

## DIET AND HYPERTENSION

The information explosion in the science of nutrition very often creates the impression that available information is contradictory. Consequently, it is no longer easy to distinguish between fact, misinformation and fiction. The Division of Human Nutrition, Faculty of Medicine and Health Sciences, Stellenbosch University act as a reliable and independent source of nutrition information.

*Compliance with the recommendations of a low sodium healthy diet (i.e: high in fruit, vegetables and low fat dairy products; an emphasis on whole grains; low saturated fat, red meats, and refined sugar; and the inclusion of nuts, seeds and legumes several times a week) lowers blood pressure in individuals with normal or high blood pressure.*

Results of observational studies and randomized trials indicate an association between decreased salt intake and lower blood pressure. To prevent hypertension, it is recommended that, on average, all adults consume a diet that achieves the recommended intake of sodium, which for most individuals requires a substantial reduction in salt intake. Other key dietary and lifestyle approaches include increased fruit and vegetable intake, increased low fat dairy intake, to obtain and maintain a healthy body weight, weight loss if overweight, daily physical activity and moderate to low alcohol consumption.

The DASH diet is based on the research studies: Dietary Approaches to Stop Hypertension, and has been proven to lower blood pressure, reduce cholesterol, and improve insulin sensitivity. It is based on an eating plan proven to lower blood pressure, a plan rich in fruits, vegetables, and low-fat or fat-free dairy. It emphasizes whole grains and contains less refined grains compared with a typical diet. It is rich in potassium, magnesium, calcium, and fibre.

Healthy individuals or those at risk of developing hypertension should consume a diet rich in potassium, calcium and magnesium. Potassium, calcium and magnesium supplements are not recommended for the prevention of hypertension as there is a lack of evidence to suggest a benefit. Dietary recommendations of increases low fat dairy and increased vegetable and fruit intake are recommended to increase these nutrients.

## Guidelines for a low salt diet

That way, you control the sodium. The main source of sodium is table salt, or sodium chloride (NaCl). One teaspoon (5g) of salt contains approximately 2 000 mg of sodium. Multiply the amount of sodium in milligrams by 2,5 to calculate the amount of salt in milligrams (divide by 1000 to get the salt value in grams).

Foods don't necessarily have to taste salty to be salty. It can be tricky to reduce salt intake, as it is often already in the foods we buy, and we can't take it out. Most of the salt in our diet, up to 60%, is found in processed foods. Bread is a serious concern as it is very high in salt and consumed as a staple food in South Africa. Other culprits are margarine, butter spreads, stock cubes, soup powders, breakfast cereals and savoury snacks. The remaining 40% is added at the table.

Read food labels and the ingredients list. If sodium or salt is listed in the first three ingredients, the food is likely to be a high-salt choice. Use this as a rule when choosing foods containing salt: those that contain more than 1,5 g per 100 g are high in salt. Try to avoid these. Foods that have less than 0,3 g of salt per 100 g are low in salt and a better choice for you. Look for the Heart Mark to identify foods that are lower in salt content. Some products appear to have less salt than they do: 'low sodium' 120 mg sodium for each 100 g, whereas 'virtually free from sodium' actually means there can be up to 5 mg sodium for each 100 g.

Do not add extra salt to food at the table. Rather use alternative flavourings that do not contain salt, e.g. herbs, pepper, curry, vinegar, onions, peppers, garlic, ginger, rosemary and lemon juice. Avoid salt-containing flavouring agents such as onion salt, celery salt, garlic salt, vegetable salt, barbeque and chicken spices, meat tenderisers, commercial sauces, soups, gravies, and stock cubes. Check the food labels for ingredients e.g. salt, sodium, monosodium glutamate (MSG), sodium nitrate, sodium bicarbonate and soy sauce or any sodium-containing additive.

Don't be fooled into thinking that fancier types of salt are better for you. Whether it's pink, black, rock, crystal or flakes, they still have the same effect on your blood pressure as standard table salt. Although less refined salts might contain more nutrients than everyday table salt, these will probably only be in very small amounts and can probably be sourced from other foods in your diet. Bigger crystals also taste less salty, so you are likely to add more than refined salt.

## **Guidelines for alcohol intake**

Restricting daily intake of alcohol to no more than two standard drinks per day of any type of alcoholic beverage is recommended for prevention of hypertension in men and women. Low risk drinking guidelines advise no more than 14 drinks/week for males, and nine drinks/week for females. Healthy adults should limit alcohol consumption to two drinks or less per day, and consumption should not exceed 14 standard drinks per week for men and nine standard drinks per week for women. (Note: one standard drink is considered 13.6 g or 17.2 ml of ethanol, or approximately 44 ml [40%] spirits, 355 ml of 5% beer or 148 ml of 12% wine.

## **Maintain a healthy body weight**

Overweight, hypertensive individuals are advised to lose weight to decrease blood pressure. For obese individuals sustained moderate weight loss by itself is definitely beneficial in obesity, especially "morbid" obesity, but also in diabetes, hypertension, hyperlipidaemia, cardiorespiratory diseases and other chronic degenerative diseases associated with any degree of excess body fat.

Body Mass Index (BMI) is a number calculated from a person's weight and height. BMI is a fairly reliable indicator of body fatness for most people. The formula for BMI is weight in kilograms divided by height in meters squared. (Example: Weight = 68 kg, Height = 165 cm - 1.65 m Calculation:  $68 \div (1.65)^2 = 24.98$ )

Maintenance of a healthy BMI (18.5-24.9 kg/m<sup>2</sup>) and appropriate waist circumference (<88 cm female; <102 cm male) is recommended to prevent the development of hypertension.

## **Be active**

Thirty to sixty minutes of exercise (such as walking, jogging, cycling or swimming), at least four times per week in addition to routine activities of daily living is associated with a reduction in blood pressure and may reduce the possibility of becoming hypertensive.

## **Dietary checklist for a healthy blood pressure:**

- Eat at least 6-8 servings of vegetables and fruit each day
- Eat natural, unprocessed and homemade foods more often
- Choose lower sodium, high-fibre cereals, breads, bakery products and snacks
- Choose 2-3 servings of low-fat milk products or alternatives each day

- Use less salt at the table and in cooking and baking
- Cut back on the amount of sauces and dressings added to food
- Choose low-fat, high-fibre, lower sodium snack foods
- Avoid processed meat such as polony and deli meat -have leftover cooked meat or chicken instead
- Check food labels and buy lower sodium foods
- Eat more beans, peas and lentils
- Eat a handful of unsalted nuts or seeds several times each week.
- Eat fewer take-away meals
- Watch portion sizes, eat slowly and enjoy every bite

***For further, personalized and more detailed information, please contact a dietitian registered with the Health Professions Council of South Africa.***

*References from the scientific literature used to compile this document are available on request.*

### **Human Nutrition | Menslike Voeding**

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