

Five persistent myths about the causes of breast cancer

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Credit: Cancer Research UK

Understanding what causes a type of cancer is vital to prevent more cases in the future. But it can feel like we're being told to avoid a new thing every day because it might cause cancer. A survey in the US found that agreement with the phrase: "It seems like everything causes cancer" is on the increase – even though, thanks to research, we know more about what causes and prevents cancer than ever before.

As it's Breast Cancer Awareness Month, we've examined some common myths around the causes of the disease. More than 1 in 4 cases of breast [cancer](#) could be prevented, meaning there are some definite avoidable causes out there (as well as some we sadly can't avoid). But you might be surprised by what's missing from the list.

Being sure about what causes cancer isn't easy. It takes years of research based on huge numbers of people to get a clear picture of what increases or decreases our risk. Most of the [evidence](#) tied to these myths isn't strong enough to suggest they actually cause cancer. And without a clear enough indication that these things could be a genuine issue, it's not worth investing in more research when that time and money could be used for science that has a real impact.

Often, because of this lack of good evidence, it's not possible to disprove any potential link entirely, but we can say the research available doesn't hold up to scrutiny. Essentially, it's very hard to prove a negative (which may be why the International Agency for Research on Cancer (IARC) has only ever classified one substance as probably not a cause of cancer in people).

But the good news is there's no reason to be concerned about the deodorants, bras, plastics and milk we encounter every day.

1. Cosmetics and deodorants

Rumours about deodorants and other cosmetics causing breast cancer started as an email hoax. There's no sound scientific evidence that deodorants cause breast cancer. There aren't enough good quality studies to rule out a definite link, but the most recent review showed no link. If anything, it actually showed a possible protective effect, suggesting there may be other factors that accompany deodorant use that might be decreasing [breast cancer risk](#), such as regular exercise.

Some of the myths around deodorants claim that aluminium, the active ingredient in most deodorants, causes breast cancer, but a review of the evidence has disputed this. It's also worth pointing out that all cosmetics sold in the UK are tightly regulated and have to be shown to be safe.

2. Myths about bras aren't supported

Wearing a bra or keeping a mobile phone in your bra hasn't been shown to cause cancer. There hasn't been much research into this because there's no scientific way that suggests how bras and cancer might be linked. The only relevant study we found on the research database PubMed didn't find a link between wearing a bra and breast cancer so women don't need to worry about getting the support they need.

Although we can't know for sure the potential long-term impact of using mobile phones on other types of cancer, scientists believe a link is unlikely. This has been most closely studied in relation to brain tumours. And it's something researchers will keep an eye on.

3. What you're drinking is more important than what the bottle is made of

Most of the concerns around plastic containers focus on whether the chemicals inside the plastic can move into food or drink. There's some evidence that this might occur, but only in very low levels. And experiments testing plastics don't necessarily reflect how people use these products so levels are likely to be far below what might be deemed unsafe. You can read more about this myth on our website.

And again, in the UK there are rules in place to make sure the materials used for food and drink packaging aren't harmful to people.

4. Milk myths

We've been asked about milk (or dairy more broadly) a lot lately, including the impact of hormones on breast cancer risk. Lots of studies have looked at how the things we eat and drink might affect our risk of cancer. And the World Cancer Research Fund regularly updates where the consensus lies based on all this research. In a thorough review they found no link between consuming dairy products and breast cancer.

Some studies suggest a potential decreased risk of bowel cancer from consuming dairy products, but the evidence isn't strong enough to make claims or give people specific advice.

5. Genetics doesn't play as much of a role as you may think

For some people with a really strong family history of breast cancer the risk tied to inherited faulty genes is important. The most famous of these are the BRCA genes. But the total number of breast cancer cases caused by inherited faulty genes is smaller than you might believe based on the media attention they often receive. It's actually fewer than 3 in 100 cases of breast cancer that are caused by inherited faulty genes.

So what does affect the risk of breast cancer?

It's impossible to know for sure what caused each individual breast cancer. But the evidence from years of research has shown there are some things that can help you stack the odds of avoiding breast cancer in your favour. Keeping a healthy weight, drinking less alcohol and keeping active all make a difference, and that is backed by evidence.

There are also some other factors you can't control, such as getting older.

And others may be difficult to avoid. Taking HRT and being exposed to radiation (mostly from necessary medical procedures) also increase the risk of [breast](#) cancer – and it's important women are aware of this when they're making healthcare decisions. On the other hand, breastfeeding decreases risk, but not everyone is able to and there are other factors that can influence this decision for women.

Not all [breast cancer](#) myths focus on supposed causes of the disease. Women may have been told to check their breasts in a particular way, time or place. But they don't need to. The important thing is getting to know what's normal for you, and to tell your doctor if you notice any unusual or lasting changes.

As ever, good quality [research](#) – rather than hoaxes and anecdotes – is the best way to keep an eye on new potential causes of cancer.

And with clear information available on what people can do to reduce their risk, it's best to ignore the scare stories.

Provided by Cancer Research UK

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