

## **20 Frequently asked questions on Iodine Deficiency Disorders**

### **1. What is iodised salt?**

Iodised salt is common salt to which a very small quantity of an iodine compound has been added. Iodised salt looks, tastes and smells exactly like common salt and is used in the same way, and for the same purposes. Iodised salt is used to prevent iodine deficiency disorders (IDD).

### **2. What is iodine?**

Iodine is a natural element, a mineral, and like carbohydrates, fats, proteins, and vitamins, is an essential constituent of human diet. Iodine is also called a “micronutrient” (like vitamin A and iron) because it is required in very small amounts by our body.

### **3. How much iodine does a person normally need?**

The daily requirement of iodine for an adult is 150 micrograms. Pregnant women and lactating mothers however, need more iodine (200 micrograms on average).

The total iodine requirement for a person living up to 70 years of life would add up to less than a teaspoonful. However, as there is no storage organ for iodine in the body, it is necessary for iodine to be included in our daily diet. The usual sources of iodine containing foods are meat, fish vegetables, milk, cereals and water.

### **4. How do we become iodine deficient?**

Our normal requirement of iodine comes directly or indirectly from crops grown on iodine rich soil and from fish and seaweeds. So, when the soil of any area lacks iodine, the crops too are deficient in this essential nutrient. People, who eat these crops regularly, do not get their requirement of iodine and ultimately develop iodine deficiency.

### **5. How is iodine used by the body?**

The thyroid gland is an (endocrine) gland located in the front of the neck. Iodine is used by this gland to produce thyroid hormones.

**6. Why is iodine important?**

Thyroid hormones are essential for normal growth, development and functioning of both the brain and body. Lack of iodine results in deficiency of these hormones and results in a wide spectrum of disorders, collectively called iodine deficiency disorders (IDD). Iodine deficiency can lead to goiter, cretinism, deafness, dumbness, squint and mental retardation.

The most visible and easily recognizable sign of iodine deficiency is goiter. A goiter is an enlarged thyroid gland which can range in size from an invisible swelling to a monstrous growth in the neck.

**7. Why is it important for a pregnant woman to have sufficient iodine in her diet?**

In the mother's womb, a baby/fetus needs a steady supply of iodine for the normal growth and development of its brain and body. Only the mother can provide this. But if the mother is iodine-deficient, the child too becomes iodine deficient. If the woman's deficiency is severe, the child's brain and body are seriously and permanently damaged and the child becomes a cretin, unable to hear, talk walk or think normally.

Iodine deficiency during pregnancy may also result in abortion or stillbirth. The critical period for brain growth is from conception to the first three years of life. Optimum iodine nutrition during this period is absolutely essential for normal brain development.

**8. Does iodine deficiency in a child affect his/her performance in school?**

In cases of mild iodine deficiency, even though the child looks normal, she/he will have mild mental retardation on closer examination. Children living in iodine-deficient areas could have an Intelligence Quotient (IQ) level 13.5 points lower than those living in iodine sufficient areas, which will affect his/her school performance.

**9. Why is iodine added to common salt?**

Salt is an ideal vehicle for addition of iodine as it is usually needed in fairly constant daily amounts. Salt is thus the most suitable food item for iodine fortification, and is effectively being used in many developed and developing countries. The techniques for iodization are simple and well established. The added iodine does not affect the appearance or taste of salt and is well accepted by the consumer.

**10. Why can't iodine be taken separately, like other medicines?**

An important fact about iodine is that although it is needed in tiny amounts, it is needed regularly, every day. If given like a medicine / vitamin, this would involve taking it daily for the rest of our lives. Salt, however, is something that is used by everyone, everyday. On an average, the same amount of salt (10 to 15 grams) is consumed every day. If this salt is iodized, then the population automatically gets the required amount of iodine.

**11. Can everyone consume iodised salt? Will there be any harm if a person who is not iodine-deficient eats iodised salt?**

All of us need only a certain amount of iodine to function normally. If this iodine is already available, the body will simply reject any additional quantities and excrete it unused through the urine.

On the other hand, if someone is deficient in iodine, the thyroid gland will use as much iodine as it needs and reject the rest. This makes iodine safe for everyone.

**12. Can iodised salt be stored like normal salt? Is the iodine lost during storage?**

YES, iodine salt can be stored like normal salt. However, as the iodine in the salt can be destroyed by prolonged exposure to direct sunlight and moisture, it is important to store the iodised salt in an airtight container made of plastic, wood, glass or clay, with a well-fitting lid. Similarly, if salt not packed well, iodine loss will take place during transit from production to consumption. Also, iodised salt should be consumed within twelve months of the packing date.

**13. Can iodised salt be used like ordinary salt? Is there any loss of iodine during cooking?**

YES. Iodised salt can be used in cooking, or as table salt.

There is some loss of iodine during cooking (20%-40%). Therefore to compensate loss of iodine during distribution, storage and cooking, higher levels of iodine are added at the production stage.

**14. Does sea salt provide sufficient quantity of iodine to meet the daily iodine requirements?**

NO. Contrary to popular belief, sea salt does not contain adequate iodine (on an average only 2 micrograms of iodine per gram).

**15. Can the daily consumption of iodised salt cure goiter, cretinism and other Iodine Deficiency Disorders?**

NO. Cretinism is permanent and incurable, like many other iodine deficiency disorders, but is preventable.

Certain goiters can be “cured” in the early stages.

Regular intake of iodine, however, prevents goiter and other iodine deficiency disorders.

**16. Is it also necessary to use iodised salt for livestock?**

YES. Iodine deficiency affects domestic animals in much the same way it affects humans. Iodised salt improves the health and productivity of animals and reduces the number of stillbirths and miscarriages. In addition, cattle that are fed on iodised salt produce milk that is rich in iodine.

**17. How long will we have to continue using iodised salt?**

EVERYDAY, FOR ALL TIME TO COME. If one lives in an iodine-deficient environment, there is no likelihood of the deficiency being corrected at the source, namely, in the soil. On the contrary, the increased degradation of our environment is making the problem worse. Large scale deforestation, among other things, has led to increased flooding and erosion of the topsoil, which carries away the iodine. Using iodised salt every day is the only way to protect ourselves and our children from the tragic and completely preventable effects of iodine deficiency. It is a small investment towards helping our children, and their children, to get the best chance to grow up with healthy bodies.

**18. How can we help to promote the use of iodised salt?**

We need to work closely with health care providers, agriculturalists, non government organizations, IDD experts, the salt industry, salt regulators, the government, policy makers, communicators, and educators, in creating awareness in the consumers for use of iodised salt.

**19. How can we know if the salt we are using is adequately iodised?**

There are two commonly used methods of testing iodine content in salt. One method is by using an iodine testing kit. When a drop or two of this solution is added to a teaspoon of salt, it will turn purple if the salt is iodised. Another method is by getting the salt tested in a laboratory (titrimetric method).

**20. How can we ensure that people consume iodised salt?**

If a law is enforced to ensure production of only iodised salt, it would enable everyone to consume iodised salt.