

Oral contraceptives: The risks and benefits of being on the pill

July 17 2024, by Joan Albert Arnaiz Gargallo



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The 20th century saw humanity develop in leaps and bounds, and without a doubt one of the most revolutionary advances was oral

contraceptives, more commonly known as "the pill."

Until the 1980s, the majority of [women](#) had extremely limited and ineffective options when it came to contraceptives. Many left a great deal to chance, using methods such as [prolonging lactation after pregnancy](#) or fertility awareness, which involves avoiding intercourse at certain times of the month or monitoring cervical mucus and body temperature.

Other methods—such as condoms or interrupted coitus (also known as "pulling out")—gave women little control, but the [pill](#) allowed them to freely choose not to get pregnant.

A question of hormones

Hormonal contraception consists of the external administration of sex hormones—estrogens and progestogens—which prevent a woman from becoming pregnant. They work in several different ways:

- By thickening the mucus that lines the cervix, which blocks the passage of sperm cells.
- By slowing the development of uterine mucus (endometrium), which prevents the implantation of a fertilized egg.
- By blocking the production of pituitary hormones (gonadotrophins), which prevents ovulation.

This form of contraception is reversible, and can take the form of pills, as well as skin patches, vaginal rings, skin implants or injections. While these alternative formats are just as effective, they vary in terms of discomfort or side effects. They also require medical procedures to begin or end their use, while [oral contraceptives](#) do not.

In any case, we cannot forget that unlike barrier methods like condoms,

hormonal contraceptives do not protect against sexually transmitted infections.

Over 99% effective

Hundreds of millions of women have taken the pill over the past six decades. Arguably, the effects—both good and bad—of few medicines have been studied more, and today we know that the benefits far outweigh the risks.

When used correctly, combined oral contraceptives (which contain both estrogens and progestogens) have a [failure rate](#) (defined as number of unintended pregnancies per 100 women in a one-year period) of less than 1%—similar to that of intrauterine devices (IUDs) and injectable progestogens. This efficacy is surpassed only by surgical sterilization (hysterectomy or vasectomy), and the most common cause of failure is missing one or more doses during a cycle.

What to bear in mind before you start taking the pill

In general, most women can use hormonal contraceptives. The only exceptions are those with [high blood pressure](#), coronary or cerebrovascular disease, or who suffer from certain types of migraine. The pill should also be avoided by women who have had breast cancer, and those who have certain [risk factors](#)—such as obesity—associated with developing blood clots, also known as "thrombosis."

While it has been documented for years that oral contraceptives [can reduce vitamin or folic acid levels](#), this effect does not appear to be significant in users with otherwise healthy nutrition. Supplemental folic acid would be necessary for women seeking to become pregnant in order to ensure the embryo's proper neurological development.

If oral contraceptives are taken alongside other medications, it can cause interactions that either increase or decrease the effects of these medicines. In this case, the best course of action is to consult with a doctor before starting to take the pill.

In addition, the effectiveness of oral contraceptives may be compromised in patients undergoing certain treatments: rifampicin (an anti-tuberculosis antibiotic) as well as a number of anti-epileptic drugs are known to decrease contraceptive levels and may [prevent them from working properly](#). Though much has been written about interactions with other antibiotics, this has not been confirmed.

The most significant risks

With regard to side effects, people [may experience certain symptoms](#) in the first months of use, which can vary depending on the estrogens or progestogens being taken.

Nausea, [breast pain](#), hair growth, irregular bleeding, irritability, decreased libido, abdominal bloating and [weight gain](#) are common, but these effects may vary depending on the format being taken, and usually improve over time, or with a change in the dose or type of pill being taken. However, in some cases these [side effects](#) may mean that treatment has to be stopped.

Apart from these possible discomforts, [the main risks](#) of taking the pill are linked to cardiovascular conditions and the likelihood of developing certain kinds of tumors.

Women who take hormonal contraceptives are 3–4 times more likely to develop venous thromboembolism (blood clots) than women who do not take them. While this sounds alarming, the risk is actually quite low in absolute numbers—it is around half the risk of venous thrombosis during

pregnancy.

Accordingly, hormonal contraceptives would not be recommended after the age of 35 for women who smoke, are obese or have a family history of cardiovascular disease. Combined oral contraceptives with low doses of estrogen are less likely to cause cardiovascular problems, and could be considered safe up to 45 years of age or older. [Pills that include newer progestogens](#) appear to be associated with an increased risk of venous thrombosis.

These drugs have also been linked to some types of cancer. Although the data varies between studies, the chances of developing [breast cancer](#) are 20-40% higher during treatment, but seem to normalize after stopping. There is also an increased chance (up to four times higher) of developing liver tumors, and in women who have tested positive for [human papillomavirus](#) (HPV), there is an increased chance of developing [cervical cancer](#).

The contraceptive of choice

There are also [good sides to taking the pill](#)—among other benefits, hormonal contraceptives have been associated with a decreased risk of ovarian and endometrial cancers. They also regulate the length of menstrual cycles and decrease premenstrual symptoms, relieve period pain and ovulation, reduce the volume of menstrual bleeding and the risk of iron deficiency (anemia), improve acne and endometriosis, and have been linked to a reduced incidence of benign breast tumors, pelvic inflammatory disease, ovarian cysts and osteoporosis.

For decades, oral contraceptives have been a highly effective, reversible way of preventing pregnancy that affords women a great deal of autonomy without medical intervention. For young non-smokers without obesity or a history of cardiovascular risk or [breast cancer](#)—who can

keep up the regime of taking a pill daily—they could be considered the best available method of contraception.

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