserting devices.

Barrier methods offer a non-hormonal option for contraception, with the added benefit of STI protection in some cases. However, they may require more planning or preparation compared to other methods.

## Barrier Methods as Backup Contraception

### •Cost:

- Barrier methods are generally **inexpensive per use**.
- **Diaphragms** and **cervical caps** require a **fitting** and **prescription**, which increases their initial cost.
- Other barrier methods, like **condoms**, **spermicides**, and **foams**, are **over-the-counter (OTC)** purchases.

### •Use Cases:

- Often chosen as a **backup method** of contraception.
- Suitable for women who are **lactating**, cannot tolerate **oral contraceptives (OCs)** or **IUDs**, or prefer a **non-hormonal** option.

## Diaphragm and Cervical Cap

### •Design:

- **Diaphragms** and **cervical caps** are **rubber domes** that fit over the cervix, acting as a physical barrier to sperm.
- They are used in combination with **spermicides**, which kill sperm that pass through the mechanical barrier.

### •Insertion and Removal:

- The woman must **learn how to insert** and **remove** the diaphragm or cervical cap properly.
- **Correct placement** is crucial for effectiveness, as misplacement (especially with the small cervical cap) is a common reason for unintended pregnancy.

•**Failure Rate:**The **typical failure rate** for diaphragms and cervical caps is **12%**, largely due to user error in placement or improper use of spermicide.

## Vaginal Sponge

- The **vaginal sponge** is a soft, concave sponge that contains **spermicide**. It is **moistened** with water before being inserted by the woman, with the **cupped side** against the cervix.

- Use:**

The sponge can be left in place for up to **24 hours** after intercourse and should be discarded after use. A **loop** on the sponge facilitates easy removal.

- Function:**

The sponge **absorbs vaginal secretions** and provides a barrier against sperm. However, it may cause **vaginal dryness** and irritation in some women.

- Effectiveness:**

Its effectiveness can be affected by **changes in the shape of the cervix**, particularly after childbirth, which can affect how well the sponge fits and works.

- STI Protection:**

The vaginal sponge does **not provide protection** against **sexually transmitted infections (STIs)**.

## Side Effects and Contraindications

- Allergy Concerns:**

Women who have an allergy to **latex** or **spermicides** may not be suitable candidates for using the diaphragm, cervical cap, or vaginal sponge.

- Urinary Tract Infections (UTIs):**The sponge can exert **pressure on the bladder**, which may increase the risk of **urinary tract infections (UTIs)**.The vaginal sponge is an accessible, **non-hormonal** contraceptive option, but women should be mindful of potential side effects and ensure proper use for optimal effectiveness.

## **Nursing Care for Vaginal Sponge Users**

### **•Spermicide Reapplication:**

The nurse should **reinforce teaching** on the use and **reapplication of spermicide** if the woman has repeat intercourse. It is essential to ensure the proper amount is applied each time to maintain effectiveness.

### **•Signs of Infection:**

The woman should be taught to **recognize signs of uterine infection**, such as:

- **Pain**
- **Foul-smelling drainage**
- **Fever**

•Additionally, the nurse should educate the woman about signs of **sensitivity to the product**, such as:

- **Irritation**
- **Itching**

### **•Urinary Tract Infection (UTI) Signs:**

The woman should be instructed to report symptoms of **UTIs**, including:

- **Fever**
- **Pain or burning with urination**
- **Urgency or urinary frequency**

## Male Condoms

### •Description:

Male condoms are **sheaths** made from **latex**, **polyurethane**, or **natural membrane** ("skins") that are worn on the penis during intercourse. They collect semen before, during, and after ejaculation.

### •Variety and Features:

Condoms come in various styles, including:

- **Ribbed**
- **Lubricated**
- **Colored**
- With or without **spermicide**

### •Accessibility and Cost:

Male condoms are **single-use** and **low-cost**, widely available in **vending machines**, **drugstores**, and **family planning clinics**.

### •STI Protection:

**Latex condoms** provide some **protection from STIs**, though they do not offer complete protection against all types of infections.

Both the vaginal sponge and male condoms are **non-hormonal** methods of contraception, with condoms also offering **protection against STIs**. Proper usage and monitoring for side effects or infections are key to maintaining their effectiveness and safety.



## Condom Usage and Nursing Education

To ensure the effectiveness and safety of condoms, the nurse should educate patients on proper usage and common mistakes to avoid:

- Lubrication:**

Use **water-soluble lubricants** if the condom or vagina is dry to prevent breakage. **Oil-based lubricants** such as baby oil, petroleum jelly, or cold cream can weaken the condom and increase the risk of breakage.

