Restrict salt intake to minimum

Table of contents

Rationale: Increased salt (sodium chloride - NaCl) intake poses a health risk and may lead to hypertension and related heart diseases and stroke.

- All foods contain sodium. Sodium requirements can be met with minimal added salt intake
- Sodium plays an important role in nerve conduction and it is primarily involved in maintenance of water and fluid balance in the body.
- Maintenance of sodium balance depends on kidney function.
- High intake of salt is associated with high blood pressure and related vascular and heart diseases.
- High intake of salt may also increase the risk of stomach cancer.
- Use iodized salt
- Restrict the intake of added salt (sodium chloride) to a maximum of 5g per day.
- Develop a taste for foods/diets that are low in salt from an early age.
- Restrict intake of processed and preserved foods such as snack foods, sauces, ketchup, biscuits, chips, cheese and salted fish.
- Eat plenty of vegetables and fruits. These are good sources of potassium, which helps in excretion of sodium and helps maintain the blood pressure.

From times immemorial, salt has been used as a preservative. All food substances contain sodium. Common salt or edible salt is sodium chloride (40% sodium and 60% chloride) and is the major source of sodium in daily diet. Sodium along with potassium is essential for water and fluid balance and electrolyte equilibrium; and also electro- physiological functions of all cells. Sodium intake needs to be balanced with potassium intake.

Sources of sodium and potassium

Habitual diets provide about 300–400mg of sodium per day. Cereals, pulses, vegetables, milk, animal and sea foods are the major sources of sodium. Foods like beans, lentils, banana, dry fruits and coconut water are good sources of potassium.

Indian food intake data indicates that average consumption of salt ranges from 3 g to 10 g/day in different states with about 45% of population consuming more than 5g/day. Since, the taste for

salt is acquired, its consumption could be restricted right from an early age. Sodium is rapidly absorbed from the gastrointestinal tract and a positive balance can be achieved with intakes of not more than 5g of salt per day (equivalent to 2g of sodium). Sodium requirements depend on its losses through urine, feces and sweat. The sweat loss varies according to climatic conditions. High ambient temperatures and vigorous physical activity increase sodium loss through sweat.

How do sodium and potassium interact in the body?

Balance of sodium (Na) and potassium (K) in diets is essential for good health. While potassium intake has been decreasing gradually, there is simultaneous increase in sodium intake, either as table salt used while cooking in meals or through processed foods. This has resulted in a higher sodium:potassium (Na:K) ratio.

High sodium and low potassium intakes are reported to be independently associated with an increased risk of developing high blood pressure. In adults, a stronger association exists with blood pressure outcomes, when the sodium-to-potassium ratio is considered as against considering either sodium or potassium alone. For optimal health benefits, individuals need to decrease their sodium intake and increase their potassium intake, leading to a decreased Na:K ratio.

The current Indian as well as WHO recommendation for sodium intake is 2300mg per day, which translates to around 5000mg or 5g (1 teaspoon) of common salt per day. At this level of intake of sodium, the potassium requirement would be around 3800mg per day. It can be easily met by consuming recommended level of vegetables (400g) and fruits (100g) per day which will also lower the Na:K ratio. Along with fruits and vegetables, nuts and flesh foods are also good sources of potassium.

Though all foods contain some amount of sodium, the contribution to total dietary intakes from food sources is less than 10% and a major amount comes from added salt either through cooking or processing. Hence, sodium intake can be restricted easily by changing food habits. Further, since taste for salt is an acquired habit, salt consumption should be restricted from an early age for health benefits in later life.

What are the health problems associated with excessive salt/sodium intake?

Existing evidence reveals a deleterious impact of high salt intake on blood vessels, blood pressure, bones and gastrointestinal tract. There is a strong association between salt intake and blood pressure. Prevalence of hypertension is low in populations consuming less than 3g salt per day. The usual increase in blood pressure with age is also not seen with such intakes. The amount of salt consumed is reflected in urinary sodium levels. Restriction of dietary salt decreases the risk of hypertension. Potassium-rich foods such as fresh vegetables and fruits decrease blood pressure. In fact, it is the ratio of sodium to potassium in the diet which is important.

Besides increasing blood pressure, excessive salt may also affect stomach mucosa and increase the risk of gastritis, atrophy and gastric cancer. Higher sodium intake leads to greater calcium excretion, which may result in reduction in bone density.

Salt intake in our population generally exceeds the requirement. It should not be more than 5g per day.

How to avoid excess salt intake?

Processed foods such as snack foods, savouries, soups, sauces, ketchup, salted butter, cheese, canned foods, papads, and salted dry fish, salted nuts/dry fruits contribute to higher intake of salt. Preserved meats/vegetables and ready-to-eat foods contain a lot of salt and sodium. Additives like baking soda (sodium bicarbonate), baking powder (mixture of sodium carbonate and sodium bicarbonate) and monosodium glutamate are other sources of sodium in processed foods. Hence their consumption should be limited.

Are other varieties of salt any better?

Technically, all salt come from sea salt - even edible salt, table salt or sodium chloride. Salt is available in two forms i.e. refined and unrefined salts, which are consumed with the purity of 99% and 96 % respectively. The most common form of salt used is finely grounded and processed with an anti-caking agent that helps salt granules from falling apart. Salt often contains some essential trace minerals such as Magnesium, Calcium, Iron, Sulfur and Nitrogen.

In addition to common white refined or non-refined salts, rock salt is also used for specific recipes or occasions. Rock salts are of two types; pink salt (sendha namak) and the other one is black salt (kala namak). Pink and black salts can be easily distinguished by their color, texture and smell. Pink salt is one of the purest forms of salts. Black salt upon storage grows darker. Assorted spices, charcoal, seeds and tree bark are used in the preservation of this salt. Therefore, irrespective of the variety of salt, their consumption should be limited as the sodium content in them is almost similar.

Source: ICMR National Institute of Nutrition, Hyderabad - Dietary guidelines for Indians