

Reproductive Facts

Patient fact sheet developed by the
American Society for Reproductive Medicine



Hormonal Contraception

How do hormonal contraceptives work?

Hormonal contraceptives contain a progestin (progesterone medicine) with or without an estrogen. Both progestin and estrogen are made in a laboratory and are similar to the hormones that people who are biologically female naturally produce. These two hormones together, or the progestin alone, work in several ways to prevent a pregnancy:

- They can prevent ovulation (the release of an egg).
- They make the mucus around the cervix (lower part of uterus) thicker so that sperm cannot enter the uterus (womb).
- They make the lining of the uterus thinner to prevent a fertilized egg from attaching itself.

Why should I consider hormonal contraception?

When used correctly, all hormonal contraception choices are more than 99% effective in preventing pregnancy. They also have other potential benefits:

- They can reduce the risk of uterine, ovarian, and colon cancers.
- They often reduce menstrual (period) blood flow.
- They may reduce painful periods.

Are there people who should avoid using hormonal contraception?

People with the following conditions should talk to their doctor before using contraceptive agents that contain hormones:

- Current or history of thrombophlebitis or thromboembolic (clotting) disorders
- Current or history of stroke or coronary artery disease
- Heart disease associated with the valves with thromboembolic (clotting) complications
- Untreated and uncontrolled hypertension (high blood pressure)

- Diabetes with circulatory problems
- Migraines with aura (visual or other neurological changes before headache)
- Major surgery with decreased physical activity
- Known or suspected cancer of the breast or personal history of breast cancer
- Decompensated (severe) liver disease or cirrhosis
- Cigarette smoking if age >35 years

What different types of hormonal contraception are available?

- **Vaginal Ring:** A flexible, small ring containing both estrogen and progestin. It is used continuously for 3 weeks, followed by a week without the ring. It can be removed for a short time for sexual intercourse.
- **Progesterone intrauterine contraception:** A small device that a healthcare provider puts into the uterine cavity that contains progestin. It can be used for up to 5 years but can be removed earlier.
- **Implantable form:** A single rod containing progestin that is implanted by a healthcare provider under the skin of the arm. It is effective for up to 3 years and can be removed earlier.

What is emergency contraception (EC)?

EC is designed to prevent a pregnancy if it is taken within 5 days of having unprotected sex. If used properly and within 72 hours, treatments are up to 87% effective. EC prevents ovulation without affecting an already developing pregnancy. There are no medical reasons preventing people from taking EC, though it may be less effective for people with a body mass index (BMI) >30. EC contains progestin, with or without estrogen, that is given in a single dose. In the United States, some brands can be purchased over the counter for people aged 17 and older.

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What are the potential risks of using hormonal contraception?

- **Breast Cancer:** A small number of studies show a slight increased risk of breast cancer in people under age 35 using hormonal contraception, but many more studies show no significant change in breast cancer risk. Overall, by age 50 there is no increased risk of breast cancer in people using hormonal contraception.
- **Bone Strength:** Injectable progestin may cause a short-term decrease in bone mass. Data are limited for other forms of hormonal contraception.
- **Heart Attack:** This is extremely rare. Although hormonal contraception slightly increases this risk, people over age
- **Oral contraceptives:** There are various formulations and doses that can be changed to meet your needs. Most contain a combination of estrogen and a progestin and are taken daily. They can be used cyclically (for example, 21 days of hormone pills and 7 days of placebo pills) to produce regular menstrual cycles, or continuously for no regular menstrual cycles.
- **Injectable progestin:** Contains a form of progestin that is given as a shot every 12 weeks. It may take up to 12 months for you to start ovulating again after you stop getting the shots.
- **Skin Patch:** Contains a form of both estrogen and progestin that is given weekly for 3 weeks followed by a patch-free week. It may not be as effective in people who weigh over 90 kg (200 pounds). Estrogen levels in people taking the patch may be higher than in people taking pills. This may mean a higher risk of blood clots.
- **Stroke:** This is very rare. This risk may be increased in people who have migraines with aura or who are over age 35 and smoke.
- **Blood Clots (venous thromboembolism):** Although the overall risk is very low, the risk is increased in all people who use formulations containing estrogen. This risk is higher in people who have underlying conditions that make them more likely to develop blood clots, such as antiphospholipid syndrome or Factor V Leiden thrombophilia.

Please ask your healthcare provider for more information about the benefits, risks, and side effects of these contraceptive agents.

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35 who smoke are at a higher risk.