

# Chapter 10 Beyond a DASH of Salt – Minerals That Help to Lower Blood Pressure

Doctors have known for many years that moderation of salt intake can help many people lower blood pressure. It has been less well known that several other minerals can help reduce blood pressure when we include more of them in our diets. Diets that are rich in calcium, potassium, and magnesium, in particular, have been shown to lower blood pressure, and the majority of Americans do not get enough. Fortunately, this plan will assure that you meet your needs, since foods rich in these minerals are the foundation of the DASH diet.

## A DASH of Salt

Everyone has heard that lowering salt will lower blood pressure. Recently there has been some controversy about this broad statement. Some people may be more sensitive than others to the effects of salt or sodium. (We talk about salt almost interchangeably with sodium, since it is the major contributor of sodium to our diets.) And there are several other minerals, such as potassium, calcium, and magnesium, which play into the equation.

The original DASH investigation used a moderate level of sodium, 3,200 mg per day, well

above the current recommendations. With the DASH diet, blood pressure was lowered significantly, even at this moderately high intake of sodium. But the question remained, what if the salt level were lower, would there be further improvements in blood pressure control? Recent DASH studies have shown that, in fact, the lower the salt intake with the DASH diet, the more the blood pressure declined. So, yes, watching your sodium intake is still a good thing.

Many studies have shown that people around the world who consume more sodium have higher blood pressures. This sensitivity increases with age. Societies where people do not consume any salt have almost no hypertension, and blood pressure does not increase with age. (In general these people also have low weight, low alcohol consumption, and high levels of physical activity.)

Typically, African Americans are quite sensitive to salt, and blacks have higher rates of hypertension than whites and Hispanics in the U. S. In the DASH study that looked at lower salt levels, blacks, and especially black women, responded better than whites to salt restriction.

Interestingly, as much as it seems like gospel that we should all try to lower our sodium intake, there are some studies in the U. S. which have shown that low intake of sodium is associated with shorter lifespan. Further, some people may actually be at risk of developing increased blood pressure if they adopt a diet that is overly restrictive in sodium. This

includes people who have a cluster of symptoms known as metabolic syndrome, which include overweight, high blood pressure, high triglycerides, low HDL (good) cholesterol and high LDL (bad) cholesterol, and carrying excess weight around the waist or upper body.

## **Beyond Salt – Calcium, Potassium, and Magnesium**

Sodium isn't the only mineral that helps with controlling blood pressure. Calcium, magnesium and potassium are all involved in helping to regulate blood pressure. And their relationship with blood pressure is generally positive. That is, getting more of these minerals in your diet helps to lower blood pressure.

### **Calcium**

Calcium has many interesting health benefits beyond strengthening bones. People who consume more calcium in their diets have lower blood pressure, weigh less, have less body fat, and have lower risk of developing type 2 diabetes. The DASH diet encourages at least 2 - 3 servings a day of low-fat or nonfat dairy foods. More servings are needed to get the recommended amount of calcium for people over 50. It is preferable to include 3 - 4 daily servings of dairy to get 1200 mg of calcium per day, which is the RDA for people over 50.

The news about all the extra health benefits of