

Combined Oral Contraceptive Pill

The combined oral contraceptive pill (COCP) is often just called the pill. It contains two hormones, an oestrogen and a progestogen. If taken correctly, it is a very effective form of contraception.

How does the pill work?

It works in three ways:

- The pill changes the body's hormone balance so that your ovaries do not ovulate (produce an egg).
- It also causes the mucus made by the neck of the womb (cervix) to thicken and form a mucous plug. This makes it difficult for sperm to get through to the womb (uterus) to fertilise an egg.
- The pill also makes the lining of the womb thinner. This makes it less likely that a fertilised egg will be able to attach to the uterus.

There are different types and strengths of oestrogens and progestogens.

How effective is the pill?

About 1 woman in 300 *using the pill correctly* will become pregnant each year. Correct use means not missing any pills, re-starting the pill on time after the pill-free week and taking extra contraceptive precautions when necessary - see below.

For comparison, when no contraception is used, more than 80 in 100 sexually active women become pregnant within one year.

What are the advantages of the pill?

- It is very effective.
- It does not interfere with sex.
- Periods are often lighter, less painful and more regular.
- It relieves premenstrual tension for some women.
- It reduces the risk of developing cancers of the ovary, colon and womb. The protection against cancer of the ovary is quite marked and seems to continue for many years after stopping the pill. It may also reduce the risk of developing certain types of cyst in the ovary.
- It may also reduce the risk of pelvic infection (as the mucous plug prevents bacteria, as well as sperm, from getting into the uterus).
- It may help to protect against some benign (noncancerous) breast disease.

Are there any side-effects when taking the pill?

Most women who take the pill do not develop any side-effects. However, a small number of women develop nausea (feeling sick), headaches or sore breasts when they take the pill. These usually go away within days or weeks of starting the pill. If they persist there are many different brands of pill you can try, which may suit you better.

Other side-effects are uncommon and include tiredness, change in sex drive, skin changes and mood changes. These are unusual and you should tell your doctor or practice nurse if you have any lasting side-effects. Many people believe that taking the pill makes you put on weight, but this has never been proven in studies.

The pill sometimes causes a rise in blood pressure, so people taking it should have their blood pressure checked every six months. The pill may need to be stopped if your blood pressure becomes too high.

Are there any risks in taking the pill?

The pill can have some serious side-effects, but these are very uncommon. For most women the benefits of the pill outweigh the possible risks. All risks and benefits of you taking the pill should be discussed with your doctor or nurse.

People taking the pill have a small increased risk of thrombosis (blood clot). This is more so in the first year of taking the pill. This is why people with a higher risk of clots cannot take the pill. However, this risk is considerably smaller than the risk of clot if you were pregnant. All pills now prescribed have low doses of oestrogens in them. Some have lower strengths which may be more suitable if you have any risk factors for thrombosis. The low-dose pills can lead to some spotting of blood occurring in between your periods as a side-effect.

You must see a doctor straight away if you have any of the following: severe headache, bad pains in the chest, leg or tummy, leg swelling, breathing difficulty, coughing up blood, sudden problems with sight or speech, weakness or numbness in an arm or leg, or collapse. These symptoms could be due to a blood clot.

Taking the pill can increase the risk of some types of cancer but also protect against other types. Research into the risk of breast cancer in people taking the pill is complicated and the results are not straightforward. Some studies suggest a possible link between the pill and a slightly increased risk of cancer of the cervix if the pill is taken for more than eight years. Some research suggests a link between using the pill and developing a rare liver cancer.

However, there is a reduced risk of developing cancer of the ovary, uterus and colon in people taking the pill. When all cancers are grouped together, the overall risk of developing a cancer is reduced if you take the pill. Further research is ongoing.

Note: if you need to go into hospital for an operation, or you have an accident which affects the movement of your legs, you should tell the doctor that you are taking the pill. The doctor may decide that you need to stop taking the pill for a period of time to reduce your risk of unwanted clots whilst you recover.

Who cannot take the pill?

Most women can take the pill. If you are healthy, not overweight, do not smoke and have no medical reasons for you not to take the pill, you can take it until your menopause. Women using the pill will need to change to another method of contraception at the age of 50 years. Your doctor or family planning nurse will discuss any current and past diseases that you have had. Some diseases cause an increased risk or other problems with taking the pill. Therefore, the pill will not be prescribed to some women with certain diseases - for example, hepatitis or breast cancer, or if you are taking certain medicines.

