Acid/Alkaline Theory of Disease Is Nonsense Gabe Mirkin, M.D.

Have you seen advertisements for products such as coral calcium or alkaline water that are supposed to neutralize acid in your bloodstream? Taking calcium or drinking alkaline water does not affect blood acidity. Anyone who tells you that certain foods or supplements make your stomach or blood acidic does not understand nutrition.

You should not believe that it matters whether foods are acidic or alkaline, because no foods change the acidity of anything in your body except your urine. Your stomach is so acidic that no food can change its acidity. Citrus fruits, vinegar, and vitamins such as ascorbic acid or folic acid do not change the acidity of your stomach or your bloodstream. An entire bottle of calcium pills or antacids would not change the acidity of your stomach for more than a few minutes.

All foods that leave your stomach are acidic. Then they enter your intestines where secretions from your pancreas neutralize the stomach acids. So no matter what you eat, the food in stomach is acidic and the food in the intestines is alkaline.

You cannot change the acidity of any part of your body except your urine. Your bloodstream and organs control acidity in a very narrow range. Anything that changed acidity in your body would make you very sick and could even kill you. Promoters of these products claim that cancer cells cannot live in an alkaline environment and that is true, but neither can any of the other cells in your body.

All chemical reactions in your body are started by chemicals called enzymes. For example, if you convert chemical A to chemical B and release energy, enzymes must start these reactions. All enzymes function in a very narrow range of acidity. (The degree of acidity or alkalinity is expressed as "pH."). If your blood changes its acidity or alkalinity for any reason, it is quickly changed back to the normal pH or these enzymes would not function and the necessary chemical reactions would not proceed in your body.

For example, when you hold your breath, carbon dioxide accumulates in your bloodstream very rapidly and your blood turns acidic, and you will become uncomfortable or even pass out. This forces you to start breathing again immediately, and the pH returns to normal. If your kidneys are damaged and cannot regulate the acidity of your bloodstream, chemical reactions stop, poisons accumulate in your bloodstream, and you can die.

Certain foods can leave end-products called ash that can make your urine acid or alkaline, but urine is the only body fluid that can have its acidity changed by food or supplements. ALKALINE-ASH FOODS include fresh fruit and raw vegetables. ACID-ASH FOODS include ALL ANIMAL PRODUCTS, whole grains, beans and other seeds. These foods can change the acidity of your urine, but that's irrelevant since your urine is contained in your bladder and does not affect the pH of any other part of your body.

When you take in more protein than your body needs, your body cannot store it, so the excess amino acids are converted to organic acids that would acidify your blood. But your blood never becomes acidic because as soon as the proteins are converted to organic acids, calcium leaves your bones to neutralize the acid and prevent any change in pH. Because of this, many scientists think that taking in too much protein may weaken bones to cause osteoporosis.

Cranberries have been shown to help prevent recurrent urinary tract infections, but not because of their acidity. They contain chemicals that prevent bacteria from sticking to urinary tract cells.

Taking calcium supplements or drinking alkaline water will not change the pH of your blood. If you hear someone say that your body is too acidic and you should use their product to make it more alkaline, you would be wise not to believe anything else the person tells you.

Dr. Mirkin is an associate clinical professor of pediatrics at Georgetown University School of Medicine and is board-certified in four specialties: allergy and immunology; sports medicine; pediatrics; and pediatric immunology. He practices medicine in Kensington, Maryland; produces and hosts a syndicated radio that can be heard online; publishes a monthly newsletter (The Mirkin Report); and has written books on sportsmedicine, weight control, and low-fat eating. His Web site contains reports on hundreds of topics.

Coral Calcium and Robert Barefoot ||| Quackwatch Home Page

This article was posted on February 6, 2003.