- Single Use Only:**

**Condoms should never be reused.** Even a small tear, such as from a pinhole, can lead to pregnancy or allow the entry of viruses like HIV.

- Expiration Date:**

Always check the **expiration date** on the condom package. Condoms with spermicide last for **2 years**, while others last **5 years**.

•**Proper Condom Handling:**

Common mistakes to avoid:

- **Avoid losing erection:** Don't let the penis lose its erection while the condom is still inside the vagina.
- **Open with care:** Don't open the package with your teeth or a sharp object to prevent damaging the condom.
- **Do not unroll before application:** Always unroll the condom after applying it to the penis.
- **Avoid storage mistakes:** Storing condoms in a wallet can expose them to heat, which destroys spermicide and weakens the condom.
- **Leave space:** Always leave a small space at the tip of the condom for ejaculate to ensure it doesn't break.

By educating patients on these points, nurses can help ensure effective condom use, reducing the risk of unintended pregnancy and STI transmission.

## Female Condoms

### Purpose:

Female condoms serve the same purpose as male condoms — to **prevent pregnancy** and **protect against STIs**. They offer a **non-hormonal** method of contraception and are an option for women who prefer control over their contraception.

### Types of Female Condoms:

#### 1. Two-Ring Style:

1. Consists of **two flexible rings**: one that fits inside the vagina and one that remains outside, with a **polyurethane sheath** in between.
2. Can be inserted up to **8 hours** before intercourse.

#### 2. Bikini-Panty Style:

1. This style includes a **pouch** that fits inside the vagina and is designed to be worn like a panty.

### Side Effects and Contraindications:

#### •Side Effects:

Side effects of female condoms are rare but may include **vaginal irritation** or **discomfort**.

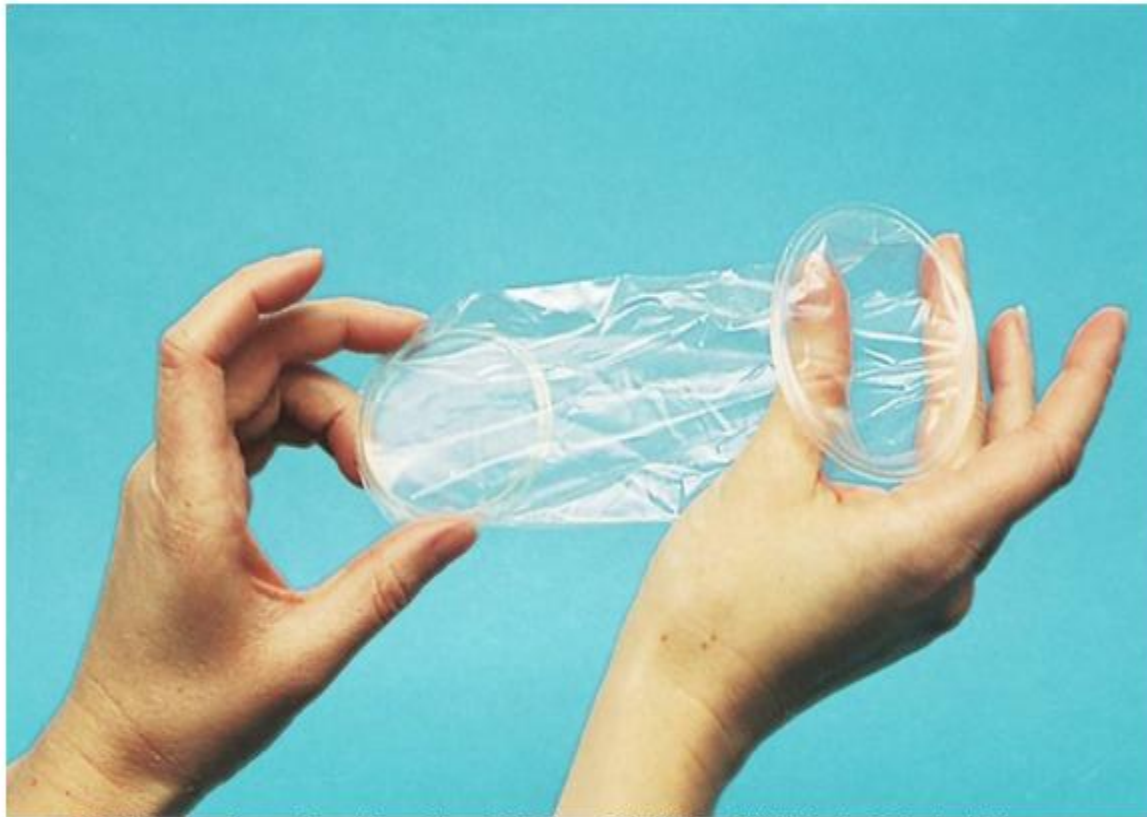
#### •Latex Sensitivity:

If either partner is allergic to latex, **polyurethane** female condoms can be used as an alternative.

