

Hypertension

Hypertension is a common problem. It is normally treated with drugs. Typically these need to be continued for a lifetime. However is this necessary?

Many studies have shown that indigenous populations across the world never develop hypertension even as they age but these same populations develop hypertension quickly once they changed to western diets. This suggests the food we eat is crucial to whether we develop blood pressure. So could changing our diet be the answer?

Metabolic Syndrome

Metabolic syndrome is a well-recognised cause of high blood pressure. This syndrome is caused by chronically high insulin levels and is sometimes called **insulin resistance**. It affects 25% of the population.

It is caused by a high carbohydrate and particularly a high sugar diet. Sugar contains fructose and glucose. It is the **fructose which is mainly responsible for the insulin resistance** but glucose adds to the problem as it increases the absorption of fructose. **Vegetable oils (found in most processed foods and cooking oils) also cause insulin resistance. High fructose corn syrup (found in most processed foods) also contains glucose and fructose.**

Insulin causes the body to retain sodium and water and to constrict blood vessels. Clues to metabolic syndrome are **high triglycerides, low HDL (sometimes called good cholesterol) and abdominal obesity** (see separate leaflet for more details). A blood test for lipids (usually done for cholesterol) will reveal if triglycerides and HDL are abnormal.

Sugar is in lots of foods, especially processed foods. A useful tip is to read labels and check the number of grams of sugars per 100grams (remember 1 teaspoonful of sugar is 4 grams). **It is the hidden sugars which catch people out** and high levels can be found in cereals, soups, yoghurts, sauces and particularly foods labelled as low fat.

Refined carbohydrates are also a problem but less so as they don't contain fructose. They include most bread (except wholemeal) most cereals (which are also high in sugar and salt), pasta, cooked potatoes, chips and white rice. Sugar and refined carbohydrates make up 50% of the British diet and have no nutritional value but they are addictive. Most wholemeal or wholegrain products are okay (though even these often have added sugar).

Hydrogenated fats also cause insulin resistance. These occur whenever fats are heated such as in margarines, fried foods and supermarket vegetable oils. They can be labelled as vegetable oil, vegetable fat, shortening, hydrolysed fat, hydrolysed vegetable protein They are found in a **wide range of processed foods** such as biscuits, mayonnaise,

pastries, pies, pizzas and pastas, crisps and cakes. These are often combined with sugar in processed foods, making them particularly harmful.

For most people with high blood pressure it makes sense to **keep low on sugar and processed food**. Some people have found sugar restriction rapidly reduces blood pressure.

The DASH Diet

The most well-known diet for hypertension is the DASH diet (Dietary Approaches to Stop Hypertension). This diet emphasises healthy foods such as fruit vegetables, nuts, seeds and fish with less red meat, sugar and refined carbohydrates. **It has been shown a number of studies to lower blood pressure and reduce the risk of heart attacks and stroke. It is similar to the Mediterranean diet which is also beneficial.**

Nutrient-Dense, Plant-Rich Diet

This survey by Dr Joel Fuhrman followed 2000 participants. Of these 443 had hypertension. These patients went on a nutrient-dense, plant-rich diet (this was a diet that emphasised vegetables, fruit, wholegrains, nuts and seeds and minimised, refined grains, processed foods, vegetable oils and animal products) for one year. The results were as follows: those not on medication reduced their BP, on average from 149/90 to 121/74. Those who stayed on medication reduced their BP from 144/87 to 122/74 and those who stopped medication reduced their BP from 144/87 to 122/74. These drops in BP were greater than anything that could be achieved by a medication.

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Other Foods

A good diet for hypertension should be **high in potassium** (most fruit and vegetables) and **magnesium** (green leafy vegetables, seeds). Organic produce has higher levels of vitamins and minerals. Recommended foods include apples, asparagus, aubergine, broccoli, cabbage, cantaloupe, grapefruit, all green leafy vegetables, melons, peas, prunes, raisins, squash and sweet potatoes. **Garlic** has a definite beneficial effect in hypertension as do **celery, blueberries, onions** and **cayenne pepper**.

Flaxseed deserves a special mention as three tablespoons of ground flaxseed daily has been found to reduce blood pressure as much as the most effective blood pressure tablets (calcium antagonists) and more than other blood pressure drugs.

Increase essential fats which are found in oily fish (herring, mackerel, sardines, anchovies), seeds (linseed, sunflower seeds, pumpkin seeds), some nuts eg. almonds, and cool-pressed seed oils eg sunflower oil. (Note most seed oils which are not cold-pressed and are harmful as they

have been preheated to high temperatures and contain hydrogenated fats and cause insulin resistance.) Cook with olive oil, butter, lard or coconut oil.

Fasting

The longer the interval between the last food you eat in the evening meal (and this includes alcohol) and breakfast the better. After 6 hours without food the body starts burning fat. Ideally make this interval at least 12 hours (optimum 16 hours). Making this interval longer has been shown to lower insulin and improve blood pressure.

Salt

There is a low salt version of the Dash diet. However, much of the data linking salt with hypertension is unconvincing and contradictory. Table salt and sea salt are largely refined products and a better alternative is salts which contain other healthy minerals. Celtic sea salt is one of the healthiest but Solo or Losalt are useful alternatives.

Other Treatments

Exercise for 20 minutes three times weekly has been shown to reduce blood pressure.

Weight loss alone can help blood pressure.

Alcohol typically worsens blood pressure, so keep this low.

Sunlight has an important effect in lowering blood pressure. Being outdoors on a cloudy day is quite adequate for the health benefits.

Mental Techniques can also be helpful. Blood pressure can respond to biofeedback. Listening to a good relaxation tape can be a very enjoyable way of improving your health.

Some people have **food allergies** and are sensitive to specific foods and their blood pressure can drop markedly after an **exclusion diet**. Clues that you may react this way are other allergic symptoms such as catarrh, irritable bowel, migraine or asthma. It is easy to find out if you have this problem because your blood pressure will be much lower after one week on an exclusion diet. (See separate leaflet on food intolerance).