Does the Alkaline Diet Cure Cancer?

The body tightly regulates blood pH, and diet cannot alter it. That said, a balanced plant-focused diet is generally the best.

April 17, 2025 By American Institute for Cancer Research and Karen Collins

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Key Takeaways

- The alkaline diet cannot change body pH. While it promotes healthy foods like fruits and vegetables, the body tightly regulates blood pH, and diet cannot alter it.
- There is no evidence that an alkaline diet can prevent or cure cancer. The tumor environment's acidity is a result of cancer metabolism, not a cause of it.
- A balanced plant-focused diet is best, especially if it's not too restrictive. Following evidence-based recommendations such as AICR's New American Plate is a smart approach for overall health and cancer prevention.

Headlines on the Internet claiming "an alkaline diet can cure cancer" might easily catch your eye. The explanations may even sound like they're rooted in science. But are they really? Let's look more closely at whether scientific evidence supports these claims.

What is the alkaline diet?

The alkaline diet is based on a theory that foods break down into acidic, alkaline or neutral states after they are digested. The alkaline diet groups foods into three categories:

- Acidic: meat, poultry, fish, dairy, eggs, grains, processed foods and alcohol
- Alkaline: fruits, vegetables, nuts, legumes, herbs and spices

- Neutral: fats and oils, sugars, starchy foods like rice (some versions of the diet classify sugars as acidic)

People who follow this diet are advised to choose more alkaline foods and few or no acidic foods. The flawed premise of the diet is that the remnants left over from digesting foods can directly affect the acidity or alkalinity of your body. This is not true.

Foods on the alkaline list, such as vegetables, nuts and fruits, are nutritious. But their value comes from fiber, vitamins, and minerals, not their ability to alter pH levels. Food cannot change the body's pH levels.

What are alkalinity and pH?

A measure called pH identifies how acidic or alkaline something is. Alkaline is the opposite of acidic. The pH scale is as follows:

- A pH greater than 7 is alkaline
- A pH of exactly 7 is neutral
- Aa pH less than 7 is acidic

Your blood pH is always alkaline. Blood pH is tightly controlled to stay between 7.35 and 7.45. If the pH level becomes too acidic or alkaline, that could be life threatening and can be a sign of a serious health problem.

The good news? Your body has systems in place to keep close control on pH of the blood. The lungs, bones and kidneys constantly work together to keep blood pH in the safe range.

Can the alkaline diet make the body more alkaline?

Some internet influencers say that the alkaline diet can help create a more alkaline environment in the body. There is a problem with this claim: Regardless of what you eat, your body systems work together, pulling in or excreting compounds that keep blood pH in the healthy range. Your diet can't change that.

It is true that protein in meat produces acid when it is digested, and vegetables and fruits are high in certain minerals, especially potassium, that are more alkaline when digested. But this does not change your body's pH.

Some proponents of the alkaline diet recommending testing the acidity of your urine. It's important to know that testing urine pH does not show that the diet is "working." Urine pH reflects your body's excretion of acid and alkaline compounds. But urine pH does not indicate change in pH throughout the body.

Do cancer cells thrive in an acidic environment?

Interest in the alkaline diet to prevent or cure cancer revolves around claims that cancer cells thrive in an acidic environment and can't survive in alkaline surroundings. But those claims are not an accurate interpretation of the science.

Cancer cells may have an acidic environment around them in laboratory studies of isolated cells. This does not mean that you can change pH to prevent or destroy cancer cells. Studies on isolated cells don't necessarily represent the complexity of what happens in human bodies. If areas around tumors are more acidic, it's likely a result of cancer cells' metabolic processes, not a cause of cancer.

Cancer development may be influenced by the environment around tumor cells, which is called the "tumor microenvironment." This microenvironment can become mildly acidic because the cancer cells regulate their internal pH by pumping acid out. This acid may help cancer cells invade into local tissues. However, since diet does not change blood pH, diet cannot impact the pH of the tumor microenvironment.

Attempts to change the pH of the tumor microenvironment have not been effective. Nigel Brockton, PhD, Vice President of Research at AICR, says "tumors cells typically have a lower and more acidic pH than surrounding tissue but are still maintained at an alkaline pH over 7. Many studies have attempted to raise the pH of the tumor microenvironment through pharmaceuticals and hyperbaric (high pressure) oxygen. However, none of these methods have improved cancer cure rates."

How does the alkaline diet compare with AICR nutrition advice?

Some aspects of an alkaline diet align with AICR's evidence-based recommendations. For example, both recommend eating more vegetables and fruits. Overall, however, the alkaline diet conflicts with some of AICR's science-based advice.

Whole grains are limited in an alkaline diet because they're classified as "acidic." But whole grains are a major source of dietary fiber and healthy compounds. Eating more whole grains is recommended for lower risk of colorectal cancer.

Alkaline diets often limit fish, dairy foods, coffee and healthy oils. Although none of these foods are essential to the diet, these are all nutritious foods that do not need to be avoided. Trying to follow unnecessary restrictions can needlessly complicate a healthy diet.

Should I follow the alkaline diet?

A restrictive alkaline diet is not recommended. It's better to follow a balanced, plant-based diet such as AICR's New American Plate.

The alkaline diet is quite restrictive and advises limiting many foods. The more restrictive a diet is, the harder it may be to meet calorie and nutrient needs. A diet that restricts foods unnecessarily can make eating less enjoyable.

Attempts to change body pH in hopes of improving cancer outcomes can lead you astray. These claims can make supplements or alkaline water seem like easy solutions, even though there's no evidence supporting such products. And they distract attention away from recommendations that are based on today's best evidence.

What nutrition advice should I follow?

Keep it simple and follow AICR's New American Plate. AICR's 10 Recommendations highlight the key steps to healthy eating.

The New American Plate shows you how to put the AICR Recommendations into practice by filling at least 2/3 of your plate with vegetables, fruits and whole grains, and 1/3 or less with protein-rich foods such as tofu, meat, poultry and fish.

With the AICR Recommendations and New American Plate, today's best research can guide you to eating choices that support your health and give you a range of choices to fit your food preferences and customs.

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