

Cancer and Diet Theories

The facts about diets and cancer can be confusing. You may have heard that sugar feeds cancer or certain foods should be avoided to prevent cancer or slow cancer growth. This sheet discusses two of the most common theories.

Do acidic foods increase cancer cell growth?

Theory: Cancer thrives in an acidic environment so you can reduce cancer cell growth by eating an 'alkaline' diet.

Facts:

- Eating acidic or alkaline foods will not alter the pH of your blood or body. The body tightly controls its own pH regardless of diet changes.
- If you could somehow change your blood pH, your healthy cells would also not be able to survive.
- Cancer cells create an acidic environment due to the way glucose is broken down. This is not affected by the foods that we eat.
- There have been no scientific studies to support an alkaline diet.

Does sugar feed cancer cells?

Theory: Eating sugar increases cancer cell growth.

Facts:

- Sugar is a type of carbohydrate. There are several types of "sugars". The commonly known ones are glucose, lactose and fructose which are found in different foods.
- All body cells, including cancer cells, prefer to use sugar for fuel.
- However, cancer cells will also use protein and fat for fuel in the absence of sugar. This includes your body protein (muscle) and fat stores. Therefore cutting out sugar will not starve the cancer cells.
- Many studies on this topic have not been tested on humans, so the results cannot be directly applied.
- Many factors affect the growth of cancer cells.

Recommendation

As cutting out sugar does not starve the cancer cells, a sugar free diet is not recommended before or during treatment.



Following a completely sugar free diet would mean that you have to avoid many foods.

Examples of carbohydrate food sources:

- Breads, cereals, rice, pasta
- Dairy foods: milk, yogurt, custard
- Fruit
- Starchy vegetables: sweet potato, corn, potato, legumes
- Refined sugar foods such as soft drinks, cordial, fruit juice/fruit drink, and lollies

Why is carbohydrate important in our diet?

When any carbohydrate foods are eaten they are broken down to glucose which the body uses for fuel. Some cells (in the brain and the blood) can only use glucose as their fuel.

Foods with carbohydrates provide a significant amount of energy (calories) and nutrients in our diets. Carbohydrates are found in a variety of foods, hence avoiding these limits your food choices and eliminates many essential nutrients from the diet.

Before and during treatment

It is important not to lose weight before or during your cancer treatment. Maintaining your weight and having good nutrition will improve physical function and quality of life, and reduce fatigue.

Recommendations during treatment

- Avoid losing weight during cancer treatment unless advised by your Dietitian.
- Aim to have a healthy, balanced diet which includes a wide variety of foods.
- Avoid drastic diet restrictions. No single food will improve response to treatment, though eating enough food is important.
- When overall food intake is poor, eating foods higher in sugar for extra energy or calories may be needed to help maintain your weight.
- If you have followed a specific diet (such as a vegetarian diet) before starting treatment and wish to continue with this, your dietitian can help to make sure you are getting enough nutrition.



Queensland
Government

After treatment – reducing your risk

Carbohydrate foods are part of a balanced diet; however it is important to choose healthy options.

Carbohydrate foods provide essential energy and nutrients for our bodies. Some have even been proven to reduce the risk of some cancers e.g. wholegrain foods, fruit, vegetables.

It is recommended to limit 'refined carbohydrates' such as soft drinks, confectionery, cordial, fruit juice/ fruit drink when you have *finished* treatment and your weight is stable. These foods have low amounts of other nutrients.

Foods high in refined carbohydrates may provide excessive energy and lead to unwanted weight gain. Being overweight or obese is a risk factor for developing some cancers. Maintaining a healthy weight is therefore recommended to reduce cancer risk and other health conditions. If you plan to lose weight, check with your Doctor or Dietitian about the best time to start. Eating a balanced diet and exercising regularly will help you reach a healthy weight.

Recommendations after cancer treatment

- Follow the Australian Guide to Health Eating
- Maintain a healthy body weight

Further information

Speak with your Doctor or Dietitian

www.iheard.com.au

www.eatforhealth.gov.au

www.cancer.org.au

www.dietandcancerreport.org

Other Key References

Dixon (2012) "Nutrition in Complementary and Alternative Medicine" Seminars in Oncology Nursing 28 (1): 75-84