The pill and breast cancer risk

How does taking the oral contraceptive pill affect your chances of developing breast cancer?

Quick facts

• The combined contraceptive pill slightly increases your risk of breast cancer
• Ten years after stopping the combined pill, this small increase in risk disappears
• We do not yet know whether the mini pill and other hormone-based contraceptives affect breast cancer risk in the same way
Types of hormone contraception

There are two main types of pill:
• The combined contraceptive pill, which contains the female hormones oestrogen and progestogen
• The mini pill, which contains progestogen only

There are other types of hormone-based contraception, including patches, implants placed under the skin, injections and hormone-releasing coils (the levonorgestrel-releasing intrauterine system, such as Mirena). Some coils do not contain hormones; these are known as intrauterine devices and are not covered by this factsheet.

Most research studies about the pill and breast cancer risk have looked at the combined contraceptive pill, so we focus on that in this factsheet.

Will taking the combined pill increase my chances of developing breast cancer?

A large number of studies have shown that taking the combined pill increases a woman's risk of developing breast cancer, but this increase in risk is small. Ten years after stopping the combined pill, this small increase in risk disappears and a woman's chance of developing breast cancer becomes about the same as if she never took the pill. It is not yet clear whether the number of years a woman takes the pill for affects her chances of getting breast cancer.

It’s important to note that breast cancer is much less common in women of child-bearing age. So even though the combined pill slightly increases a woman’s risk of breast cancer, at ages up to 40, this risk is quite small.
Over the past 30 years, the levels of oestrogen used in the combined pill have decreased. It is not clear whether the modern, low doses of the combined pill are associated with the same breast cancer risk as the older, higher dose pills that have been studied. There also hasn’t yet been enough research to show whether or not there is an increased risk of breast cancer with the mini pill and other hormone-based contraception.

Why does the combined pill increase the risk of breast cancer?

The combined pill contains the female sex hormones oestrogen and progestogen. These hormones prevent pregnancy by stopping the ovaries releasing eggs (called ovulation). However, these hormones can increase the growth of some breast cancers, which might explain why taking the pill slightly increases the risk of breast cancer.

How much does the combined pill increase my breast cancer risk?

The older you are, the higher your risk of developing breast cancer. Taking the combined pill adds to your risk a little further, whatever your age.

We can explain this using the chart opposite. This shows how many women out of 2,000 will develop breast cancer for two groups: those using the combined pill (grey) and those not using hormone-based contraception (pink).

For example:

- In a group of 2,000 women using the combined pill, about 11 or 12 will probably develop breast cancer by age 39 (grey).

- In contrast, of 2,000 women who don’t use hormone-based contraception, about 9 or 10 will probably develop breast cancer by age 39 (pink).

- Therefore, up to age 39, using the combined pill causes about 2 extra women out of every 2,000 to develop breast cancer.

As you can see, increasing age has the biggest effect on breast cancer risk, but using the combined pill adds to this risk a little.

Estimated number of women out of 2,000 who will develop breast cancer

![Graph showing breast cancer risk by age and hormone use]

What else should I consider?

The pill is safe and very effective for preventing pregnancy, and for many women the benefits will outweigh the risks. For example, although the pill increases breast cancer risk, it decreases the risk of ovarian and womb cancers.

Breast Cancer Now recommends that if you are thinking of taking, or stopping taking, the pill, you should speak to your GP or family planning clinic. When making the decision, you should take into account the risks and benefits of taking the pill, your medical history, lifestyle, individual preferences and alternative methods of contraception you could use.
Some of the main benefits and risks of the combined pill are below. More information can be found on the Family Planning Association’s website: www.fpa.org.uk

Benefits:
- Prevention of pregnancy
- Usually makes periods lighter, regular and less painful
- Reduced risk of cancer of the ovary and womb
- Can reduce the symptoms of premenstrual syndrome (PMS)

Risks:
- Slightly higher risk of breast cancer
- Increased risk of cervical cancer
- Risk of higher blood pressure and blood clots

If you have inherited one of the faulty breast cancer genes BRCA1 or 2, we recommend you speak to your family history or genetics specialist if you are considering using the pill.

For more ways to reduce your risk see breastcancernow.org or call Freephone 0333 20 70 300

About Breast Cancer Now
We’re Breast Cancer Now, the UK’s largest breast cancer charity – and we’re dedicated to funding research into this devastating disease. We’re determined to stop women dying of breast cancer by 2050. But we’ll only reach that point by working in a new, more open and collaborative way. We’re bringing together all those affected by the disease to fund research, share knowledge and find answers. To improve the way we prevent, detect, treat and stop the disease. So we can move from a time when people still fear breast cancer to a generation where everybody lives. Join us at breastcancernow.org

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We welcome feedback. Please email comments to info@breastcancernow.org or call 0333 20 70 300.

This leaflet is based on up-to-date research evidence and aims to give the best information available. All information was reviewed by appropriate experts and members of the public. We advise readers with concerns about breast cancer to discuss them with a health professional.

If you would like more information about the sources of evidence on which this publication is based, please contact info@breastcancernow.org or call 0333 20 70 300.

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