Shaping healthy futures:
The case for salt reduction in children and adolescents

India is witnessing a growing burden of non-communicable disease risk among children (5–9 years) and adolescents (10–19 years).

Unhealthy diets are major risk factors for obesity, diabetes, and hypertension not only among adults but also among children and adolescents.[1]

Findings from the CNNS-2016–2018 highlight the emerging concern: overweight and obesity prevalence was 2% among children under five years of age and 1% among adolescents aged 10–19 years were obese. 1% of school-age children and adolescents were diabetic, 7% were at risk of chronic kidney disease while 5% of adolescents aged 10–19 years were found to be hypertensive.[2]

Unhealthy diets, i.e., diets high in sugar, salt, and fats and low in fruits, vegetables, and whole grains are linked to increased risks of obesity, high blood pressure, and diabetes. There is a need for a broader, more comprehensive approach to improving diets and promoting healthier food environments for children and adolescents. This means ensuring nutrition adequacy as well as reducing the intake of "nutrients of concern" – unhealthy fats, sugar and salt.

High salt intake and related health risks among children and adolescents

While focusing on reducing unhealthy fats and sugar to address obesity among children and adolescents, policies & programmes must also address high salt diets and ready to eat packaged and ultra processed foods among younger age groups.

Average salt intake in India is 8-11 gms which is around twice the daily recommended intake of <5 gms/ day. Majority of salt intake in India (~ 80%) comes from food cooked at home[3], but eating out and consumption of packaged foods is increasing rapidly.

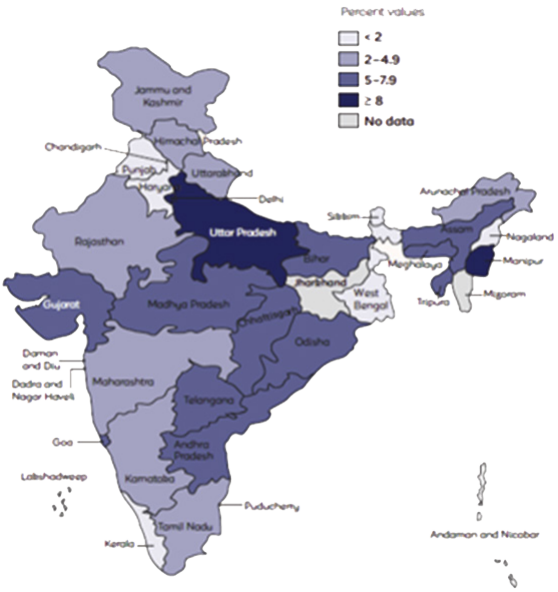

Figure 1: Prevalence of hypertension among adolescents aged 10-19 years, India, CNNS 2016-18

WHO–ICRIER analysis reported a 13.37% Compound Annual Growth Rate (CAGR) in the retail sales of ultra-processed foods between 2011 and 2021.[4]

Excess salt intake is associated with increased risk of high blood pressure in both adults and children.[5] Childhood is a key stage when dietary habits and taste preferences develop, making early dietary intervention important.[6] Children with high blood pressure have about seven times higher odds of developing hypertension in adulthood, making early prevention critical.[7]

According to CNNS 2016–18, around 5% of adolescents in India have hypertension, with variations across states (Figure 1). A meta-analysis indicated that even small reductions in salt can lower blood pressure in short-term, and, if sustained, can slow the age-related rise in blood pressure among children and reduce future cardiovascular disease.[8]

India aligns with the WHO global target to reduce salt intake by 30% by 2030, However, stronger policies and programs are needed to reduce salt consumption among children and adolescents.

Recommended salt intake among children and adolescents

- The WHO Sodium Intake Guideline (2012) recommends a maximum salt intake of 5g salt/day for adults. For children aged 2-15 years, WHO recommends reducing salt intake to control blood pressure, with the recommended maximum adjusted downward based on children's lower energy requirements relative to adults.[9]
- The Recommended Dietary Allowance (RDA) 2020 by ICMR-NIN specifies sodium intake recommendations for different age groups, aligned with WHO (2012) guidelines and calculated based on energy requirements (kcal) (table 1).
- Dietary Guidelines for Indians (2024) highlights that preference for salt is an acquired behavior; therefore, restricting salt intake from early childhood is essential for establishing healthy dietary patterns and achieving long-term health benefits.

Age Group		Sodium (mg/day)	Salt equivalent (g/day)
Adults (18-60 y)	Men	2000	5
	Women	2000	5
Infants*	7-12 months	650	1.63
Children	1-3 years	1000	2.5
	4-6 years	1300	3.25
	7-9 years	1600	4

Table 1: Source ICMR-NIN Expert Group on Nutrient Requirement for Indians, Recommended Dietary Allowances (RDA) and Estimated Average Requirements (EAR) -2020.
* Exclusive breastfeeding for the first six months ensures nutritional adequacy for infant growth and development.

Policy and program recommendations

The recommendations below are focused on creating a healthier food environment for children and adolescents.

1 Strengthening School Food Environment

- **Healthier diets under Pradhan Mantri Poshan Shakti Nirman (PM-POSHAN) program:** The program serves about 11.80 crore children aged 5–14 years. Along with improving the dietary diversity of the meals provided under this program, setting salt standards and strengthening the capacity of cook-cum-helpers to prepare low-salt meals can create a healthier food environment.
- **Strengthening the implementation of FSSAI regulation[10] on school food environment:** Implementation of FSSAI's regulations prohibiting the advertisement, marketing, sale, or free distribution of foods high in saturated fat, trans-fat, added sugar, or salt within school campuses and within a 50-metres of the school gate.
- **Integrate salt-reduction education under School Health & Wellness Programme (SHWP):** Integrate healthy diet and salt-reduction education into the School Health & Wellness Programme to promote healthy eating, build student awareness, encourage label reading, and support healthier food choices at school and home.
- **Establish a dedicated Salt Board:** A dedicated Salt Board, modeled on the existing Sugar and Oil Boards, could be established to promote awareness on reducing salt consumption among children and adolescents.

2 Reducing the consumption of packaged and processed food

- **Front-of-package warning labels (FoPWL):** Front-of-package warning labels can help consumers, including parents, children and adolescents, identify unhealthy foods and make healthier purchase decisions. FoPWL can also encourage product reformulation, and research shows that warning labels are effective in helping Indian consumers identify unhealthy foods.[11,12]
- **Marketing restrictions on unhealthy foods to children and adolescents:** Children and adolescents can be significantly influenced by the marketing of HFSS foods.[13] Regulating HFSS food advertising on television, print, online platforms and social media can help reduce the demand and consumption of these unhealthy foods. Misleading advertisements targeting parents and children should also be restricted.

Additionally, existing health programmes focused on children and adolescents such as Rashtriya Bal Swasthya Karyakram (RBSK) and Rashtriya Kishor Swasthya Karyakram (RKSK) can also be used to include messages on healthy diets and salt reduction. Integrating these messages into programs of departments like Education and WCD, especially inclusion of a healthier diet in school curriculum, can help raise awareness, and promote healthier dietary practices amongst children and adolescents.

Conclusion

India has set a target to reduce population-level salt intake by 30%, and greater focus on children and adolescents can help achieve this goal. Childhood and adolescence are key stages for developing lifelong dietary habits; so reducing salt intake early can lead to significant long-term health benefits.

Through coordinated and sustained action by government, industry, civil society, and healthcare providers, India can translate evidence into action, create a healthier food environment for children and adolescents and reduce the burden of hypertension and other non-communicable diseases.

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