



# Talcum Powder and Cancer

## What is talcum powder?

Talcum powder is made from talc, a mineral made up mainly of the elements magnesium, silicon, and oxygen. As a powder, it absorbs moisture well and helps cut down on friction, making it useful for keeping skin dry and helping to prevent rashes. It is widely used in cosmetic products such as baby powder and adult body and facial powders, as well as in a number of other consumer products.

In its natural form, some talc contains asbestos, a substance known to cause cancers in and around the lungs when inhaled (see *Asbestos* (</cancer/cancer-causes/asbestos.html>)). All talcum products used in homes in the United States have been asbestos-free since the 1970s.

Most concerns about a possible link between talcum powder and cancer have been focused on:

- Whether people who have long-term exposure to natural talc fibers at work, such as talc miners, are at higher risk of lung cancer from breathing them in.
- Whether women who apply talcum powder regularly in the genital area have an increased risk of ovarian cancer.

## Does talcum powder cause cancer?

When talking about whether or not talcum powder is linked to cancer, it is important to distinguish between talc that contains asbestos and talc that is asbestos-free. Talc that has asbestos is generally accepted as being able to cause cancer if it is inhaled. This type of talc is not used in modern consumer products. The evidence about asbestos-free talc, which is still widely used, is less clear.

Researchers use 2 main types of studies to try to figure out if a substance or exposure causes cancer.

**Lab studies:** In studies done in the lab, animals are exposed to a substance (often in very large doses) to see if it causes tumors or other health problems. Researchers might also expose normal cells in a lab dish to the substance to see if it causes the types of changes that are seen in cancer cells. It's not always clear if the results from these types of studies will apply to humans, but lab studies are a good way to find out if a substance might possibly cause cancer.

**Studies in people:** Another type of study looks at cancer rates in different groups of people. Such a study might compare the cancer rate in a group exposed to a substance to the rate in a group not exposed to it, or compare it to what the expected cancer rate would be in the general population. But sometimes it can be hard to know what the results of these studies mean, because many other factors might affect the results.

In most cases neither type of study provides enough evidence on its own, so researchers usually look at both lab-based and human and studies when trying to figure out if something causes cancer.

## Studies in the lab

Studies that exposed lab animals (rats, mice, and hamsters) to asbestos-free talc in various ways have had mixed results, with some showing tumor formation and others not finding any.

## Studies in people

### Ovarian cancer

It has been suggested that talcum powder might cause cancer in the ovaries (</cancer/ovarian-cancer.html>) if the powder particles (applied to the genital area or on sanitary napkins, diaphragms, or condoms) were to travel through the vagina, uterus, and fallopian tubes to the ovary.

Many studies in women have looked at the possible link between talcum powder and cancer of the ovary. Findings have been mixed, with some studies reporting a slightly increased risk and some reporting no increase. Many case-control studies have found a small increase in risk. But these types of studies can be biased because they often rely on a person's memory of talc use many years earlier. One prospective cohort study, which would not have the same type of potential bias, has not found an increased risk. A second found a modest increase in risk of one type of ovarian cancer.

For any individual woman, if there is an increased risk, the overall increase is likely to very be small. Still, talc is widely used in many products, so it is important to determine if the increased risk is real. Research in this area continues.

## Lung cancer

Some studies of talc miners and millers have suggested an increased risk of lung cancer (</cancer/lung-cancer.html>) and other respiratory diseases, while others have found no increase in lung cancer risk. These studies have been complicated by the fact that talc in its natural form can contain varying amounts of asbestos and other minerals, unlike the purified talc in consumer products. When working underground, miners can also be exposed to other substances that might affect lung cancer risk, such as radon (</cancer/cancer-causes/radiation-exposure/radon.html>).

No increased risk of lung cancer has been reported with the use of cosmetic talcum powder.

## Other cancers

Talc use has not been strongly linked to other cancers, although not all possible links with other cancers have been studied extensively.

One study suggested genital talcum powder use may slightly increase the risk of endometrial (uterine) cancer (</cancer/endometrial-cancer.html>) in women who are past menopause. But other studies have not found such a link. Further studies are needed to explore this topic.

Some limited research has also looked at a possible link between inhaled talc exposure at work and other cancers, such as stomach cancer. But there is no strong evidence of such links at this time.

## What expert agencies say

Several national and international agencies study substances in the environment to determine if they can cause cancer. (A substance that causes cancer or helps cancer grow is called a *carcinogen*.) The American Cancer Society looks to these organizations to evaluate the risks based on evidence from laboratory, animal, and human research studies.

The **International Agency for Research on Cancer (IARC)** is part of the World Health Organization (WHO). Its major goal is to identify causes of cancer.

- IARC classifies talc that contains asbestos as “carcinogenic to humans.”
- Based on the lack of data from human studies and on limited data in lab animal studies, IARC classifies inhaled talc *not* containing asbestos as “not classifiable as to carcinogenicity in humans.”
- Based on limited evidence from human studies of a link to ovarian cancer, IARC classifies the perineal (genital) use of talc-based body powder as “possibly

carcinogenic to humans.”

The US **National Toxicology Program (NTP)** is formed from parts of several different government agencies, including the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA). The NTP has not fully reviewed talc (with or without asbestos) as a possible carcinogen.

(For more information on the classification systems used by these agencies, see *Known and Probable Human Carcinogens* (</cancer/cancer-causes/general-info/known-and-probable-human-carcinogens.html>).

## Can I reduce my exposure to talcum powder?

It is not clear if consumer products containing talcum powder increase cancer risk. Studies of personal use of talcum powder have had mixed results, although there is some suggestion of a possible increase in ovarian cancer risk. There is very little evidence at this time that any other forms of cancer are linked with consumer use of talcum powder.

Until more information is available, people concerned about using talcum powder may want to avoid or limit their use of consumer products that contain it.

Written by      References

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