How do birth control pills work? [1]

Alice,

How do birth control pills work?

? Woman

Answer

Dear Woman,

Birth control pills prevent pregnancy through several mechanisms, mainly by stopping ovulation. If no egg is released, there is nothing to be fertilized by sperm, and the woman cannot get pregnant. Most birth control pills contain synthetic forms of two female hormones: estrogen and progestin. These synthetic hormones stabilize a woman's natural hormone levels, and prevent estrogen from peaking mid-cycle. Without the estrogen bump, the pituitary gland does not release other hormones that normally cause the ovaries to release mature eggs.

Specifically, synthetic estrogen in the pill works to:

- Stop the pituitary gland from producing follicle stimulating hormone (FSH) and luteinizing hormone (LH) in order to prevent ovulation.
- Support the uterine lining (endometrium) to prevent breakthrough bleeding mid-cycle.

Meanwhile, synthetic progestin works to:

- Stop the pituitary gland from producing LH in order to prevent egg release.
- Make the uterine lining inhospitable to a fertilized egg.
- Partially limit the sperm's ability to fertilize the egg.
- Thicken the cervical mucus to hinder sperm movement (although this effect may not be key to preventing pregnancy).
There are two kinds of hormonal birth control pills: (1) the combination pill which contains estrogen and progestin and (2) the progestin-only pill (known as the minipill). Combo pills are significantly more effective than progestin-only pills and have the added benefit of less breakthrough bleeding. However, some women cannot tolerate estrogen and prefer the progestin-only pill. Both types of pills are available in several different brands, each of which have slightly different blends of hormones.

These two kinds of hormonal birth control are available in other forms besides pills. The combination formula is also available as a patch and a vaginal ring. The progestin-only formula is also available in intramuscular shots (Depo-Provera), an implant (Implanon), and in intrauterine devices (the Mirena IUD).

Some women may prefer these other forms of hormonal birth control because they can be taken less often (and consequently are easier to remember). While birth control pills must be taken everyday, the patch is only applied once per week, the vaginal ring only once per month, and the intramuscular shot only once every 3 months. An IUD is inserted into the uterus and can prevent pregnancy for five years or more. In the US, hormonal birth control pills and devices are only available by prescription. Women may want to ask a gynecologist or women's health care provider for information about different kinds of birth control, including which methods would be best for them personally.

If you choose birth control pills (which are sometimes the cheapest form of birth control), it is very important to take the pills at the same time everyday. This creates a more stable level of hormones in your body. When you forget your pill (or take it three to four hours late or more), this causes a dip in your body's levels of the birth control hormones. If you forget your pill one day, you may need to take two pills the next day, which will cause a spike in your body's levels of the birth control hormones. To maximize protection against pregnancy and to minimize side effects, pick a time you are likely to remember (maybe first thing in the morning or right before bed) and take your pill this same time everyday.

Finally, birth control pills traditionally come in packs of 21 or 28 pills. Both types of packs contain 21 active pills. The seven extra pills in the 28-pill pack are placebo pills which are there to remind you to continue taking one pill everyday and to remind you when to begin the next pack. Whether you take placebo pills or simply wait 7 days to start the next pack, the 7-day break from hormones triggers monthly bleeding that mimics a woman's menstrual period. Women are still protected from pregnancy during this time as long as they have taken all the active pills consistently and correctly. For more details, take a look at Why do I menstruate while on birth control? [2] in Go Ask Alice! archive for Sexual Health.

Newer brands of birth control pills have been approved by the U.S. Food and Drug Administration (like Seasonale) which allow women to have their "period" fewer times per year. Seasonale packs come with 84 active pills followed by a placebo week so the woman bleeds only 4 times per year. For more info, check out Delaying your period through oral contraceptives [3] in the Go Ask Alice! Sexual and Reproductive Health [4] archive. If you're interested in using hormonal birth control, speak with your health care provider about which method would suit you best.

Take care,

Alice!

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