



**Queensland
Government**
Queensland Health

Public Health Alert

Health Protection Directorate
Division of the Chief Health Officer

BonSoy soy milk: Information for Medical Practitioners and Hospital Emergency Departments

4 Key points for Medical Practitioners

- 1. BonSoy soy milk has been withdrawn from the marketplace following detection of high levels of iodine in this product. This product should not be consumed.**
- 2. A cluster of 7 and possibly 8 adult cases in one practice in NSW have been diagnosed with thyroid conditions believed to be associated with consumption of BonSoy soy milk (as of 24 Dec 2009)**
- 3. In addition, a newborn has been diagnosed with hypothyroidism secondary to iodine excess following maternal consumption of BonSoy during the pregnancy**
- 4. Doctors should be alert to seek information about BonSoy soy milk consumption by any persons presenting or who have presented in the past months with thyroid conditions.**

BonSoy is a soy milk product distributed nationally in Australia. Tests have shown it to contain extremely high levels of iodine and consumption has been linked to clinical thyrotoxicosis and, less commonly, hypothyroidism. Iodine crosses the placenta and may cause foetal and neonatal hypothyroidism which can cause developmental problems in the newborn.

Exceeding the safe upper limit for iodine intake may occur when 30ml is consumed per day by an adult, or 5ml for a child.

Recommended levels of iodine

The recommended daily intake for iodine depends on age and life stage:

- Younger children (1 to 8 years) – 90µg
- Older children (9 to 13 years, boys and girls) – 120µg
- Adolescents (14 to 18 years) – 150µg
- Men – 150µg
- Women – 150µg
- Pregnancy and breastfeeding – 220µg and 270µg respectively.

The recommended safe upper limit for iodine is:

- Young children (1 to 3 years) – 200µg
- Older children and Adolescents (14 years) – 900µg
- Adults – 1,100µg

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Signs and Symptoms excessive iodine intake

Excessive iodine can lead to hyperthyroidism or, less commonly in adults, hypothyroidism. Infants appear more susceptible to hypothyroidism following excessive iodine exposure.

The commonest symptoms of hyperthyroidism are palpitations, fatigue and weight loss. Hypothyroidism is often insidious and, in mild cases, may only be detected on routine screening but it can cause fatigue, weight gain and mental clouding.

Medical Management

- Patients should be advised not to consume the product and to dispose of it either down the drain or in the garbage bin.
- Iodine has a half life of approximately 30 days.
- When a patient presents with a history of prolonged BonSoy soy milk consumption together with symptoms or signs listed above, Medical Practitioners should consider measurement of TSH. If the TSH is abnormal, proceed to measurement of the urinary iodine level (normal range in children 100-500 ug/L) and thyroid antibodies and consider referral to an endocrinologist or at least try to obtain phone consultation with an endocrinologist. There is no need to measure the urinary iodine level if the TSH is normal (Normal range 0.3-4.0 mU/L, can vary between laboratories) as stopping the ingestion of the milk will return the body's iodine levels to normal within a few weeks.
- Advice to patients who report they have drunk the milk and are pregnant: see your GP or obstetrician for a TSH measurement. The Newborn is at risk for Transient Hypothyroidism and should have a TSH and fT4 done soon after birth (this is usually routinely done with the Guthrie heelprick test); and again at 14 days of age. If the TSH is abnormal at birth, then treatment and further tests may be required – these should be conducted under endocrinologist supervision. The effect of the high iodine levels will be to block synthesis of thyroid hormones causing hypothyroidism which in the neonatal period could cause a permanent loss of cognitive function.
- Suspected cases should be reported to local public health authorities.

Advice for the general public about the recall of BonSoy soy milk product and a fact sheet about iodine is available on the Food Standards Australia and New Zealand website: <http://www.foodstandards.gov.au/>

For further information check with your local public health unit (see over).

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