If you have risk factors for venous thromboembolism (blood clot) then you may be advised not to take the pill. If you have two or more of the following risk factors then you should not take it:

- A family history of venous thromboembolism (blood clot) in a first-degree relative (eg, sister, mother) aged under 45 years.

- Being overweight. Your doctor or nurse can work out your BMI. This measures how much you weigh related to your height. If your body mass index (BMI) is above 30 kg/m². You should not be taking the pill if your BMI is over 39 kg/m² even if you do not have any other risk factors.
- If you are not very mobile for a long period of time - for example, if you are in a wheelchair or have your leg in a plaster cast.
- History of superficial thrombophlebitis (where the veins on the surface of your legs become red and sore).

If you have risk factors for arterial disease (circulation problems) then you may be advised not to take the pill. If you have two or more of the following risk factors then you should not take it:

- A family history of arterial disease (circulation problems) in a first-degree relative (for example, sister, mother) aged under 45 years.
- Diabetes mellitus: if you have had diabetes for more than 20 years you should not take the pill even if you have no other risk factors.
- Hypertension: high blood pressure that is not controlled with treatment.
- Smoking: you should not take the pill if you smoke 40 or more cigarettes a day, even if you have no other risk factors.
- Age over 35 years: you should not take the pill at all if you are aged over 50 years.

Note: the BMI is calculated by your weight (in kilograms) divided by the square of your height (in metres). For example, if you weigh 66 kg and are 1.7 m tall then your BMI would be $66/(1.7 \times 1.7) = 22.8$.

If you are breast-feeding you should not take the pill, as it can reduce the amount of milk. Other forms of contraception are available if you are breast-feeding.

Can I take the pill if I have headaches or migraines?

If you have headaches which are not migraines, then it is perfectly safe for you to take the pill. However, if you have migraines then you may be advised not to take the pill. This is the case when your migraine is associated with aura or if you are over 35 years old. If you notice any increase in headache frequency or severity when taking the pill you should let your doctor know.

How do I take the pill?

There are different brands of pill which contain varying amounts and types of oestrogen and progestogen. There is usually a leaflet inside the packet of pills. Read the leaflet carefully and make sure you understand how to take the pill and what to do in special situations such as if you miss a pill or you vomit. The following gives a general guide.

Brands with 21-day pills

Most brands of pill come in packs of 21. To start, it is best to take the first pill on the first day of your next period. You will be protected against pregnancy from then on. If you start the pill on any other day, you need an additional contraceptive method (such as condoms) for the first seven days. You should take your pill at about the same time each day for the 21 days.

You then have a break of seven days before starting your next pack. You will usually have some bleeding in the seven-day break, although it may happen later. This is called a withdrawal bleed and is like a period, although strictly speaking it is not a menstrual period. You will be protected from pregnancy during the seven-day break provided you have taken your pills correctly *and* you start the next pack on time. Start the next pack after the seven-day break whether you are still bleeding or not. If you take the pill correctly, you will start the first pill of each pack on the same day of the week.

Most 21-day pills have the same amount of oestrogen and progestogen in each pill. Some brands, called phasic pills, vary the dose in two or three steps throughout the 21 days. The pills in these packets have to be taken in the correct order as directed on the packet.

Brands with pills for every day

These contain 21 active and seven dummy pills. Instead of a seven-day break, you carry on taking the dummy pills. The idea is that you don't have to remember to restart the pill after a seven-day break and you get into a routine of taking a pill every day. The pills have to be taken in the correct order. Read the instructions carefully, particularly on when to start, which pill to start with, and how long it takes for the contraceptive effect to begin.

What if I miss or forget to take one or more pills?

Read the leaflet that comes with your brand of pill for advice on what to do. Ovulation (and therefore pregnancy) may occur if you miss pills, particularly if the missed pills are at the end or beginning of the packet. The advice depends on how many pills you have missed, and when they were missed in the cycle.

If one pill is missed, anywhere in the pack take the missed pill now. This may mean taking two pills in one day. You should take the rest of the pack as usual. No extra contraception is needed. You should have the 7-day break as normal.

If two or more pills are missed anywhere in the pack, take the last missed pill now. This may mean taking two pills in one day. Any earlier missed pills should not be taken. You should take the rest of the pack as usual. You should also use extra precautions (eg condom or abstinence) for the next 7 days.

