

Fact sheet 15

Is there a link between ovarian cancer and talcum powder?

Ovacome is a national charity providing advice and support to women with ovarian cancer. We give information about symptoms, diagnosis, treatment, research and screening. Ovacome also runs a telephone support line and works to raise awareness and give a voice to all those affected by ovarian cancer.

This fact sheet is for women concerned about possible links between ovarian cancer and the use of talcum powder.

There have been worries for some years that using talcum powder on the genital area may increase the risk of ovarian cancer.

Research studies

Most of the evidence linking using talc with ovarian cancer is based on asking women with and without ovarian cancer if they have used talc.

In 2003 the results of 16 studies involving 12,000 women showed that using talc increased the risk of ovarian cancer by around a third. A 2013 review of American studies involving 18,000 women had similar results for genital talcum powder use (but not general use).

There are uncertainties around these results. There was no consistent evidence to prove that the more you use talc, the greater your risk of ovarian cancer. If talc really does cause ovarian cancer, why didn't all the studies show that the risk of ovarian cancer was related to the amount of talc used?

Studies of this type involving women who already have ovarian cancer can suffer from bias, which can lead to inaccurate results. For example, women with ovarian cancer understandably look for a cause for their disease and may have been more likely to remember using talc than those who did not have cancer.

A large well-designed American study in 2000 involving nearly 80,000 women found no link between using talc and the risk of ovarian cancer. There was a possible weak link to one particular type of ovarian cancer, serous ovarian cancer, but this may have been due to chance.

A link with serous ovarian cancer was again suggested by a study in Australia in 2008, but the small (less than one fifth) increase was only just considered to be relevant.

In the Australian study the risk for women who used talc was not increased in those who had not had their fallopian tubes blocked in order to have a sterilization. This is odd because you would expect unblocked tubes to increase any real risk from talc, as they would allow the talc to reach the ovaries along the same route as sperm travels to allow pregnancy.

In 2007, a combined analysis of nine studies looking at talc from contraceptive diaphragms (caps) failed to show any link between talc and ovarian cancer. This is reassuring, because you might expect that putting a diaphragm that has talc on it into the vagina might mean the ovaries are exposed to higher concentrations of talc, rather than simply applying it to the genital area.

Even if the risk of ovarian cancer is increased, studies suggest that using talc increases the risk of ovarian cancer by around a third. Although this may sound frightening, to put it into context, smoking and drinking increases the risk of oesophageal cancer by 30 times.

Ovarian cancer is a rare disease, and increasing a small risk by a third still gives a small risk.

Is there any other evidence?

The other evidence that using talc is associated with ovarian cancer comes from studies which have shown talc in the ovaries of women with the disease. There is also doubt about the significance of these studies because:

- not all studies ruled out the possibility that the talc came from the protective gloves worn by the scientists examining the ovaries, rather than from talc applied to the genital area;
- only a small number of ovaries were studied;
- talc was found in normal ovaries as well as cancerous ones; and
- finding talc in a patient with ovarian cancer is not the same as proving that the talc caused the cancer.

There are two other pieces of evidence to consider. First, women who use talc appear to have lower levels of an antibody called MUC1 compared to women who don't use talc.

High MUC1 levels are associated with better results in patients with ovarian cancer. In theory, it is possible that any substance that reduces levels of MUC1 could somehow increase a woman's risk of ovarian cancer.

However, this weak link between talc and ovarian cancer is just speculation at the moment. With no convincing results from research studies, it is hard to imagine that talc is a significant cause of ovarian cancer.

Second, a recent study in the US found that variations in certain genes responsible for neutralising toxins from the environment might influence

whether or not talc increased a person's risk of ovarian cancer. However, the effect seen was not very large, and needs to be confirmed in further studies.

What we know

We still do not know what really causes ovarian cancer. But it is likely to be a combination of many different inherited and environmental factors, rather than one cause such as talc. It is also important to remember that, out of the millions of women in England and Wales, many of whom use talc, only a very small number will develop ovarian cancer each year. So even if talc does increase the risk slightly, very few women who use talc will ever get ovarian cancer. Also, if someone has ovarian cancer and used talc, it seems unlikely that using talc was the reason they developed the cancer.

More studies will be needed to work out exactly whether or not using talc causes ovarian cancer.

If you would like more information on the sources and references for this fact sheet, please call us on 0845 371 0554. If you would like to discuss anything about ovarian cancer, please phone our supportline on 0845 371 0554 Monday to Friday between 10am and 5pm. Alternatively please visit our website at www.ovacome.org.uk

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