

HORMONE CONTRACEPTION AND BREAST CANCER

A GUIDE FOR PATIENTS

There has always been some uncertainty around hormonal contraception and whether this increases the risk of breast cancer slightly. This leaflet has been written to help assess the benefits and risks of these methods.

COMBINED HORMONAL CONTRACEPTION - CHC

Combined Hormonal Contraception (CHC) includes the Combined Oral Contraceptive Pill (COCP or 'the pill'), Transdermal Patch ('the patch' or Evra®) and the Vaginal Ring ('the ring' or NuvaRing®).

CHC is a widely used method of contraception and can help heavy or painful periods. In addition, use of CHC is known to reduce the risk of developing ovarian and endometrial (lining of the womb) cancers.

The main increased risk of using CHC is of blood clots in the legs (deep venous thrombosis) but this is still a rare event.

BREAST CANCER RISK AND CHC

All women are at risk of developing breast cancer during their lifetime. Breast cancer is rare under the age of 40 but the risk increases as a woman gets older.

A large study published back in 1996 (Reference 1) found that users or recent users of CHC had a slightly increased risk of developing breast cancer compared with women who were not taking CHC.

The study results showed that any increased risk decreased after stopping CHC and had disappeared by 10 years after stopping CHC. This means that if a woman takes

CHC up to the age of 30 and then stops, any possible increased risk of developing breast cancer will have disappeared by the time she becomes 40. Her risk of developing breast cancer will then be the same as another 40 year old woman who has never taken CHC.

This study also found that women who developed breast cancer while taking CHC tended to have smaller, less advanced cancers than those women who were not taking CHC.

This was a large study (looking at data on 53,297 women with breast cancer and 100,239 women without breast cancer), which makes its findings more likely to be reliable.

However, the total amount of hormones in 'the pill' at the time the study was conducted was higher than the doses found in modern pills, patches and rings.

Further studies (References 2, 3, & 4) have found no increased risk of developing breast cancer in women who were taking CHC or who had taken CHC in the past.

FAMILY HISTORY OF BREAST CANCER AND CHC

For women with a strong family history of breast cancer, there is limited information about whether or not this will increase the risk of developing breast cancer.

Women known to carry a mutation of the breast cancer genes BRCA1 or BRCA2, have a significantly increased baseline risk of breast cancer. The small amount of evidence available does not seem to indicate that CHC use will further increase this risk (Reference 5).

We would therefore encourage women with a strong family history of breast cancer to discuss the risks and benefits of CHC carefully with their doctor or nurse before starting it.

PROGESTOGEN-ONLY CONTRACEPTION

Progestogen-only contraceptive methods comprise:

- The progestogen-only pill (the 'mini-pill')
- Progestogen-containing implant (Nexplanon®)

- The contraceptive injection (Depo-Provera®)
- The intra-uterine system (Mirena®)

We have less information about any possible increased risk of breast cancer associated with their use. The implant and intra-uterine system are being more widely used now as women are encouraged to use longer acting methods of contraception.

A large study of Danish women (Reference 6) showed that there may be a similar, slight increase in breast cancer risk with use of progestogen -only contraception, however, the overall numbers of breast cancer were small and, as with CHC, this risk decreased over time after stopping progestogen-only methods.

CONCLUSION

To summarise, we remain unsure whether using hormonal contraception definitely increases a woman’s risk of developing breast cancer or not. However, we can be reasonably confident that if there is an increased risk, this will have disappeared 10 years after stopping hormonal contraception.

This must be balanced against the benefits of reliable contraception, control of menstrual bleeding or pain and the reduction in risk of ovarian and endometrial cancers that hormonal contraception can provide.

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2. Marchbanks, P.A, et al. Oral contraceptives and the risk of breast cancer. *The New England Journal of Medicine*. 2002. 346.26. 2025-2079.

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4. Hannaford, P. et al. Cancer risk among users of oral contraceptives: cohort data from the Royal College of General Practitioners' oral contraception study. *The British Medical Journal*. 2007. 335. P651-654.
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6. Mørch LS, Skovlund CW, Hannaford PC, et al. Contemporary Hormonal Contraception and the Risk of Breast Cancer. *N Engl J Med* 2017;**377**:2228-2239.