You may need emergency contraception (the morning after pill or similar) if you have had unprotected sex in the last 7 days and have missed two or more pills in the first week of a pack. You may need to start the next pack of pills without a break, if there are fewer than seven pills left in the pack (after the missed pill).

If you are unsure what to do, or are unsure that you have taken the pill correctly, then use other forms of contraception (such as condoms) and seek advice from a doctor or nurse.

Do other medicines interfere with the pill?

Yes, some do but most do not. Therefore, before you take any other medicines, including those available to buy without a prescription, herbal and complementary medicines, ask your doctor or pharmacist if they stop the pill from working properly. He or she will advise you on what to do.

For example, some medicines that are used to treat epilepsy and tuberculosis (TB) can stop the pill from working properly. St John's wort is an example of a commonly used herbal remedy that can affect the pill.

Antibiotics

Antibiotics (other than one called rifampicin) do not interfere with the effectiveness of the pill. In the past it was recommended that, if you were taking antibiotics and were also taking the pill, you should use additional contraception. This is **no** longer the current recommendation after more recent evidence has been reviewed. You should continue taking your pill as normal if you also need to take any antibiotics.

What if I vomit or have diarrhoea?

If you vomit within 2-3 hours of taking a pill, the pill will not have been absorbed. If you are well enough, take another pill as soon as possible. Provided that you do not vomit this second pill and it is taken on the same day, then you will remain protected from pregnancy. If you continue to vomit, then it is the same as missing pills (see above). Mild diarrhoea does not affect the absorption of the pill. Severe diarrhoea may affect it and if you have severe diarrhoea, consider this as the same as missing pills (see above).

What happens if I don't have a withdrawal bleed between packs?

It is normal to have bleeding during the seven-day break between pill packs (or when taking the dummy pills in pills taken every day). However, it is quite common for there to be no bleeding between pill packs. You are not likely to be pregnant if you have taken the pill correctly and have not vomited or taken any medicines that can interfere with the pill. Start the next pack after the usual seven-day break and continue to take your pill as usual. See your doctor or nurse if:

- You don't have any bleeding after the next pack (two packs in total); or
- You have not taken the pill correctly; or
- You have any reason to think that you may be pregnant.

A pregnancy test may be advised.

Bleeding whilst on the pill (breakthrough bleeding)

During the first few months, while your body is adjusting to the pill, you may have some vaginal bleeding in addition to the usual bleeding between packs. This is not serious but more of a nuisance. It may vary from spotting to a heavier loss like a light period. Do not stop taking your pill. This usually settles after the first 2-3 months. If it persists, see your doctor or nurse. Another brand of pill may be more suitable for you.

Can I delay or skip a withdrawal bleed (period)?

There are times when it is useful not to have vaginal bleeding (a period between packs), for example, during exams or holidays. Check with your doctor or nurse about the best way to do this with your particular brand of pill. For the commonly used pill types (that is, not bi-phasic or tri-phasic or every day types) you can go straight into your next pack without a break. Have the usual seven-day break at the end of the second packet.

Further information

Your GP, practice nurse, family planning clinic and pharmacist are good sources of information if you have any queries. The fpa (formerly the family planning association) also provides information and advice. fpa's helpline: 0845 310 1334 or visit www.fpa.org.uk

Further reading & references

- [Drug Interactions with Hormonal Contraception](#), Faculty of Sexual and Reproductive Healthcare (2011)
- [Missed Pill Recommendations](#), Faculty of Sexual and Reproductive Healthcare (2011)
- [First Prescription of Combined Oral Contraception](#), Faculty of Family Planning and Reproductive Health Care (2007); now known as the Faculty of Sexual and Reproductive Healthcare
- [Gallo MF, Lopez LM, Grimes DA, et al; Combination contraceptives: effects on weight. Cochrane Database Syst Rev. 2008 Oct 8;\(4\):CD003987.](#)
- [Beral V, Doll R, et al; Collaborative Group on Epidemiological Studies of Ovarian Cancer. Ovarian cancer and oral contraceptives: collaborative reanalysis of data from 45 epidemiological studies including 23,257 women with ovarian cancer and 87,303 controls. Lancet. 2008 Jan 26;371\(9609\):303-14.](#)

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