

# *DASH Diet—Not Just for Hypertension*

If you've got hypertension, you should know about the DASH diet. It's a proven way to lower blood pressure—in many cases as effectively as medication.

If your blood pressure is only slightly above normal or you have a genetic risk of hypertension, you should also know about the DASH diet because it may help you prevent or delay the onset of disease.

And if you're simply interested in maintaining good health, you can't go wrong with the DASH diet. It's a healthy, well balanced diet that is flexible, not too strict and includes foods that are readily

Agriculture Food Pyramid. It's also low in fat and high in reduced-fat dairy products and whole grain bread and cereals.

In the initial study the DASH diet was pitted against a control diet resembling the typical American diet and a "fruit and vegetable" diet that substituted fruits and vegetables for snacks and desserts but was otherwise similar to the control diet, with moderately high levels of fat. While the "fruit and vegetable" diet lowered blood pressure, the DASH diet was twice as effective.

- one-half cup of dry cereal or
- one-half cup of cooked cereal, rice or pasta.

Calcium and protein, also known to lower blood pressure, are obtained largely through the two to three servings daily of low-fat dairy products:

- 1 cup of skim or 1 percent milk
- 1 cup of low-fat yogurt
- one and one-half ounces of part-skim or non-fat cheese.

DASH dieters are limited to six ounces or less a day of lean meat, chicken or fish and two to three servings of added oils,

## **How Does It Work?**

A diet rich in fruits and vegetables has long been recommended to lower blood pressure, perhaps because these foods provide high levels of potassium, magnesium and fiber. Studies, however, have failed to demonstrate a benefit from consuming these nutrients in supplement form.

The DASH diet was designed to give the above nutrients as they occur together in foods while providing less cholesterol and saturated fat than the typical American diet.

Any fruits or vegetables can be chosen for the eight to ten servings a day. One serving would equal:

- one medium fresh fruit,
- one-half cup of fresh, frozen or canned fruit,
- six ounces of fruit juice.
- one cup of raw, leafy vegetable,
- one-half cup of cooked vegetable or
- six ounces of vegetable juice.

The diet calls for seven to eight servings daily of grains and grain products, including whole grain bread, English muffins, pita bread, bagels, cereal, grits, oatmeal, crackers, unsalted pretzels and popcorn. One serving would equal:

- one slice of bread,

*The diet is designed to bring together potassium, magnesium, calcium, protein and fiber as they occur together in food.*

*The DASH diet is a proven way to lower blood pressure, but if you're simply wanting to maintain good health, you can't go wrong with this plan.*

available and reasonably priced. The diet, moreover, is consistent with recommendations for prevention of heart disease, cancer, diabetes and osteoporosis.

DASH is an acronym for Dietary Approaches to Stop Hypertension, the study which first demonstrated the benefits of this approach to lowering blood pressure. The diet lowered blood pressure by 11.4 over 5.5 points in subjects with hypertension—similar to the reduction normally obtained with effective medication therapy.

The DASH diet calls for four to five servings daily of fruits and four to five servings of vegetables—double the amount recommended by the U.S. Department of

fats and salad dressings. The diet also calls for four to five servings a week of nuts, seeds, lentils or beans.

About 27 percent of calories in the DASH diet come from fat, compared to 37 percent in the typical American diet.

In the initial DASH study, subjects consumed 3,000 milligrams daily of sodium, 600 mg higher than that recommended for healthy individuals and 1,000 more than that normally prescribed for persons with hypertension. The DASH2 study, now underway, will see whether low intakes of sodium will produce even greater benefits.

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## Who Benefits Most?

Those who benefit most from the DASH diet are clearly those with already high blood pressure. Hypertensive subjects saw their blood pressure drop by an average 11.4 over 5.5 points. For African American subjects with hypertension, the reduction was even greater—13.2 over 6.1 points.

Persons over age 60, who have the highest rate of hypertension, benefitted as much as younger subjects. Since the diet provides high levels of calcium, it also helps prevent the onset of osteoporosis.

Subjects with normal or high normal readings witnessed smaller decreases of 3.5 over 2.1 points. Most persons with high normal blood pressure will go on to develop hypertension within five years, so a decrease of this magnitude can be very significant—perhaps delaying or preventing the onset. A similar decrease for the entire American population, according to the authors, would decrease the incidence of stroke by 27 percent and of coronary heart disease by 15 percent.

For African American subjects with normal or high normal blood pressure the decrease was greater than that for whites, suggesting additional preventive benefits since African Americans have a high risk of developing hypertension.

The high level of fruits, vegetables and fiber is exactly what public health experts have been advocating for years as a preventive measure against cancer.

A recent study reported in *Circulation* [Vol. 102, no. 8, 852-857] found that subjects on the DASH diet had reduced levels of homocysteine, emerging as an important risk factor for atherosclerosis or hardening of the arteries. This decrease in homocysteine, according to the authors, might translate into a seven to nine percent reduced risk of heart disease over those on the control diet, who had an increase of homocysteine.

Because the DASH diet provides about

*African Americans, who have a high rate of hypertension, benefitted even more than other subjects from the DASH diet.*

1,200 milligrams daily of calcium, it greatly reduces the risk not only of osteoporosis but also of premenstrual syndrome and of colorectal cancer. Calcium, scientists believe, can bind fatty acids that might otherwise irritate the colon and lead to abnormal cell growth.

Doctors have long known that weight loss, even a few pounds, is one of the most effective measures for lowering blood pressure. For research purposes, the DASH study provided enough calories to prevent weight loss, but the composition of the diet is such that most individuals could lose pounds or maintain their weight fairly readily with such a regimen.

If you already have hypertension, if your blood pressure is creeping up or if you simply want to eat for good health, you can start the DASH diet on your own. It's simple, flexible and doesn't require any special foods or preparation. If you're taking medication, of course, you should continue doing so until your doctor tells you otherwise.

Information about the diet and a booklet describing it in detail can be obtained from the DASH web site at <http://dash.bwh.harvard.edu>.

In order to implement the diet, you may have to add a serving or two of both fruits and vegetables with each meal. These also make good snack and dessert choices. Cut back on the butter, margarine and salad dressing you use now, and limit yourself to two three-ounce servings of meat, chicken

or fish a day. A cappuccino or café au lait made with skim milk will provide about a third of the dairy requirement.

The DASH diet won't deprive your taste buds or leave you hungry. It's a new way of eating that will help your heart and blood pressure while helping to protect you from cancer, diabetes and osteoporosis.

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