Besides oral contraceptives (birth control pills) and the hormonal intrauterine device, there are several other forms of hormonal birth control: implants, injections, rings, and patches. These methods are effective in preventing pregnancy and are a good choice for many women.

This pamphlet explains

- how hormonal birth control methods work
- types of hormonal methods
- benefits, risks, and side effects of each method

How Hormonal Birth Control Methods Work

Hormonal birth control methods work by releasing hormones. The implant and injection release progestin. The vaginal ring and patch release both estrogen and progestin.

Hormonal birth control methods prevent ovulation. They also cause changes in the mucus in the cervix and changes in the endometrium. The cervical mucus thickens, making it hard for sperm to reach the egg. The endometrium thins, making it less likely that a fertilized egg will attach to it (Table 1).

Hormonal birth control methods do not protect against sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV). A male or female condom should be used in addition to a hormonal birth control method to provide STD protection if you are at risk of getting an STD.

**Implant**

A contraceptive implant is a single rod about the size of a matchstick. A health care provider inserts the implant under the skin with a special applicator. It takes less than 1 minute. Your upper arm is numbed with a local anesthetic. No incision is made.

**Benefits**

The implant protects against pregnancy for up to 3 years. It is the most effective reversible method of birth control. During the time that it is effective, you do not have to do anything else to prevent pregnancy. If you wish to become pregnant, the implant can be removed easily by your health care provider, and fertility returns without delay. The implant can be used by women who are breastfeeding.

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of women out of 100 who will become pregnant during the first year of typical use*</th>
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<tbody>
<tr>
<td>Implant</td>
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<td>Injection</td>
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<td>Vaginal ring</td>
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*Typical use: When a method is used by the average person who does not always use the method correctly or consistently
Risks

Although rare, if pregnancy occurs while the implant is inserted, there is an increased risk of it being an **ectopic pregnancy**. Other possible risks include problems with insertion of the implant, such as inserting the implant too deeply, which makes removal difficult. These problems occur in less than 1% of women.

Side Effects

The most common side effect of using the implant is irregular bleeding. Menstrual periods may be heavier or lighter. They may last longer, or they may be infrequent. Bleeding between periods may occur. In about 30–40% of women who have used the implant for 1 year, bleeding stops completely. This side effect can be helpful to women who have heavy bleeding or other menstrual problems.

Women have reported weight gain while using the implant: about 3 pounds during the first year of use and 4 pounds during the second year. It is not clear how much of the weight gain is related to the implant.

Other possible side effects of the implant include the following:

- Mood changes
- Headaches
- Acne
- Depression

Injection

An injection of depot medroxyprogesterone acetate (DMPA) provides protection against pregnancy for 3 months. DMPA is a type of progestin.
Injections must be given every 3 months by a health care provider, and you must get the injection on time. The first one usually is given within the first 5 days after the start of your menstrual period. This timing is to ensure that you are not already pregnant and to prevent ovulation during the first month of use.

After a woman stops DMPA injections, fertility returns in about 10 months. For some women, it may take longer. If you know you want to become pregnant within the next year or two, you may want to choose another form of birth control.

Benefits

Injections may be good for women who find daily birth control methods inconvenient. In addition to preventing pregnancy, the injection may have other benefits. It may reduce the risk of cancer of the uterus. For women who have migraines related to their menstrual periods, this method may decrease their frequency. The injection can be used by women who are breastfeeding.

Risks

Many women and teenagers have a decrease in bone density while using hormonal injections. Bone loss can be a concern for teenagers because they are still building their bone density, and taking injections can keep that from happening. Bone density appears to return to levels that are normal for the woman's age when the injections are stopped. It is hard to predict the risk of future fracture from the use of injections, and little research has been done. Women should weigh the possible risk of fracture against the real risk of pregnancy.

Women who have multiple risk factors for cardiovascular disease, like smoking, older age, or diabetes, may be at increased risk of cardiovascular disease while using the DMPA injection. This increased risk may last for some time after the method is stopped. Women with a history of stroke, vascular disease, or high blood pressure also may be at increased risk of cardiovascular disease while using this method.

Side Effects

DMPA injections tend to cause irregular bleeding during the first 6–9 months of use. Bleeding may be heavier, lighter, or unpredictable. After a while, monthly bleeding may not occur at all. Of the women who use injections for 1 year, about one half no longer have any bleeding. When injections are used for longer than 2 years, about 70% of women do not have any bleeding. This side effect can be helpful to women who have heavy bleeding or other menstrual problems.

Another possible side effect is weight gain. More than 60% of women report a weight gain of 5 pounds during the first year of using the injection. You may continue to gain a small amount of weight each year you use the injection.

