

## Hypertension and Nutrition Management - Dash Diet Plan

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Hypertension is now the most common cardiovascular problem in Africa, previous studies show that One-third of people are unaware they have hypertension. Those with the highest rates of hypertension, are likely to be middle aged or older, less educated, overweight or obese, physically inactive and to have diabetes.

Most people with high blood pressure have no signs or symptoms, even if blood pressure readings reach dangerously high levels. HBP can lead to headaches, being tired all the time, blurred vision, nosebleeds, ringing in the ears, chest pain, irregular heart-beat, feeling of confusion off and on and heart failure. Very high blood pressure, if untreated, could eventually lead to heart attack or stroke.

These are the reasons we want to get hypertension under control. It greatly increases the risk of chronic disease and there are higher health care costs associated with these diseases.

People with uncontrolled hypertension are:

- 3x more likely to develop coronary heart disease.
- 6x more likely to develop congestive heart failure
- 7x more likely to have a stroke.

Prevention is key. Your risk never goes back to where it was. Under the best of circumstances, a treated patient still has twice the risk of heart attack or stroke of someone who never had high blood pressure. High blood pressure tends to run in families and is more likely to affect men than women. Age and race also play a role. The link between salt and high blood pressure is especially compelling.

The majority of all people with high blood pressure are "salt sensitive", meaning that anything more than the minimal bodily need for salt is too much for them and increases their blood pressure. Other factors that have been associated with essential hypertension include obesity; diabetes; stress; insufficient intake of potassium, calcium, and magnesium; lack of physical activity; and chronic alcohol consumption.

**Blood pressure categories - adults**

Before discussing the DASH diet, I want to review a little about high blood pressure.

	Systolic (mm Hg)	Diastolic (mm Hg)
Optimal	<120 and	<80
Normal	<130 and	<85
High-Normal	130 - 139 or	85 - 90
High		
Stage 1	140 - 159 or	90 - 99
Stage 2	160 - 179 or	100 - 109
Stage 3	≥180 or	≥110

**Table 1**

These are the categories of blood pressure. To be considered optimal or normal, your systolic and diastolic pressures must fall within the recommended ranges. For high-normal and high, you fall into those categories if your systolic or diastolic pressure is high.

They not only define what high blood pressure is, they also help determine, along with other factors, how high blood pressure is treated.

For example, if your blood pressure is high normal and you have no major risk factors such as smoking, lipid abnormalities, diabetes, age over 60 years, etc. then treatment is lifestyle modifications.

Lifestyle modifications include changing dietary habits, increasing physical activity, stopping smoking, moderating alcohol intake, etc.

If your pressure is high normal and you already have target organ damage or clinical CVD, then treatment changes to include drug therapy along with lifestyle modification.

**Overweight, obesity and blood pressure goals**

Most doctors will not prescribe high blood pressure medicine until blood pressure is 140/90. The American Diabetes Association recommends that blood pressure be treated at 130/80 in diabetic people, since they are at such high risk for heart attack, stroke, kidney failure and even blindness from damage to the blood vessels in the eyes. The lifestyle changes to lower blood pressure, even for those without diabetes, probably should be started when blood pressures approach 135/80. Risk for complications associ-

ated with high blood pressure are minimal when blood pressure is 120/80 or less. Any lifestyle change to reduce blood pressure to this level should be encouraged to any individual.

Body Mass Index (BMI) is one of the commonly used measures of obesity. Body Mass Index (BMI) is a number calculated from a person's weight and height. BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems.

BMI values between 18.5 and 24.9 are considered "normal" or "healthy" weight. BMI values between 25 and 29.9 are considered "overweight" and 30 and above are considered "obese". BMIs above 25 are unhealthy and have been shown to increase the risk of certain chronic diseases. BMIs under 18.5 are considered "underweight".

For most people, BMI provides a good measure of obesity. However, BMI does not provide actual information on body composition (i.e. the proportions of muscle, bone, fat, and other tissues that make up a person's total body weight), and may not be the most appropriate indicator to determine health status for certain groups of people. For example, athletes with dense bones and well-developed muscles or people with large body frames may be obese by BMI standards (i.e. they have BMIs greater than 30), but yet have little body fat. On the other hand, inactive people may seem to have acceptable weights when, in fact, they may have too much body fat.

**Reducing overweight and obesity: Lifestyle modification**

Losing weight if you are overweight is also something you probably would like to hear less about, but weight loss is very effective for blood pressure control. Even just a 10 - 20 pound weight loss can drop your blood pressure significantly. The good news is that if you follow the DASH diet and get more active, you may see the pounds slip away without even thinking about it.

Weight loss, sodium reduction, increased physical activity, and limited alcohol intake are established recommendations that reduce blood pressure (BP). Blood pressure often increases as weight increases. Losing just 10 pounds can help reduce your blood pressure. In general, the more weight you lose, the lower your blood pressure. Losing weight also makes any blood pressure medications you're taking more effective. You and your nutritionist can determine your target weight and the best way to achieve it.

**Important tips to adopt a healthy diet**

- **Keep a food diary:** Writing down what you eat, even for just a week, can shed surprising light on your true eating habits. Monitor what you eat, how much, when and why.
- **Consider boosting potassium:** Potassium can lessen the effects of sodium on blood pressure. The best source of

potassium is food, such as fruits and vegetables, rather than supplements. Talk to your nutritionist about the potassium level that's best for you.