### Effectiveness:

•The **failure rate** of female condoms is approximately **18%** (with typical use). However, the effectiveness can be improved if used correctly and consistently.

By offering protection against both pregnancy and STIs, female condoms provide a valuable option for women who seek a **non-hormonal, female-controlled method** of contraception.



**FIG. 11.4 Female condom.** (From Grimes DE, Grimes RM: *AIDS and HIV infection*, St Louis, 1994, Mosby.)

## Female Condoms (continued)

### Key Features:

- **Prelubricated** and **single-use**, available over-the-counter.
- Provide **female control** over contraception and **STI protection**, without requiring partner cooperation.
- **Effectiveness**: The failure rate for **pregnancy prevention** is around **5%** with **perfect use**, but with typical use, the failure rate can be higher, around **21%**.

### Side Effects and Contraindications:

- **Side effects** are rare but may include **vaginal irritation** or **discomfort**.
- **Latex Sensitivity**: If either partner is allergic to latex, **polyurethane** condoms can be used as an alternative.

Although effective in preventing both pregnancy and STIs, some women find female condoms **unattractive** or **difficult to use**, which can impact consistent use. Nonetheless, they provide women with more control over their sexual health and contraception choices.

## Spermicides

### Description and Usage:

- Spermicides come in various forms: **foam, cream, jelly, film**, and **suppository capsules**.
- Available **over-the-counter (OTC)**, these products are inserted into the **vagina** before intercourse to:
  - Neutralize vaginal secretions.
  - Destroy sperm.
  - Block the entrance to the uterus.
- Different products have specific **directions for use**, but most need about **15 minutes** to become effective, especially **films** and **suppositories** which must melt.
- Spermicides are effective for **1 hour**; **reapplication** is necessary for repeated intercourse.
- **Douching** should be avoided for **6 to 8 hours** after intercourse to prevent reducing effectiveness.
- **Failure rate**: The typical failure rate is **21%**.

### Effectiveness:

- Spermicides are more effective when used in conjunction with other contraceptive methods, such as **condoms**.

### Side Effects and Contraindications:

- **Irritation**: Spermicides can cause local irritation in the **vagina** or on the **penis**.
- This irritation may lead to **tiny cracks** in the skin, which can increase the risk of **infections** by providing **entry points** for pathogens.

While spermicides offer a convenient and non-hormonal option, their effectiveness can be lower on their own, and they are best used in combination with other barrier methods for better protection.

# Emergency Contraception

## Overview:

• **Emergency contraception** is a method of preventing pregnancy after unprotected sex, contraceptive failure (e.g., condom breakage), or in cases such as **rape**.

## Types of Emergency Contraception:

### 1. Plan B (Levonorgestrel):

1. Contains the **progestin levonorgestrel**.
2. Available **over-the-counter** without a prescription.
3. Most effective when taken within **72 hours** of unprotected intercourse, but may still work up to **120 hours** (5 days).
4. **Less effective** for women weighing over **165 pounds**.

### 2. Ulipristal Acetate (Ella):

1. Requires a **prescription**.
2. Works by **delaying ovulation**.
3. Can be taken within **5 days (120 hours)** after unprotected sex.

### 3. Copper IUD:

1. Can be placed within **5 days** after unprotected intercourse and is an **effective postcoital contraceptive**.

## Follow-up and Counseling:

• Women using emergency contraception should be referred for **counseling** and **follow-up care** to ensure they are supported emotionally and physically after use.

Emergency contraception is a valuable option in preventing unintended pregnancy after a contraceptive failure or unprotected sex, though it is not intended for regular use and should be used as a backup, not a primary contraceptive method.

## Unreliable Contraceptive Methods

### 1. Withdrawal (Coitus Interruptus):

1. Involves the man withdrawing his penis before ejaculation.
2. It relies on self-control, which is often difficult to achieve consistently.
3. **Preejaculatory secretions** can contain sperm, which can still result in pregnancy.

### 2. Douching:

1. Douching after intercourse is not an effective method of birth control.
2. It may actually **push sperm further into the birth canal**, increasing the likelihood of pregnancy.

### 3. Breastfeeding:

1. **Breastfeeding** can inhibit ovulation in many women, especially if the infant feeds at least **10 times in 24 hours**.
2. **Prolactin**, which is produced to stimulate milk production, also inhibits ovulation.
3. However, if the infant is supplemented with formula or starts solid foods, **milk production decreases**, and ovulation is likely to resume, making pregnancy possible.
4. **Ovulation precedes menstruation**, so pregnancy can occur even before the first period after childbirth.

