

## A Grain of Salt and a Grain of Sense?

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Many factors are responsible for high blood pressure and one frequently mentioned in this context is salt. Is there a connection?

### Where does the salt come from in our diet?

About 10% of dietary sodium (table salt is made of sodium chloride) is naturally present in foods; 15% of it is added during cooking or at the table [so-called discretionary salt] and about 75% is incorporated during manufacture and processing.

Since the dawn of civilisation salt has been a valuable food ingredient used as a flavour, for food preservation and the inhibition of microbiological spoilage. It is also indispensable in the preparation of many foods which have distinctive flavours and textures.

### What is the role of sodium, potassium and chloride in the body?

These are dietary essentials but, unlike most nutrients, there are rarely problems associated with a dietary shortage.

Particularly in the case of sodium, the problem lies in excessive intakes. Together with other determinants of blood pressure, these ions maintain the blood volume or extra-cellular fluid in the body, electrophysiological activity in muscles and nerves, osmotic pressure and acid-base balance - all essential for life.

### What are the risk factors for high blood pressure?

The management of high blood pressure, or hypertension, is important because it is the major risk factor for stroke. Risk of stroke rises as the level of blood pressure rises and there is widespread recognition that there is an increased risk of cardiovascular disease from even slightly elevated blood pressures.

Several key risk factors are involved including family history, low levels of physical activity, smoking, living with obesity, excessive intakes of alcohol and excessive dietary salt intake. In recent years attention has been focused on the relationship between dietary sodium and hypertension, and the international scientific community has recommended that a reduction of sodium intake of about one-third could be beneficial to health.

Over the last few years, research studies have provided a wealth of data which has fuelled the debate between those that would advocate salt restriction for the population as a whole and those who would target dietary interventions to those groups of individuals who are hypertensive or who are susceptible or

sensitive to dietary salt intake. There is no doubt that some people are genetically susceptible to hypertension and potentially more vulnerable from high intakes of salt. A promising area of research is to develop genetic and other screening technologies which could identify "at risk" groups.

## What can we do to maintain healthy blood pressure?

As scientists continue to disentangle the complex genetic, dietary and lifestyle factors which influence hypertension, salt restriction can be recommended for older hypertensives. For the majority of the population, it is sensible to cut out smoking, maintain a healthy bodyweight, moderate alcohol consumption, increase physical activity, increase consumption of fruit and vegetables and whole-grain foods as well as to moderate salt intake.

## References

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