

Alcohol and breast cancer

We talk to our Chief Medical Advisor, Professor Paul Wallace, to find out the facts about alcohol and breast cancer.

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When asked to name the main health effects of drinking too much alcohol, many people will first say liver disease. Others will mention heart disease. Some will name mental health issues. Cancers are often low down on the list.

But they shouldn't be – especially breast cancer.

The studies

It is clear from a number of large scale studies that there is a link between alcohol consumption and cancer. Globally, one in five (21.6%) of all alcohol-related deaths are due to cancer¹. Breast cancer is the most common cancer among women² and second only to lung cancer as a cause of cancer death in women³.

Professor Paul Wallace, Drinkaware's Chief Medical Advisor, believes that more people should know that alcohol can increase women's risk of getting breast cancer.

“My impression is that many of my patients and some of my colleagues don't know about the link between alcohol and breast cancer any more than they do about the association between [alcohol and fertility](#). We can do more to increase awareness.”

We spoke to Professor Wallace to get the [facts about alcohol](#) and breast cancer and learnt that:

- There is good evidence to suggest that alcohol increases the risk of developing breast cancer.
- Of course drinking alcohol does not mean you will automatically get breast cancer, it does mean your risk of developing it will be increased.
- How much you drink over your lifetime is what increases the risk.

Drinking alcohol is one of several factors that can increase your risk of developing breast cancer. Around 6% of breast cancer cases in the UK are linked to drinking alcohol⁴.

The government advises that people should not regularly drink more than 14 units a week to keep health risks from alcohol low. If you do choose to drink, it is best to spread your drinks

evenly throughout the week. If you wish to cut down the amount you are drinking, a good way to do this is to have several drink-free days per week.

The evidence

Evidence which shows that alcohol increases the risk of developing breast cancer is not new. A 2006 review of scientific studies found that there is enough evidence to say that there is a link between alcohol consumption and breast cancer⁵. Professor Wallace confirms that we have known for years that your risk of developing breast cancer increases when you drink. Overall, women have a 9.5% chance of getting breast cancer before they are 75. One study found that drinking every day – even a small amount – raises that risk to 10.6%⁶. Professor Wallace says, though, that the overall risk (anything that affects your chance of getting a disease) is based on how much you drink on average each day over a lifetime.

A number of studies have found that a women's risk of breast cancer increases by 7 – 12% for every 10g of alcohol per day.^{7,8} Professor Wallace says a very important large scale recent study which has again demonstrated the link between alcohol and breast cancer is the [Million Women Study](#). This study of 1.3 million women run by the University of Oxford estimated that each additional alcoholic drink regularly consumed per day was associated with 11 additional breast cancers per 1000 women up to age 75⁹.

How alcohol increases the risk

The exact ways alcohol increases the risk of developing breast cancer are not fully understood but we do know some of the potential mechanisms. Professor Wallace says that the increased risk is almost certainly in part because alcohol breaks down into a substance called acetaldehyde, which can cause genetic mutations – a permanent change in the DNA sequence that makes up our genes. This can trigger a response from the body which leads to cancerous cells developing.

Alcohol is also thought to increase levels of the female hormone oestrogen in pre-menopausal and post-menopausal women. One characteristic of a cancer cell is that it multiplies out of control and in certain types of breast cancer, high circulating levels of oestrogen can make this more likely to happen¹⁰. Light to moderate drinking is associated with minimally increased risk of overall cancer. For men who have never smoked, risk of alcohol related cancers is not appreciably increased for light and moderate drinking (up to two drinks per day). However, for women who have never smoked, risk of alcohol related cancers (mainly breast cancer) increases even within the range of up to one alcoholic drink a day.¹¹

Assessing the risk

Professor Wallace says it's important to put this risk into context. There are many other factors which increase the risk of developing breast cancer. "I often sit down with my patients and explain that there are certain factors we can do nothing about," he says. "For example, the fact that you are female is a risk factor in developing breast cancer. We also know breast cancer is

age-related so you're more likely to develop it as you get older and that you're more prone to breast cancer if it is part of your family history. These are all factors beyond our control.

“We also know that risk is related to the ‘hormone environment’ that women experience during the course of early pregnancy, child birth and breastfeeding which all exert a protective effect. Seen in relation to all of these other factors, excessive alcohol consumption appears to contribute about 6% of the overall risk of breast cancer in developed countries.”

Advice

If you choose to drink, you can help keep your risk of developing breast cancer from alcohol low by not drinking more than 14 units a week: the more you cut down on alcohol the more you reduce your risk.

If you do choose to drink, it is best to spread your drinks evenly throughout the week. If you wish to cut down the amount you are drinking, a good way to do this is to have several drink-free days per week.

Male breast cancer

If you're a male drinker worried about developing breast cancer, the advice to not regularly drink more than the [low risk unit guidelines](#) is the same. But male breast cancer is far rarer and more research is needed to understand the link between alcohol and the increased risk of developing it. Professor Wallace says there are other [effects of drinking](#) that male drinkers should be concerned about first.

Alcohol is one of many risk factors for breast cancer. Visit the breast cancer pages on [Cancer Research UK](#) to find out more information about how making changes to your diet and exercise levels alongside reducing your drinking can help reduce your risk of developing breast cancer.

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