Other possible side effects include the following:

- Headaches
- Nervousness
- Dizziness
Weakness or fatigue

Vaginal Ring

The vaginal ring is a flexible, plastic ring that you insert into the upper vagina. It releases estrogen and progestin. Most women and their partners cannot feel the ring when it is in place.

You do not need to visit your health care provider to have the ring inserted or removed, but a health care provider must prescribe it. Depending on where you are in your menstrual cycle when you start using the ring, you may need to use a backup method of birth control, such as a condom, for the first 7 days of use.

The ring is worn for 21 days, removed for 7 days, and then a new ring is inserted. During the week it is out, bleeding occurs. The ring also can be used as a continuous-dose form of birth control. To use it this way, remove the old ring and insert a new ring every 3 weeks with no ring-free week in between. Using the ring continuously will lessen or prevent bleeding.

The ring can slip out of place. If it does, you should use a backup method of birth control for 7 days. If it slips out of place often, you may need to choose a different method of birth control.

Benefits

Benefits of using the ring include reduced pain during periods. The vaginal ring may improve acne and reduce excess hair growth. When used continuously (a new ring every 3 weeks), the ring can help prevent menstrual migraines.

Risks

Certain risks are associated with birth control methods that contain estrogen and progestin (see box). Discuss your individual risks with your health care provider.

Side Effects
Possible side effects include the following:

- Vaginal infections and irritation
- Vaginal discharge
- Headaches
- Weight gain
- Nausea

Skin Patch

The contraceptive skin patch is a small (1.75 square inches) adhesive patch that is worn on the skin. The patch releases estrogen and progestin through the skin and into the bloodstream. The patch can be worn on the buttocks, chest (excluding the breasts), upper back or arm, or abdomen. It should not come off during regular activities, such as bathing, exercising, or swimming.

The patch is used on a 4-week or 28-day cycle. A patch is worn for a week at a time for a total of 3 weeks in a row. During the fourth week, a patch is not worn and bleeding occurs. After week 4, a new patch is applied and the cycle is repeated. You will apply the patch on the same day of the week even if you are still bleeding.

The patch also can be used as a continuous-dose form of birth control. You apply a new patch every week on the same day without skipping a week. Using the patch this way will lessen or prevent bleeding.

Risks of the Ring and Patch

Both the vaginal ring and patch contain estrogen and progestin. There are certain risks associated with using this type of combined hormonal contraception. For most women, the risk of serious complications is small. Risks include the following:

- Blood clots in the legs
- Heart attacks and stroke (smoking greatly increases the risk of these complications)
- Gallbladder disease
- Liver tumors

Some women should not use combined hormonal methods. For example, women
Depending on where you are in your menstrual cycle when you start using the patch, a backup method of birth control, such as a condom, should be used for the first week of the first cycle.

**Benefits**

In addition to preventing pregnancy, the patch may improve acne and decrease unwanted excess hair growth. Used continuously, it can reduce the frequency of menstrual migraines.

**Risks**

Certain risks are associated with birth control methods that contain estrogen and progestin (see box). Discuss your individual risks with your health care provider.

**Side Effects**

Possible side effects include the following:

- Nausea
- Breast tenderness
- Headache
- Skin irritation

**Finally...**

Implants, injections, rings, and patches are effective ways to prevent pregnancy. They are convenient, easy to use, and reversible. Your health care provider can help you decide which method is best for your needs and lifestyle.

**Glossary**

**Bone Loss:** The gradual loss of calcium and protein from bone, making it brittle and more susceptible to fracture.

**Cardiovascular Disease:** Disease of the heart and blood vessels.

**Cervix:** The opening of the uterus at the top of the vagina.

**Ectopic Pregnancy:** A pregnancy in which the fertilized egg begins to grow in a place other than inside the uterus, usually in the fallopian tubes.

**Endometrium:** The lining of the uterus.

**Estrogen:** A female hormone produced in the ovaries.

**Hormones:** Substances produced by the body to control the functions of various organs.

**Human Immunodeficiency Virus (HIV):** A virus that attacks certain cells of the body's...
immune system and causes acquired immunodeficiency syndrome (AIDS).

**Intrauterine Device:** A small device that is inserted and left inside the uterus to prevent pregnancy.

**Ovulation:** The release of an egg from one of the ovaries.

**Progestin:** A synthetic form of progesterone that is similar to the hormone produced naturally by the body.

**Sexually Transmitted Disease (STD):** A disease that is spread by sexual contact, including chlamydia, gonorrhea, human papillomavirus infection, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

**Uterus:** A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.