

Can't judge food by its label

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Advanced kidney disease patients have a list of foods they know to avoid because they naturally contain a high level of the mineral phosphorus, which is difficult for their compromised kidneys to expel. But researchers from MetroHealth Medical Center and Case Western Reserve University School of Medicine in Cleveland have discovered that a great deal of processed and fast food actually contains phosphorus additives which can be just as dangerous for these patients. The study is published in the February 11, 2009 issue of the *Journal of the American Medical Association (JAMA)*.

High blood levels of phosphorus can lead to heart disease, bone disease, and even death among patients with advanced kidney disease. This is why these patients must avoid foods with naturally high levels of phosphorus - such as certain meats, dairy products, whole grains, and nuts. The research team discovered that it has become an increasingly common practice by food manufacturers to include phosphorus additives, such as sodium phosphate or pyrophosphate, to processed foods. The additives are used to enhance flavor and shelf life - particularly in meats, cheeses, baked goods, and beverages - and it is very difficult for American consumers to know whether or not these additives are present in products.

"Calories, fat, and sodium content are required to be listed on nutrition labels, but phosphorus is not," says Catherine Sullivan, M.S., R.D., lead researcher from the Center for Reducing Health Disparities, a joint center created and operated by MetroHealth and Case Western Reserve University. "This makes it impossible for kidney disease patients to

know how much phosphorus they are eating. For example, we discovered that while chicken is often on dialysis patients' 'Safe List' of foods to eat, chicken from fast food and sit down restaurants often contains this phosphorus additive."

The researchers found they were able to significantly lower phosphorus levels among advanced kidney disease patients once they were taught to avoid foods containing phosphorus additives.

The investigators randomly assigned 279 advanced kidney disease patients receiving dialysis treatment to a control group that received usual care or to an intervention group that was taught to avoid additive-containing foods when purchasing groceries or eating at fast food restaurants. After three months, phosphorus levels declined two and a half times more in the intervention group than in the control group (0.4 vs. 1.0 mg/dL).

The study findings are most relevant to the half a million Americans with advanced kidney disease and the 10 million more with moderate kidney disease. However, the study authors note that even people with normal kidney function may be affected by these additives since previous research has found that high phosphorus diets appear to lower bone density and increase fracture risk as well.

"Phosphorus is already abundant in naturally-occurring foods," says study co-investigator Srilekha Sayre, M.D., M.S., MetroHealth and Case Western Reserve University. "By adding even more phosphorus to our food supply, we may be exceeding the body's regulatory ability, especially for those with kidney disease. We need to limit the use of these additives until their impact is better understood or at least encourage the Food and Drug Administration to require food manufacturers to report phosphorus content on nutrition food labels."

Source: Case Western Reserve University

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