

Oral Contraceptives and Blood Clots

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New Zealand Medicines and Medical Devices Safety Authority
A Business Unit of the Ministry of Health.

Before prescribing a contraceptive, your doctor is required to discuss the options with you and to explain the risks and benefits. This will help you make a choice about which method to use. Your doctor will also need to check whether you have any risk factors that would prevent you from using an oral contraceptive ('the pill') or increase your risk of having a blood clot or other side effect. All benefits and risks need to be considered when deciding which contraceptive is best for you.

This fact sheet is about blood clots, a rare complication of taking oral contraceptives.

What is a blood clot?

The blood clots associated with using oral contraceptives occur in the veins of the legs. They cause a blockage in the vein. On rare occasions pieces of the clot dislodge and travel to the lungs. Clots in the legs or lungs are called venous thromboembolism or VTE. While most women recover completely from VTE, some have ongoing health problems. A small number of women have died.

These blood clots in the veins are not the same as the clots that you can see in menstrual blood when you have your period.

How often do blood clots occur with oral contraceptives?

Blood clots only happen very occasionally in women using oral contraceptives, and deaths from blood clots are even more rare. The risk of having a blood clot depends on a number of factors. It increases with age and it also depends on what kind of oral contraceptive is being taken.

Most oral contraceptives contain both oestrogen and a progestogen. These are called *combined oral contraceptives* - see table. Depending on the type of progestogen in the pill, they are known as either second or third generation contraceptive pills. There are also pills containing cyproterone, which are used to treat conditions caused by an excess of the hormone androgen, e.g. pronounced acne. These cyproterone-containing pills provide contraception as well. Another type of oral contraceptive is the *progestogen-only pill*, also known as the 'Mini-pill'.

Women can have blood clots when they are not using oral contraceptives. For every 100,000 women aged 15-44 who are not taking the pill, approximately 5-10 will develop a blood clot in one year.

Taking a combined oral contraceptive increases this very small risk of developing a clot by 3-4 times if you are on a second generation pill, 6-8 times if you are taking a third generation pill, and possibly over 8 times for those on pills containing cyproterone. Women using progestogen-only pills are at little or no increased risk of blood clots.

Type of oral contraceptive	Brands available in New Zealand
Progesterone-only pill	Femulen, Microlut, Microval, Noriday, Cerazette
Combined oral contraceptives with low-dose oestrogen and progestogen	
<i>Second generation</i> Pills containing an oestrogen, and the progestogens levonorgestrel or norethisterone	Brevinor, Brevinor-1, Levlen ED, Loette, Microgynon 20ED/30/30ED, Monofeme, Nordette, Norimin, Synphasic, Trifeme, Triphasil, Triquilar ED
<i>Third generation</i> Pills containing an oestrogen, and the progestogens desogestrel or gestodene	Femodene, Marvelon, Melodene, Mercilon, Minulet
<i>Anti-androgen</i> Pills containing an oestrogen and cyproterone	Diane-35/35ED, Estelle 35/35ED
Combined oral contraceptives containing high-dose oestrogen and progestogen	
Pills containing 50mcg oestrogen and a progestogen	Biphasil, Microgynon 50ED, Nordiol, Norinyl-1, Ovral

How often are blood clots fatal?

Of those women who get a blood clot, about 3% will die. As combined oral contraceptives are used by many women in New Zealand, two deaths a year from blood clots would be expected in this country.

During 1990-2001, 20 women in New Zealand using combined oral contraceptives are known to have died of a blood clot in the lungs. Of those who died, 15 were using third generation pills and 2 were using pills containing cyproterone. There is a risk of death with second generation pills but it is lower.

What increases the risk of blood clots?

Some of the risk factors for blood clots are:

- *a previous blood clot*
- *a close family member who has had a blood clot*
- *being overweight*
- *cancer*
- *some blood disorders*
- *being immobilised*
- *bad varicose veins.*

Your risk of having a blood clot can also be temporarily increased, for example by a long flight, childbirth, being immobilised by injury or illness, or by having surgery. Women who have had a previous blood clot should not take a combined oral contraceptive. You should tell your doctor if any of these risk factors apply to you.

What are the symptoms and what should I do about them?

The symptoms of a blood clot in the leg are swelling, tenderness and pain, but a blood clot may occur without symptoms. Breathlessness and sharp chest pain can occur with a blood clot in the lungs. These symptoms can also occur for other reasons.

If you develop any of these symptoms, you should see a doctor immediately. You should be particularly alert to these symptoms if you have a risk factor for blood clots.

If you get a blood clot, your doctor may refer you to hospital for tests and treatment with blood-thinning medication. Treatment may last for several months and some women may have ongoing problems such as pain or swelling.

Who should I discuss this information with?

You should discuss your risk of blood clots with your doctor. If together you decide your risk on a combined oral contraceptive is too high, there are a number of different types of contraceptives available, including the progestogen-only pill and non-hormonal barrier methods such as condoms. You should discuss with your doctor which type is likely to suit you best. You have a right to expect your doctor to explain this information in a way that you can understand.

Remember that blood clots are rare events in healthy women taking the contraceptive pill. Serious consequences are even less likely to occur. Your risk will be reduced even further if you see a doctor immediately if you get any symptom of a possible blood clot.