

Editorial**Iodine Deficiency: Where We Stand****Mohsin Masud Jan**

Editor

Estimates put nearly 70 percent of the total population people in Pakistan at a risk of iodine deficiency and related disorders.

According to the World Health Organization, Iodine deficiency is still a public health problem in 54 countries. A total of 36.5% (285 million) school-age children were estimated to have an insufficient iodine intake.¹

Iodine is essential for the normal growth and development. The whole spectrum of health consequences casually linked to iodine deficiency is collectively known as Iodine Deficiency Disorders (IDDs), and it is most commonly seen among poor, pregnant women and preschool children. The effects of IDD on the fetus are in the form of congenital abnormalities, early death, brain damage, cretinism and deafness; effects on children and adolescents are goiter, impaired mental function, stunted physical growth, short stature and diminished school performance; whereas the effects on women are in the form of decreased fertility, spontaneous abortions and still births in pregnant women.

The most visible sign of iodine deficiency is goiter, an enlargement of the thyroid gland. Individuals living in areas affected by severe iodine deficiency may have an intelligence quotient (IQ) of up to 13.5 points below that of those from comparable communities in areas where there is no iodine deficiency (8–10).^{2,3,4}

The spectrum of iodine deficiency disorders includes goiter; hypothyroidism; increased susceptibility to nuclear radiation; spontaneous abortion; stillbirths; congenital anomalies; perinatal mortality; endemic cretinism, including mental deficiency with a mixture of mutism, spastic dysplasia, squint, hypothyroidism and short stature; infant mortality; impaired mental function; delayed physical development; and iodine-induced hyperthyroidism^{5,6}

Sources of iodine include seafood, bread, grains, green vegetables, drinking water, milk (especially cow milk) and eggs. The daily requirement of iodine for adults has been established as 150 micrograms per day or 5 gram of iodized salt per day. Though Universal Salt Iodization (USI) remains as the most viable option.

Iodized salt has been introduced in Pakistan as a counter measure for the rampant Iodine deficiency, and the result is a considerable reduction in the prevalence of goiter and a progressive disappearance of cretinism.

Studies have brought to light, that more than five million children born each year in Pakistan are unprotected against brain damage; 36 percent mothers and 23 percent pre-school children suffer from iodine

deficiency. Pakistan has been rated as 6th among the countries where iodine deficiency is a serious health problem.

Although according to National Nutrition Survey (NNS) 2011, 79 per cent people in Punjab province are consuming iodized salt as compared to 17 per cent in 2001, still it is low when compared with countries with similar socio-economic conditions like Nepal where 98 per cent of the total population consumes iodized salt.

There remains a dire need to create mass awareness on this issue and mount advocacy for promotion of IDD legislation and monitoring of the enforcement of Universal Salt Iodization at production, retail and community levels in order to combat iodine deficiency in the country.

Everyone, the civil society organizations, health professionals, religious leaders, social workers, salt producers, politicians, media and policy makers, need to combine their efforts and focus towards the large scale use of Iodized Salt, because, just a little effort, and a little extra cost can go miles towards preventing iodine deficiency and its subsequent consequences.

REFERENCES

1. Andersson, Maria, et al. Current global iodine status and progress over the last decade towards the elimination of iodine deficiency. *Bull World Health Organ* [online] 2005; 83(7) [cited 2015-04-27];518-525
2. Bleichrodt N, Born MP. A meta-analysis of research on iodine and its relationship to cognitive development. In: Stanbury JB, editor. The damaged brain of iodine deficiency. New York: Cognizant Communication; 1994:195–200.
3. Kapil U, Singh P. Current status of urinary iodine excretion levels in 116 districts of India. *J Trop Pediatr* 2004;50:245–247.
4. Kapil U. Successful efforts toward elimination iodine deficiency disorders in India. *Ind J Comm Med* 2010; 35(4):455–468
5. World Health Organization, United Nations Children's Fund, International Council for the Control of Iodine Deficiency Disorders. Assessment of iodine deficiency disorders and monitoring their elimination: a guide for programme managers, 3rd edition. Geneva: World Health Organization; 2007 (Accessed online)
6. Zimmerman M, Jooste P, Pandav C. Iodine-deficiency disorders. *Lancet* 2008;372(9645):1251–1262.