

# Oral contraceptives and blood clots

**This information sheet will help you understand more about the risks and benefits from using oral contraceptives. It is not a substitute for talking with your doctor, nurse or pharmacist.**

**The most important risk of harm for women using oral contraceptives is a blood clot.**

## What is a blood clot?

A blood clot is a normal response to a cut and helps to stop bleeding. However, sometimes blood clots can form inside the body, usually in the leg veins. This is called deep vein thrombosis (DVT), and the blood clots can block the vein.

Rarely, pieces of the clot can break off and travel to the lungs. A clot in the lungs is called pulmonary embolism.

Together, deep vein thrombosis and pulmonary embolism are known as venous thromboembolism (VTE).

## Who can get a blood clot?

Blood clots can happen to anyone. Two out of every 10,000 healthy, non-pregnant women who are not using an oral contraceptive will develop a blood clot each year.

## What are the symptoms of a blood clot?

- In the leg: swelling, tenderness and pain can occur with a blood clot in the leg.
- In the lung: breathlessness and sharp chest pain can occur with a blood clot in the lungs.

**Call an ambulance** if you develop any of these symptoms, because it is important to get treated as soon as possible.

## How often do blood clots occur with oral contraceptives?

Blood clots only happen very occasionally (rarely) in women using oral contraceptives.

### Combined oral contraceptives

Combined oral contraceptives contain both an oestrogen (ethinylestradiol) plus a progestogen (norethisterone, levonorgestrel, desogestrel, drospirenone, cyproterone, norgestrel or dienogest). They are also known as COCs, or 'the pill'.

The risk of developing blood clots with COCs ranges from 5 to 12 out of 10,000 women per year, depending on the amount of oestrogen and the type of progestogen (see Table 1 on the next page). The risk is higher during the first year of using a COC, when switching between different COCs, and if you have had a break of longer than a month.

### Progestogen-only oral contraceptives

Progestogen-only oral contraceptives contain only a progestogen (as desogestrel, levonorgestrel or norethisterone) — they do not contain any oestrogen. Progestogen-only oral contraceptives are also known as the 'mini-pill'.

Progestogen-only contraceptives are not associated with an increased risk of developing blood clots. The risk of developing blood clots with progestogen-only contraceptives is about 2 out of 10,000 women per year, which is the same as the risk in women who do not take oral contraceptives (see Table 1).

**Table 1: Risk of developing a blood clot in a year**

Group	Risk of developing a blood clot (venous thromboembolism) in a year
Healthy, non-pregnant women who are not using a combined oral contraceptive (COC)	About 2 out of 10,000 women
Women using a COC that contains a low dose of ethinylestradiol <sup>a</sup> plus: norethisterone or levonorgestrel desogestrel, drospirenone or cyproterone nomegestrol or dienogest	About 5–7 out of 10,000 women About 9–12 out of 10,000 women Not yet known
Women using a COC that contains a high dose of ethinylestradiol <sup>b</sup> plus levonorgestrel	About 9–12 out of 10,000 women
Women using a progestogen-only <sup>c</sup> oral contraceptive	About 2 out of 10,000 women

- Combined oral contraceptives that contain 20–35 micrograms of ethinylestradiol as the oestrogen, plus norethisterone, levonorgestrel, desogestrel, drospirenone, cyproterone, nomegestrol or dienogest as the progestogen.
- Combined oral contraceptives that contain 50 micrograms of ethinylestradiol as the oestrogen, plus levonorgestrel as the progestogen.
- Oral contraceptives that contain only desogestrel, levonorgestrel or norethisterone.

Sources:

European Medicines Agency. 2014. *Benefits of combined oral contraceptives (CHCs) continue to outweigh risks* 16 January 2024. URL: [https://www.ema.europa.eu/en/documents/referral/benefits-combined-hormonal-contraceptives-chcs-continue-outweigh-risks\\_en.pdf](https://www.ema.europa.eu/en/documents/referral/benefits-combined-hormonal-contraceptives-chcs-continue-outweigh-risks_en.pdf) (accessed 27 May 2026).

Keith L and Bates M. 2024. Estrogen, progestin, and beyond: Thrombotic risk and contraceptive choices. *Hematology. American Society of Hematology. Education Program*. 2024(1): 644–51. DOI: 10.1182/hematology.2024000591 (accessed 27 May 2026).

## What else increases the risk of blood clots?

The risk of developing a blood clot increases with:

- being overweight
- age (older than 35 years)
- having a close family member who has had a blood clot in the past (genetic)
- smoking
- childbirth
- pregnancy
- immobility, for example being on a long flight or not moving around after an injury, illness or operation.

These are also called risk factors. Having more than one risk factor increases the chance of having a blood clot. You should tell your doctor if any of these risk factors apply to you before you start using an oral contraceptive.

## What are the benefits of using an oral contraceptive?

Oral contraceptives are 91% effective at preventing pregnancy with typical use compared with male condoms, which are 82% effective with typical use.

Other benefits include lighter periods, less period pain and an improvement in symptoms of premenstrual syndrome (PMS) or premenstrual tension (PMT). Combined oral contraceptives have also been shown to reduce the risk of cancer of the uterus and ovaries.

## Where can I find more information on using oral contraceptives?

You can find out more in the Consumer Medicine Information (CMI) leaflet for each medicine. Search for the CMI on the Medsafe website: [medsafe.govt.nz/DbSearch/infoSearch](https://medsafe.govt.nz/DbSearch/infoSearch)

Healthify also has information about combined oral contraceptives and the progestogen-only pill:

- [healthify.nz/medicines-a-z/c/combined-oral-contraceptive-pill](https://healthify.nz/medicines-a-z/c/combined-oral-contraceptive-pill)
- [healthify.nz/medicines-a-z/p/progestogen-only-oral-contraceptive-pill](https://healthify.nz/medicines-a-z/p/progestogen-only-oral-contraceptive-pill)

**If you have any further questions, discuss these with your doctor, nurse, pharmacist or Family Planning.**