These methods are unreliable because they do not consistently prevent pregnancy and often depend on factors that can change, such as behavior or the infant's feeding patterns. They should not be relied upon as primary contraception methods.



### **Nursing Tip:**

•**Pregnancy while breastfeeding:** A woman can still become pregnant while breastfeeding, as ovulation may occur before the first menstrual period.

### **Permanent Contraception (Sterilization):**

#### **Definition:**

Sterilization is a **permanent** birth control method that is nearly 100% effective in preventing pregnancy. Once performed, the individual cannot naturally conceive, making the decision to undergo sterilization irreversible.

#### **Advantages:**

- Effectiveness:** Sterilization provides near-zero risk of pregnancy, giving peace of mind.
- Reduced anxiety:** Without concerns of unintended pregnancy, individuals may enjoy their sexual relationship more freely.

#### **Disadvantages:**

- Permanence:** The biggest drawback is that it is permanent. Life circumstances may change, such as:
  - **Divorce**
  - **Marriage**
  - **Death of a child**
  - **Change in desire for children**

- These changes may lead to regret, as the individual cannot reverse the procedure.

- **Surgical risks:** The procedures involve surgery, which, while generally safe, carries risks such as:

- **Hemorrhage** (excessive bleeding)
- **Infection**
- **Injury to nearby organs**
- **Anesthesia complications**

Sterilization is a highly effective contraceptive choice, but due to its permanence, individuals must carefully consider the decision and be certain they do not want to have more children in the future.

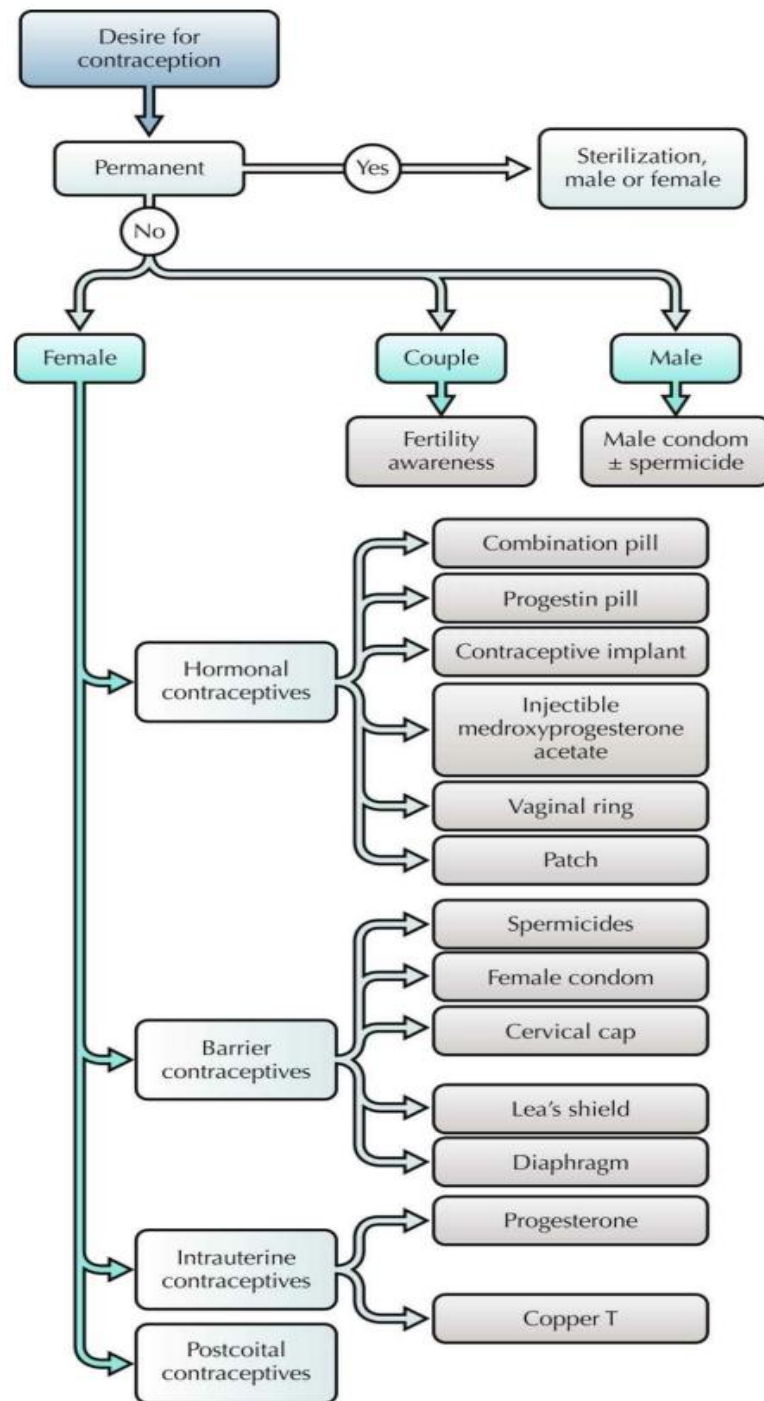
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### **Male Sterilization (Vasectomy):**

