

## Eat Dairy Products To Control High Blood Pressure

**SOUTHAMPTON (Bucks Co.)** — For decades, dietary recommendations for hypertension have focused primarily on eliminating excesses in the diet that provoke high blood pressure. A new report released by the National Heart, Lung, and Blood Institute (NHLBI) also points to a growing body of research on the potential benefits of adding certain nutrients into a balanced diet.

For the first time, NHLBI is recommending that people with hypertension get adequate calcium, potassium and magnesium in their diets. This fifth Report on Detection, Evaluation and Treatment of High Blood Pressure also reaffirms the importance of other well-known lifestyle modifications that help control hypertension.

The report says it is too early to tell how and why these nutrients may have an effect on hypertension. While additional research is conducted, however, it recommends that people who have or are at risk of hypertension make sure to get the recommended daily allowance of these nutrients. Each is readily available in common foods — though dairy products are the only food source that provides all three of these minerals simultaneously in meaningful quantities.

### The Need for Calcium

Calcium is the most abundant mineral in the body. While it is critical to body function and good health, the body does not manufacture it. Calcium comes directly from foods we eat. If we do not consistently get enough calcium in the diet, the body drains the mineral from bones — where 99 percent of the body's calcium is stored — and once removed, it is not easily replenished.

Scientists have known for some time that calcium is essential for building strong bones during childhood and early adulthood. Most people associate calcium deficiencies with osteoporosis, a disease characterized by loss of bone mass that results in an increased risk of fractures.

Research has shown that calcium also plays an essential role in blood clotting, nerve transmission, regulating heart rhythm and muscle contraction. And for some people, inadequate calcium intake is also associated with the development of hypertension.

### The Magnesium and Potassium Connection

Magnesium is a key nutrient in the body that is essential to the function of many enzyme systems in the body, building bones and neuromuscular transmission. And as an agent that causes the dilation of blood vessels, magnesium may also play a role in the regulation of blood pressure, according to epidemiological studies.

Potassium is primarily involved in the release of energy from carbohydrates, proteins and fats, muscle contraction, maintenance of fluid and electrolyte balance in cells and the transmission of nerve impulses. The current body of research noted in the NHLBI report suggests that potassium deficiency may increase blood pressure, while a high dietary potassium intake may protect against developing hypertension.

### A Decade of Accumulating Evidence Supports NHLBI Recommendations

Findings of nearly 300 studies have begun to show that blood

pressure may be modified by the intake of calcium, potassium, and magnesium. Several investigations, in fact, suggest that increasing dietary calcium lowers blood pressure in some patients with hypertension and in pregnant women at risk of preeclampsia or gestational hypertension.

Several of the early studies on calcium and hypertension conducted a decade ago in the United States and Belgium assessed the phenomenon of urinary calcium leaks and found an increase associated with high blood pressure. While the link was not firmly established, multiple laboratories in countries around the world have since confirmed this defect in the kidney's ability to handle calcium among hypertensive patients. More recently, researchers observe this phenomenon in certain populations at increased risk for developing high blood pressure.

A series of observational reports on dietary calcium intake among people with and without high blood pressure indicates that dietary calcium favorably influences blood pressure status.

### Clinical Studies Reaffirm Early Observations

Much of the clinical experience runs parallel to these observations. A prospective study of more than 58,000 female registered nurses noted a significant inverse association between dietary calcium and hypertension. Women who consumed at least the RDA of calcium each day had a 23 percent reduced risk of developing hypertension, compared with women who consumed less than 400 milligrams per day. When combined with the RDA of magnesium, women experienced a 35 percent reduction in risk of developing high blood pressure.

In several studies of pregnant women, an increase in calcium consumption significantly reduced either blood pressure or the incidence of pregnancy-induced hypertension, a condition known as preeclampsia. One investigation found that women with a lower calcium intake dur-

ing the first 20 weeks of pregnancy developed gestational hypertension while women who consumed adequate levels did not.

While considerable evidence suggests a role for calcium in blood pressure regulation, scientists are not yet claiming a cause and effect relationship. Meanwhile, scientists are taking a closer look at how calcium may benefit people at risk of hypertension. Currently, there is no way to identify who might benefit most from increased calcium consumption. So far, the evidence suggests that getting the recommended daily allowance (RDA) of calcium, magnesium and potassium will have a beneficial effect.

### Adding Essential Nutrients to the Diet

Calcium, magnesium and potassium are naturally occurring minerals in many foods. Yet, many people do not get enough of these nutrients. Dairy products, including milk, cheese and yogurt, are the only food sources that contain sufficient levels of calcium, magnesium and potassium. Only 15 percent of adult women and 23 percent of adult men consume two or more servings of calcium-rich foods each day. That means at least 78 million adults in this country are not getting the calcium they need -- at least three servings a day.

Dairy foods are the richest sources of calcium in the food supply. They contribute more than 75 percent of calcium in the diet, yet only 12 percent of the fat.

Other foods rich in magnesium include leafy green vegetables (eaten raw), nuts (especially almonds and cashews), soybeans, seeds and whole grains. And potassium is found in such foods as dairy products, orange juice, bananas, dried fruits, meats, bran, peanut butter, dried beans, peas and potatoes with skin.

Health experts stress that people with hypertension should add these important nutrients to their diet and follow other recommended lifestyle changes to have a favorable effect on blood pressure.



**Pennsylvania Dairy Princesses and the Pennsylvania Dairy Promotion Program joined WPSX-TV, public television, "Winterfest" fund drive. The visit was organized to bring a dairy product message to the station's viewing audience throughout central Pennsylvania. Participants in the event, held Saturday, December 5, in State College, included: (left to right) Marel Raub, Perry County Alternate Dairy Princess, Anita Faulkner, Juniata County Dairy Princess, and Robin Walls, Clarion/Venango Dairy Princess. "Winterfest" is one of several fund drives conducted by the station throughout the year.**

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