- **Be a smart shopper:** Make a shopping list before heading to the supermarket to avoid picking up junk food. Read food labels when you shop, and stick to your healthy-eating plan when you're dining out, too.
- **Cut yourself some slack:** Although the DASH diet is a lifelong eating guide, it doesn't mean you have to cut out all of the foods you love. It's OK to treat yourself occasionally to foods you wouldn't find on a DASH diet menu, like a candy bar or mashed potatoes with gravy.

**Dash diet plan for hypertension**

The DASH diet is nutritionist-recommended for people with hypertension (high blood pressure) or prehypertension. The DASH diet eating plan has been proven to lower blood pressure in studies sponsored by the National Institutes of Health (Dietary Approaches to Stop Hypertension). In addition to being a low salt (or low sodium) plan, the DASH diet provides additional benefits to reduce blood pressure. It is based on an eating plan rich in fruits and vegetables, and low-fat or non-fat dairy, with whole grains.

It is a high fiber, low to moderate fat diet, and is rich in potassium, calcium, and magnesium. The DASH diet is a healthy plan, designed for the whole family.

The DASH diet can be also be incorporated into any diet for those with diabetes. It emphasizes an eating plan that is low in saturated fat, cholesterol, and total fat and higher in fruits, vegetables, and low-fat dairy foods. It also is lower in sodium than many dietary patterns.

**Dash diet pattern**

Food Group	Servings*
Grains	6 - 8
Vegetables	4 - 5
Fruits	4 - 5
Low-fat or fat free dairy	2 - 3
Meats, poultry, fish	Less than 6
Nuts, seeds, dry beans and peas	4 - 5/week
Fats and oils	2 - 3
Sweets	5/week
Sodium	2300 mg

**Table 2**

Now let's look at the specifics of the DASH diet. As I said, it really emphasizes fruits and vegetables. While 5 a day is a nice start, this study actually found 8 servings a day is even better. That sounds like a lot, but if you have 2 servings of fruits and/or vegetables at

each meal, plus one serving at two snacks you have hit your daily quota. One serving is ½ cup cooked vegetable or fruit, 1 cup raw or a medium piece of fresh fruit. Getting 3 servings of low fat or non-fat dairy products is equally beneficial. A serving would be 8 ounces of skim or reduced fat milk, 1 cup low fat or non-fat yogurt or 1 ½ ounces of reduced fat cheese.

Again, by adding one serving to each meal, you could meet the goal. The use of nuts, seeds and dried beans as meat substitutes 4 - 5 times per week helps to lower blood pressure.

DASH also substituted whole grain breads and cereals for breads and grains that are highly processed. These whole grains provide beneficial magnesium and fiber. Meat, fish and poultry servings are kept small – no more than 3 ounces per meal to control fat and cholesterol.

DASH diet is even more effective if the sodium levels are restricted to around 2400 milligrams per day. Frankly that is not very high, and most people would have to make some big changes in their cooking and eating habits to hit that level, but it can be done by cutting down salt. While your food at first will taste rather bland, in just 2 - 3 weeks you will be surprised how salty food begins to taste bad. You will begin to enjoy the real flavor of food instead of the overwhelming taste of salt.

The most obvious way to lower sodium intake is to take the salt shaker off the table. Another is to either cut in half or leave out entirely the table salt added to recipes like quick breads, casseroles, cooked vegetables and even the water you cook pasta in. Most frozen vegetables, unless they have a sauce, are relatively low in sodium if you don't add salt. Canned vegetables, however, can be very high in sodium. If you must use canned, rinse them in a colander for one minute and then cook them in fresh water. Season vegetables, meats, chicken, fish and casseroles with a squeeze of lemon or a tablespoon of table wine instead of salt. Lemon juice and wine both naturally contain potassium chloride which is what is used in most salt substitutes. But don't use cooking wine, it contains salt! Finally, make soups and stews without salt, or at least half the salt, and let them blend overnight to enhance their flavors without so much salt.

If you look at the nutrition label of most convenience foods, you will see that many are very high in sodium. If you seriously want to cut the sodium level in your diet you need to eat convenience foods that are lower in sodium and eat out less often. In fact, you may want to eat out only once a week if that often. Look for the amount of sodium in foods by finding on the Nutrition Facts Label. Choose foods that have lower amount of sodium based on the label.

### Alcohol and smoking impact on blood pressure

Alcohol can be both good and bad for your health. In small amounts, it can potentially lower your blood pressure by 2 to 4

mm Hg. But that protective effect is lost if you drink too much alcohol — generally more than one drink a day for women and more than two a day for men. Also, if you don't normally drink alcohol, you shouldn't start drinking as a way to lower your blood pressure. There's more potential harm than benefit to drinking alcohol.

If you drink more than moderate amounts of it, alcohol can actually raise blood pressure by several points. It can also reduce the effectiveness of high blood pressure medications.

Alcoholic drinks contain calories which is another good reason to cut back on them if you are trying to lose weight and control high blood pressure. True, 5 ounces of wine = 100 calories.

A 12 ounce beer counts as one drink the same as 5 ounces of wine or 1.5 ounce of whiskey. True – They are all considered one drink. The beer is 150 calories, the others are 100 calories.

Smoking injures blood vessel walls and speeds up the process of hardening of the arteries. Smoking causes shrinking of the arteries and restricted blood flow. So even though it doesn't cause high blood pressure it is a bad idea for anyone, especially those with high blood pressure. Once you quit, your risk of having a heart attack is reduced after one year.

To summarize make a DASH diet to more fruits and vegetables, whole grain breads and cereals, non-fat and low fat dairy foods and nuts, seeds, and dried beans. Hypertension is dangerous if left untreated.

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