

FAQs: Diet and cancer risk

Dispelling some common diet-related myths on foods and risk of cancer, and on alternative diets for people having cancer treatment

Does sugar increase the risk of cancer?

The cells in our body use sugar (glucose) for energy. Cancer cells grow faster than usual, which requires a lot of energy, leading to the suggestion that sugar ‘feeds’ cancer cells. But there is no strong evidence that cutting sugar out of your diet will prevent cancer or stop cancer cell growth or that eating more sugar will cause cancer cells to speed their growth.



However, sugary foods and drinks when consumed frequently or in large quantities can lead to weight gain, and being overweight and obese is linked to an increased risk of a number of different types of cancer including breast, pancreatic, liver, ovarian and colorectal cancers. The good news is that there are many healthier snack choices that taste good and provide us with essential nutrients. In this article we offer some tips and suggestions for healthier snacks for all ages.

‘Cutting out sugar doesn’t help treat cancer, and sugar doesn’t directly cause cancer’
- Cancer Research UK

Can dairy foods increase the risk of cancer?



In a review of the research available, the World Cancer Research Fund concluded that evidence suggests dairy products like milk and yogurt decrease the risk of colorectal cancer. There is no strong evidence linking dairy products to any other types of cancer although there is some limited (inconsistent) evidence that diets high in dairy products or calcium may decrease the risk of breast cancer, but may increase the risk of prostate cancer. It is sometimes wrongly reported by the UK press and populist media that animals are routinely given hormones to increase their milk yield, and that milk and dairy foods contain added hormones that can increase cancer risk. However, in the UK and EU adding

hormones to the diet of animals to enhance milk production or to dairy products is banned.

‘...cancer experts do not recommend following a dairy-free diet to try to reduce the risk of cancer.’

- Macmillan Cancer Support

Can alkaline diets prevent cancer?

Despite a lack of evidence, the idea that ‘acidic’ diets can increase your risk of cancer is still promoted in the popular media. Some laboratory-based studies suggest cancer cells thrive in an acidic environment, so an alkaline diet is promoted to correct this. In fact, the pH (level of acidity) in our bodies is tightly regulated by the kidneys within a very narrow range. Any extra acid or alkali is removed through urine so food choices may affect the pH of your urine but will not change your body acidity. The alkaline diet promotes fruit and vegetables, and it is possible that a diet high in these may have cancer protective effects due to their nutrient and bioactive compounds rather than their acid/alkaline promoting qualities. However, the alkaline diet also promotes exclusion of many foods, several of which contribute beneficial nutrients to most people's diet.



‘Altering the cell environment of the human body to create a less-acidic, less-cancer-friendly environment is virtually impossible.’

- American Institute of Cancer Research

Do low-calorie sweeteners cause cancer?



Low calorie sweeteners have been the subject of safety scares after the findings of animal studies with significant scientific shortcoming suggested that they could cause cancer. However, large and more recent human studies have since provided strong evidence that they do not increase the risk of cancer. In the EU, all low calorie sweeteners undergo a rigorous safety assessment by the European Food Safety Authority (EFSA) before they can be used in foods and drinks.

‘Earlier cancer scares linked with certain sweeteners have been discredited.’ - World Cancer Research Fund

Will eating a ‘superfood’ prevent cancer?

The term ‘superfood’ is often used to describe foods with supposed health ‘superpowers’, ranging from blueberries to broccoli to green tea. However, this term should be treated with caution as there is no evidence for any one particular food making a major difference to cancer on its own. That said, some compounds found in foods that have been labelled with this term, such as antioxidants in fruits and vegetables or curcumin in turmeric, have been shown to affect cancer cells in lab studies. However, the compounds tested in a lab are often in a different form or dose to how we eat them in the diet, so we need considerably more research to investigate any potential links. Including a variety of foods in a healthy, balanced diet is key to good health.

‘The term ‘superfood’ is really just a marketing tool, with little scientific basis’

- Cancer Research UK

Can vegan diets prevent cancer?

Some research has suggested an association between vegan diets and a lower risk of cancer but findings are somewhat inconsistent. It does not appear that vegan diets are any more protective than plant-based diets that include moderate to small amounts of animal foods. The World Cancer Research Fund recommendations for cancer prevention include eating more plant-based foods such as wholegrains, fruit, vegetables, pulses, nuts and seeds, and eating less red and processed meat. These diets tend to provide higher amounts of dietary fibre, as well as lower intakes of fatty/processed meat, refined grains, sugar-sweetened foods and drinks and saturated fat than other dietary patterns. A healthy vegan diet will typically share these characteristics, and this may underlie many of the health benefits observed. Importantly, we should bear in mind that exclusion of animal products per se does not necessarily equate to a healthy diet. Poor choices can be made within any dietary pattern.



'There is no direct evidence that following a vegan diet reduces the risk of developing cancer'

- World Cancer Research Fund

Diet and cancer treatment

There is a lot of confusion around what we eat in relation to cancer, and some alternative diets or nutritional therapies have been claimed by the media to treat cancer such as Gerson's Therapy, the ketogenic diet or high-dose vitamin C (see below for details on these).

These types of diets are typically restrictive and hard to follow, and there is no scientific evidence that they can cure cancer. Reputable scientific cancer organisations do not support alternative therapies like Gerson's for cancer treatment.

In fact, what we do know from the science is that weight loss is linked to poorer outcomes, so it's important to eat as well as you can when you have cancer. You may be given specific dietary advice, but this should be given by a health professional like a registered dietitian who is qualified to advise you.

If you wish to follow any alternative diet you should only do so under the supervision and guidance of your doctor or dietitian. Stopping your conventional cancer treatments and methods of symptom control can be harmful.

Gerson's therapy	Ketogenic diet	High-dose vitamin C
<p>A therapy based on a regimen of a large quantity of organic fruit and vegetable juices in addition to coffee enemas and nutrition supplementation.</p> <p>There is no scientific evidence that Gerson's Therapy can treat cancer, and in some cases it could be harmful to your health.</p>	<p>Supporters of this high fat, very low carbohydrate diet believe that cancer cells are dependent on sugars and strictly reducing the intake of carbohydrates can starve the tumour. While studies on ketogenic diets in mice with brain tumours have shown some positive results, there is a lack of large-scale clinical trials in humans.</p> <p>There is currently no scientific evidence supporting the effectiveness of the ketogenic diet in treating brain or other tumours.</p>	<p>High intravenous doses of vitamin C are being researched in a number of clinical trials, mainly in the US, but research is in the early stages.</p> <p>There is currently no reliable evidence from clinical trials in humans that intravenous high-dose vitamin C is an effective way to treat cancer. It may also interfere with cancer treatment.</p>

For more information on:

Tips for reducing cancer risk, go to www.nutrition.org.uk
 Eating well during cancer treatment, go to The Royal Marsden: www.royalmarsden.nhs.uk or
 Macmillan Cancer Support: www.macmillan.org.uk

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