

## DASH: Reducing Risk of Heart Failure

Michael Rich

**Latest research shows that in addition to reducing blood pressure, the DASH diet also reduces risk of heart failure. Michael Rich, Executive Director of the Blood Pressure Association provides some practical suggestions on how to help patients commit to the DASH diet, in place of or alongside their medications.**

High blood pressure is an unwelcome fact of life for millions of people across the UK. A significant cause of illness and death, it is responsible for 60% of all strokes and 40% of heart attacks. An estimated fifteen million people in the country have high blood pressure, with one third not yet aware of the fact. Many more will go on to develop hypertension<sup>1</sup>. But the good news is that for the vast majority of people, high blood pressure is easily manageable whether through medication, lifestyle change or both. The Blood Pressure Association is a UK charity dedicated to lowering the nation's blood pressure<sup>2</sup>. One of the ways in which we do this is through supporting people to take action to help lower their blood pressure. Diet and exercise is a big part of this.

### What is the DASH diet?

The **Dietary Approaches to Stop Hypertension (DASH) diet** is probably one of the most well known and effective ways to lower high blood pressure<sup>3</sup>. A study published in the US this year showed the DASH Diet is also effective in reducing instances of heart failure<sup>4</sup>, so the importance of promoting the DASH diet as an aid to reduce cardiovascular risk is growing. Research has shown that it works but we know that it can be difficult to follow, requiring some commitment on the part of the individual.

The DASH Diet is recommended by many bodies including the American Heart Association. Going considerably further than traditional recommendations to reduce salt intake in the diet, the DASH diet effectively lowers blood pressure as well as having a lowering effect on cholesterol. Some US research has shown that the DASH diet is more effective in African Americans<sup>5</sup>.

Based on an approach that is rich in fruits and vegetables as well as low or non-fat dairy products, the DASH approach includes variety through inclusion of whole grains, fish, poultry and nuts. In comparison to the normal "Western" diet, it is low in red meat, sweets, added sugars and drinks containing sugar. For most of us used to a standard UK diet, the change to DASH can be somewhat daunting. On an average daily 2,000 calorie diet a person would be expected to eat<sup>6</sup>;

- 6 to 8 servings of grain or grain products (including 3 whole grain)
- 8 to 10 servings of fruit and vegetables (average consumption is 2 to 3 servings a day<sup>7</sup> so this is a significant increase for most and can take a lot of adjustment)
- 2 to 3 servings of low or non-fat dairy foods
- 6 or less servings of lean meat, poultry or fish every day
  - NOTE: one serving = 25g
- 4-5 servings of nut seeds and legumes per week

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## Does DASH work?

The DASH diet has undergone a number of studies which shows that the diet has a significant effect on blood pressure. Furthermore, that effect happens quite rapidly – within two weeks. A second DASH study showed that the diet combined with significant salt reduction was even more effective in reducing blood pressure levels<sup>8</sup>.

## Impact of adding soya to the DASH diet

A recent randomised cross-over study in 42 post menopausal women demonstrated a significant improvement in metabolic syndrome with the addition of soya to the DASH diet. The participants consumed one of three diets: the DASH diet with one serving of lean red meat or the DASH diet with the red meat replaced by either 30g of soya protein or 30g soya nuts. After a period of 8 weeks, both soya protein and soya nut DASH diets significantly improved insulin resistance, fasting glucose and LDL cholesterol compared to the DASH diet alone<sup>9</sup>.

## Getting patients started

The best way to move on to the DASH diet is gradually. The change in diet can be off-putting and the significant increase in fibre, fruit and vegetables for most may cause bloating and other stomach problems at first. For a patient currently only eating one or two portions of fruit and vegetables every day, encourage them to add an extra serving at both lunch and dinner. If they do not eat fruit, add in a serving to a meal or a couple of servings as snacks. Encourage people to replace fizzy drinks at lunch with skimmed milk and to read food labels on bought foods so that they can steer clear of food high in fat and salt.

## A day on the DASH diet

Below is an example of a day on the DASH diet. It gives an idea of what a daily DASH approach might look like and how it differs from the average diet<sup>3</sup>:

	Grains	Fruit & Veg	Low fat dairy	Meat, Poultry, fish	Nuts, seeds, legumes
<b>Breakfast</b>					
Bowl (30g) wholegrain cereal	1				
1 medium banana		1			
200ml low fat/fat free milk			1		
1 wholemeal toast	1				
Small glass fruit juice		1			
<b>Lunch</b>					
Tuna (75g) Sandwich Using 1 large wholemeal roll (Tuna should be fresh or tinned in oil)	2			3	
Large salad of lettuce, cucumber, tomatoes etc		2			
Peach/Orange		1			
<b>Dinner</b>					
75g Poultry / Meat / Fish				3	
Large serving of broccoli and carrots		3			
Brown Rice or Pasta ~200g cooked weight.	2				
1 piece of fruit		1			

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SNACKS					
A handful of unsalted almonds					1
1 diet fruit yogurt			1		
2 wholegrain crackers (low salt)	1				
<b>TOTAL</b>	<b>7</b>	<b>9</b>	<b>2</b>	<b>6</b>	<b>1</b>

## Conclusion

For people who are keen to control their blood pressure without having to go onto medication, the DASH diet is an excellent starting point. For those who need medication, the DASH diet will considerably aid in the control of their blood pressure. The low fat, low cholesterol aspects of the diet will also help reduce cholesterol levels and recent research showing a reduction in heart failure risk points to the fact that while the DASH diet does need a commitment from the individual, that commitment will pay off and people should see a difference in their levels of blood pressure within a couple of weeks – a real incentive to continue with DASH.

### Dietary tips for reducing high blood pressure

- Switch salt for spices, herbs, lemon or lime
- Use fresh chicken, turkey, tofu, fish and lean meat rather than processed or smoked meat
- Think about portion size
- Think about snacks. Changing these to fruit or vegetables is a good way of increasing your intake of fruit and vegetables and lower your intakes of sugar and fats
- Think about the nutrient content of convenience foods. Pizza, soups, sandwiches, microwave quick meals – many have high levels of salt and fat so check the label. Choose lots of food with fat and salt levels of <3g/100g and <0.3g/100g respectfully but try to limit foods with fat and salt levels of >20g/100g and >1.5g/100g respectfully.
- Think about breakfast. Some breakfast cereals are high in salt and sugar so check the labels to find healthier wholegrain versions
- Fruit and vegetable portions do not have to be “fresh”. Canned or frozen are as good, just make sure that they have no added salt or sugar
- Drink water rather than soft drinks that are often very high in sugar
- Think about the salt that you put on your food. You may not shake any directly on but many sauces such as Tomato Ketchup are high in salt
- Include fruit and vegetables with every meal, e.g. add salad in your sandwich, fruit with your breakfast cereal

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