

Endemic goiter now

Abstract

Iodine deficiency is a serious problem worldwide. Its clinical consequences — endemic goiter and cretinism — reflect not only the severity of iodine deficiency, but also the effects of constituents of food and of selenium deficiency on thyroid hormone biosynthesis and metabolism. Goiter is its most obvious consequence, but others do more damage, particularly effects on the developing brain.

Endemic cretinism, caused by severe iodine deficiency during pregnancy, is the world's most common preventable cause of mental retardation. It can be prevented by iodine treatment before conception, but whether it can be prevented or ameliorated by treatment during pregnancy or after delivery is not known. Foods such as cassava and millet contain substances that can be converted to thiocyanate, which inhibits thyroid hormone biosynthesis and therefore magnifies the effect of iodine deficiency.

Iodized salt is required by law in most countries, and is priced, packaged and advertised. These measures have saved hundreds of thousands of children from the risk of iodine deficiency disorder (IDD). But over a billion people in more than 100 countries are still vulnerable to mental retardation and physical defects from the lack of iodine in their diets.

Key words: iodine deficiency, selenium deficiency, endemic goitre, endemic cretinism