ACTA SCIENTIFIC NUTRITIONAL HEALTH

Volume 3 Issue 1 January 2019

Perspective

Dietary Salt and Sodium: Impact in Pediatric and Adult Population in Disease and Health Times

Laxmi Kant Bharti*

Additional Professor, Department of Pediatric Gastroenterology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India

***Corresponding Author:** Laxmi Kant Bharti, Additional Professor, Department of Pediatric Gastroenterology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India.

Received: December 06, 2018; **Published:** December 17, 2018

Sodium is a very vital micronutrient needed for survival of life in balanced amount. It helps in regulating fluid balance in our body. Too much sodium can increase amount of water in our body. Excess fluid in vessels may lead to stress and increase in pressure and more loads to heart. It is found in most of the macronutrients in diet in small amount. Sodium is mostly added in form of common salt (Sodium chloride, NaCl) in most of the foods. Common salt contains 40% of the sodium and 60% of chloride.

Following is the requirement range of sodium per day (In milligram), which include every source of sodium in our daily diet [2] (Table 1).

Age*	Average Intake (AI)	Upper limit (UL)
1 - 3	1000	1500
4 - 8	1200	1900
9 - 50**	1500	2300
51 - 70	1300	2300
70+	1200	2300
* Male and Female		
** Including pregnancy and lactation		

Table

The above table-1 indicates average and upper maximum limit of sodium requirement per day. So, the adequate requirement of salt (NaCl) per day is not more than 5-6 gram/day including every source of sodium in our diet. But the actual requirement of Sodium in our body is just 69 mg/day. Sodium represents the (39.34%) of the formula weight of sodium chloride (Na = 23, Cl = 35).

Our natural diet provides usually 300-400 mg of sodium per day. Cereals, pulses, vegetables, fruits, milk and milk products, meat, seafood's are the sources of sodium usually. Requirement of sodium varies very little for the losses from stool, urine and sweats. Even with heavy exercises and liters of sweating from skin, the adequate sodium requirement doesn't go beyond 2300 mg/day.

Salt intake is unfortunately found to be high to very high among different parts of world. In a recent study done by American heart Association (AHA) shows that salt consumption in India very high across north and south India ranging from 9.45-10.41 gms/day [1]. Indian council of Medical research (ICMR) statement is that salt intake has lots of variation across the nation and also across the rural and urban population of same area varying between 5gm to as high as 30gm/day. This may be because of lots of differences between social and cultural and dietary lifestyle of population and on the other hand increasing fast food and processed food intake culture, more frequent restaurant culture, increasing readymade and processed food culture is increasing in urban areas.

Common salt makes taste for food and also poverty may be reason why people eat more salt in rural India. Salt is a very cheap food additive. Many of the times the poor and low economy class population use salt as medium to make the food eatable with bread (roti). For example, sprinkling of salt in chutney (sauce), with onion and May times sprinkling salt over onion to make it tasty and palatable. There are many rural areas where salt amount is culturally added more.

On the other hand, causes for high sodium intake in urban population is different. Becoz of rapid economic growth and people having busy lifestyles people need quick and readymade service. Looking for demand market flooded with readymade and ready to use processed food items, which are high in sodium. Sodium acts as stabilizer and it makes tastes for the food also, so it's being used in various other forms also apart from Common salt. There is very high use of condiments in food like sauces, ketchups, salad dress-

ings, relish and pickles. These items having very high salt or sodium content. Sodium adds flavor to readymade foods and also prevents food from spoiling. It also performs chemical function during baking and readymade food processing.

It is well known that high-pressure load to vessels and excess fluid overload may lead to hypertension, stroke, Kidney disease and some neurological problems [4].

So, to prevent huge number of non-communicable disease like hypertension, population must reduce heart diseases, renal disease and some neurological diseases sodium intake. The low sodium diet must be inculcated in the culture and behavior of population. Each family and all members of family must adopt this good life style.

So, there should be gradual decrease in low sodium shift diet policy by family. Make more foods from raw food and unprocessed foods. Use of condiments must be very rarely. To make food tastier and flavor natural flavoring agents like onion, garlic, lemon juice, herbs, flavor vinegars, fresh tomato instead of tomato soup should be used. Unsalted snacking should be used. Always look for nutrition facts specially sodium content of readymade and processed used when you have to use them in unavoidable situations.

Limit and restrict outside restaurant food. Choose fresh vegetables and fresh fruits only. Limit high sodium content foods like hot chocolates, flavored coffee, pickle, papad, processed cheese. Take the saltshaker off the dining table. Use salt after the food is made. Every family should taste the food before adding the salt and slowly whole family should adopt minimum or no salt diet. Decrease sodium intake from very early age. Always try to calculate sodium content of kitchen food for awareness. Use low sodium salt preparations whenever needed. Milk and milk products usually low in sodium. Ringed canned foods well to reduce sodium content. These terms in restraint menu indicate high sodium content: pickled, smoked, marinated, teriyaki, soy sauce, broth, au jus. Salad dressings having high sodium. Avoid beets, carrots, and spinach. Cocoa, biscuits, rolls, muffins, pancake, wafers, ready to eat cereals, health drinks like bournvita, Complan, Horlicks, boost are high in sodium content.

The common drugs having more sodium content include paracetamol, aspirin, ibuprofen, vitamin C, calcium, zinc and metoclopramide, effervescent, laxatives etc [3].

It is evident that majority of world population having diet in high sodium which is very unhealthy lifestyle. Slowly and gradual shift to low sodium healthy life style adaptation and proper health awareness and pushing commercial food companies to make for low sodium or no sodium with alternate process for making readymade food products is way for healthy world and indirectly saving millions dollar economy for nation.

Bibliography

1. Claire Johnson., *et al*. "Exercise training for blood pressure: a systematic review and meta-analysis". *Journal of the American Heart Association* 2.1 (2013).

2. Institute of Medicine. Dietary Reference Intakes for Water, Potassium, Sodium, Chloride and Sulfate. Washington, DC: National Academy Press, (2004).

3. Jacob G., *et al.* "Association between cardiovascular events and sodium containing effervescent, dispersible, and soluble drugs: nested case-control study". *The New England Journal of Medicine* 333 (1995): 1291

4. He FJ and MacGregor GA. "A comprehensive review on salt and health and current experience of worldwide salt reduction programmes". *Journal of Human Hypertension* 23 (2009): 363-384.

Volume 3 Issue 1 January 2018