

Dietary Sugars & Cancer



Risk Factors for Cancer

There are many known risk factors for cancer. These include age, tobacco use, alcohol use, obesity, low physical activity levels, sun exposure and pollution. Many aspects of the diet influence cancer risk, some adversely and some beneficially. Weight gain and obesity have been associated with an increased risk of at least 13 different types of cancer².



Cancer



Cancer is a group of diseases characterized by uncontrolled cell growth in various tissues in the body.

It is likely that cancer has always afflicted humans, although for centuries its relative impact has been overshadowed by early death from infectious diseases. However, with the growing global development, cancer has become one of the major public health challenges of the 21st century and is projected to increase from 19 million cases in 2020 to around 30 million cases in 2040¹. Cancer is a group of diseases characterized by uncontrolled cell growth in various tissues in the body.

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Dietary Sugars and Cancer

There is no convincing evidence that sugars (total, added or free) directly cause cancer³⁻⁵. Weight gain and obesity are established risk factors for cancer². Weight gain is caused by excessive consumption of calories from any food or drink. Sugars intake can only be indirectly linked to cancer, via sugar's potential to provide surplus calories, if consumed in excess. Therefore, any public health messaging around sugars and cancer is generally based around this indirect link; sugars have not been shown to directly cause cancer. This indirect link has led the World Cancer Research Fund to include in their Cancer Prevention Recommendations to "limit consumption of sugar-sweetened drinks", "avoid high-calorie foods and drinks" and "limit consumption of 'fast foods' and other processed foods high in fat, starches or sugar" to reduce the risk of weight gain^{6,7}.

The European Food Safety Authority (EFSA) Working Group stated that "although recommendations made by WCRF to reduce sugar intake are based on the assumption that dietary sugars will increase body weight and thus the risk of those types of cancer associated with excess body weight, the associations found between sugar intakes and cancer risk appear to be erratic at best". The Panel also noted that there isn't a biological mechanism to explain how it could be possible for sugars intake to directly cause cancer⁵.

Weight gain is caused by excessive consumption of calories from any food or drink.



Sugars Feeding Cancer Cells: A Misconception?

Glucose (a simple sugar) is a highly consumed nutrient by cancer cells, which are known to rewire metabolic pathways to meet their energy demands. This has led to the misconception that reducing or removing sugars from the diet will prevent or slow down cancer growth. However, all cells use glucose for energy and the body keeps blood glucose at a steady level (not too high or too low) to ensure that all cells have a constant energy source⁸. There is no evidence from human studies that consuming sugars directly causes cancer to grow at a faster rate, or that a no- or low-sugar diet will cause cancer to stop growing, shrink, or disappear⁹.

References

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