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Hypertension: Part IV What Can I Do?

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In our June 17, 2004, Your Life Your Health, the following statement appeared under the heading of life-style changes which improve blood pressure: “**Adopt DASH eating plan:** Consume a diet rich in fruits, vegetables, and low fat dairy products with a reduced content of saturated and total fat -- Approximate SBP Reduction, Range: 8-14 mmHg.”

History of the DASH Diet (Dietary Approaches to Stop Hypertension)

Funded by the National Heart, Lung and Blood Institute, Dietary Approaches to Stop Hypertension (DASH) is a major research study to determine whether diet can lower blood pressure. High blood pressure (hypertension) is a major risk factor for coronary artery disease (which can lead to heart attack) and carotid artery disease (which can lead to stroke). The goal of the DASH study was to determine whether a particular diet could lower blood pressure, reducing the risk of potentially fatal events. Ideally, the researchers wanted to identify a diet to lower blood pressure, as a vegetarian diet often does, but that would also include some meat to appeal to a broader group of people.

The DASH study examined the impact of three different dietary patterns on a group of 459 subjects. The average age of the group was 44.6 years old, and 49 percent of the participants were women. In addition, 59 percent of the participants were African-American.

After the participants had eaten an average, “typical” American diet for three weeks, their blood pressure was measured. They were then asked to do one of the following:

- ☐ Group One: Continue eating the average American diet without adding or limiting any specific types of foods.
- ☐ Group Two: Eat more fruits and vegetables than group one, the average American diet.
- ☐ Group Three: Eat more fruits, vegetables and low-fat dairy products than one normally would, and restrict ones intake of fat and sweets. This later became known as the DASH diet.

All three groups consumed the same amount of salt (3000 mg per day, slightly less than the average intake of Americans at 3600 to 4000 mg per day) and calories. Alcohol was limited to one to two drinks a week in all groups.

After eight weeks, all participants on the DASH diet (group three) exhibited lower blood pressure. In fact, the blood pressure of participants on the DASH diet was about as low as that of patients who took medications (anti-hypertensives) to lower blood pressure. It is estimated that widespread use of the DASH diet could reduce the overall incidence of coronary artery disease

by 15 percent and stroke by 27 percent. The study was published in the *New England Journal of Medicine* in 1997.

African-Americans and DASH

Follow-up research suggested that the DASH diet is even more effective for African-Americans than it is for Caucasians. Identifying an effective treatment for African-Americans is particularly important because they are at particularly high risk of developing high blood pressure.

Before the introduction of the DASH diet, the main dietary change recommended for patients with high blood pressure was a reduction of salt. However, the DASH study was able to show for the first time how dietary changes other than salt reduction can affect blood pressure.

To further investigate the effects of salt on blood pressure, a second phase of research was performed. The DASH-Sodium trial investigated the relationship between blood pressure and different levels of dietary sodium intake with two different diet plans. The study included 412 participants, 57 percent of whom were women and 57 percent were African American. Forty-one percent of the participants had hypertension.

The participants were assigned to two different dietary patterns:

- ☐ Group One: Continue eating the average American diet without adding or limiting any specific types of foods.
- ☐ Group Two: the DASH diet.

Both groups then modified the sodium content of their diet as follows:

- ☐ High sodium diet (3,300 milligrams of sodium per day) for one month,
- ☐ Intermediate sodium diet (2,400 milligrams of sodium per day) for the following month and lastly
- ☐ Low sodium diet (1,500 milligrams of sodium per day) for one month.

Reducing sodium intake lowered blood pressure for both the average American diet and the DASH diet groups. In fact, the more the sodium level was reduced the greater the blood pressure fell. However, the biggest reduction in blood pressure was found in the group that followed the DASH diet at the lowest level of sodium intake. **Therefore, according to this study the DASH diet combined with a reduction in sodium intake has an additive effect on lowering blood pressure. The results of the DASH-Sodium trial were published in the *New England Journal of Medicine* 2001.**

Dos and Don'ts for the DASH Diet

Staying true to any diet is a challenge, but keep in mind that any change you are able to make today is a step toward a healthier tomorrow. Here are some tips to help you stay on track:

- ☐ Do add a serving of vegetables at lunch.
- ☐ Do use half the butter, mayonnaise, salad dressing or other high-fat items that you normally use. Trying low-fat or non-fat alternatives will also help.
- ☐ Do eat fruit as a snack. An apple or banana is perfect for those hungry times between

meals. Want something to munch on? Try berries!

- ❑ Do watch what you drink. Replace soda, sugary teas or punches and alcoholic beverages with fat-free (skim) (or 1 percent). This will not only help you cut back on your sweets, but will also help you meet the DASH diets dairy requirements.
- ❑ Do learn serving sizes. Serving-sizes are a guideline to help you change not only what you are eating, but also how much of each type of food you are eating. While all the numbers and charts are initially cumbersome, they will become second nature once a daily routine has been set.
- ❑ Do learn to read food labels. Much of the sodium in our diet is added to foods while processing. To lower your intake of sodium, begin by removing the salt shaker from the table. Gradually lower the amount of salt added during cooking and instead try herbs, spices, lemon or sodium-free seasoning blends to flavor your food. You can also rinse canned foods to lower their sodium content. Lastly, read food labels and compare sodium content of foods when shopping.
- ❑ Do experiment with vegetarian dishes or dishes with little meat and more vegetables and grains. These include stir-fry meals, pasta dishes and casseroles. These healthy and tasty alternatives will add spice and variety to your diet.
- ❑ Do change your shopping list. That way, you won't be eating the same things in the same proportions. Increase the amount of fruits and vegetables on your weekly shopping list. Don't buy as much meat. If its not there, you cant eat it.
- ❑ Do feed your cravings for sweets with sugar-free gelatin or dried fruit.
- ❑ Do keep it simple. Remember that you are not trying to stay on a short-term diet. You are changing your lifestyle. The simpler you keep your meals, your goals and your tasks, the easier they will be to maintain.
- ❑ Do keep a record. Keeping a diary or a logbook can help you keep track of the number of servings you are eating in each category. Plus, seeing what you are eating in black and white is a great way to check your progress. It can also help you to identify patterns and triggering events that put you off track.
- ❑ Do celebrate success! Reward yourself for every accomplishment (but not with food!)
- ❑ Don't make meat the center of your meal. Although meat contains nutrients that are good for the body, it is also high in saturated fat and cholesterol, not to mention calories. You can continue to enjoy meat as part of a balanced meal rather than the whole meal. Remember to make this change gradually. If you typically eat more than the suggested amount of meat, reduce your portions by a third for one week. After a week, cut back another third until your serving sizes of meat are equal to the DASH serving size of 3 ounces.
- ❑ Don't try to do it all at once. You will be more successful if you make gradual changes in your eating habits.
- ❑ Don't be discouraged by occasional lapses. They happen. It is important, however, to determine why the lapse occurred so you can avoid that same trigger in the future. Perhaps it was a holiday party that got you off track? Stress due to a problem at work? Learn from the mistake and move on; don't beat yourself up. It's all part of the process of change.

Next week, more about the Dietary Approaches to Stop Hypertension. Remember, it is your responsibility and it is your life and your health.