- **Procedure:** Male sterilization, or **vasectomy**, involves making small incisions on each side of the scrotum to cut the **vas deferens**, the tubes that carry sperm.
- **Sterility timeline:** Sterility is **not immediate** after the procedure because sperm remain in the system beyond the cut area.
  - **Temporary contraception:** Another form of contraception should be used until all sperm are cleared, which usually takes **1 to 3 months**.
- **Follow-up:** The man should **return to the physician** for a semen analysis to confirm that no sperm remain in the semen.

### **Female Sterilization (Tubal Ligation):**

- **Procedure:** **Tubal ligation** involves **blocking or tying** the fallopian tubes, preventing eggs from traveling from the ovaries to the uterus, which makes fertilization impossible.
- Both male and female sterilization are highly effective, permanent contraceptive options, but they require careful consideration, as they cannot be easily reversed.



## **Get Ready for the NCLEX® Examination! Key Points**

- Preventive care is cost-effective, because health problems can be caught early and treated.
- Teaching a woman breast self-examination can reduce her risk of death from breast cancer.
- Several self-help measures can relieve some symptoms of premenstrual syndrome.
- Prevention of toxic shock syndrome involves not allowing microorganisms the time to grow in the woman's reproductive tract.
- Sexually transmitted infections must be adequately treated in all sexual contacts to stop the transmission and to prevent resistance to antibiotics.
- Contraception is an individual choice. The nurse must avoid incorporating personal preferences when educating patients about contraceptive methods.
  - Contraceptive choices include temporary contraception, such as barrier methods or hormones, and permanent contraception, such as hysteroscopic sterilization or vasectomy.

- Emergency contraception, Plan B, is a progestin-only medication taken within 72 hours of unprotected sexual intercourse and is available without a prescription.
- Fertility awareness methods can be used both to prevent pregnancy and to increase the chance of achieving it.
- Except for abstinence, condoms (male and female) offer the best protection from STIs.
- Common menopausal symptoms, such as hot flashes and vaginal dryness, stem from the cessation of ovulation and the decrease in hormonal activity, particularly that of estrogen and progesterone.
- Prevention of disabling osteoporosis begins with an adequate calcium and vitamin D intake during youth to achieve maximum bone mass. Reducing the risk for osteoporosis after menopause is best accomplished by an adequate calcium and vitamin D intake combined with exercise.
- Alternative therapies for hormone replacement are available for women who cannot take estrogen

## **Review Questions for the NCLEX® Examination**

1. Choose the correct teaching for breast self-examination (BSE):

1. Monthly BSE eliminates the need for a professional examination until after age 40 years.
2. **BSE should be done 1 week after the beginning of each menstrual period.**
3. Dry fingers make it easier to feel very small lumps that are just under the skin.
4. Use the palm of the hand to palpate the breast.

2. Factors that change the normal flora of the vagina and predispose to vaginal infection include (select all that apply):

1. **use of antibiotics.**
2. **douching.**
3. **sexual intercourse.**
4. daily baths.

**3. What is a reliable temporary (reversible) birth control method?**

- a. Douching
  - b. Breastfeeding
  - c. **Transdermal patch**
  - d. Vasectomy
  - e. IUD
- 1. b and e
  - 2. 2. a and d
  - 3. 3. c and e
  - 4. 4. a and b

**4. To relieve or reduce symptoms of premenstrual dysphoric disorder, what should the nurse recommend that the woman do?**

- 1. **Avoid simple sugars and caffeine consumption.**
- 2. Use oral contraceptive medication.
- 3. Avoid physical exercise.
- 4. Limit water intake to 1000 mL/day.



**5. The nurse should teach the woman who is experiencing menopause that (select all that apply):**

1. calcium is best absorbed when vitamin D intake is adequate.
2. weight-bearing exercise is important.
3. lying down and resting after each meal is important.
4. an increased intake of vitamin C will enhance calcium absorption.

Thanks for listening