Iodine deficiency is not just a disorder that occurs overseas – recent reports suggest that it is starting to make its presence felt in Australia.

THE PROBLEM
Iodine is an essential nutrient in food. Lack of iodine causes health problems such as enlarged thyroid gland (goitre), and is especially dangerous for pregnant women.

Iodine intake in Australia has dropped, especially due to people using less iodised salt.

Health regulators in New Zealand and Australia have been debating whether iodine should be added to bread or milk.

The Centre for the Control of Iodine Deficiency Disorders says Australians are becoming mildly iodine deficient.

Iodine is an essential micronutrient for the function of the thyroid gland, being a key component of thyroid hormones, which regulate growth, development, metabolism and reproductive functions.

You need very little – less than a teaspoon over your entire lifetime – but you do need it regularly.

Australian and New Zealand soils are very low in iodine. In the past, health problems have been averted with the addition of iodine to table salt. However, in recent times, people are decreasing their salt intake for health reasons and therefore getting less iodine from this source. Reports suggest that iodine deficiency is once again becoming a problem.

Foods grown in soils low with iodine content are poor sources of this mineral. Most iodine in the diet comes from seafood, iodised salt, milk and some vegetables.

Iodine intake over the past 10 years has dropped. A few contributing factors are thought to be:

- Reduction in the use of salt, for health reasons (mainly the risk of increased blood pressure).
- The failing popularity of iodised salt in favour of other forms such as sea salt.
- A reduction in the use of iodised salt by manufacturers of processed foods (from which a large percentage of our salt intake is derived).
- Changed practices in the dairy industry, which stopped using iodine-based disinfectants that inadvertently contaminated the milk.
- Withdrawal of legal requirements to add iodine to bread.

Up to 80% of the body's iodine is concentrated in the thyroid gland (a butterfly shaped gland just below the larynx (voice box)), where it is used to make thyroid hormones which control body temperature, protein synthesis, energy production, cholesterol excretion and normal foetal development.

Iodine deficiency can cause a range of health problems:

- Its best-known effect is goitre (enlargement of the thyroid gland);
- Weight gain;
- Lethargy;
- Intolerance to cold;
- Increased blood cholesterol;
- Mental slowness;
- Reduced heart function;
- Infertility;
- In babies and children, severe mental and growth retardation and hearing difficulties;
- Increased risk of attention disorders and learning difficulties.

During 2003 and 2004, Australian school children took part in the National Iodine Nutrition Study. This found overall that children in mainland Australia are borderline iodine deficient.

Close to half the participants, the majority of whom hailed from South-Eastern Australia, showed "mild to moderate" iodine deficiency, according to World Health Organisation guidelines.

Results varied from state to state. Mild deficiencies were reported in NSW and Victoria, borderline deficiencies in South Australia, and sufficient levels in Queensland and Western Australia.

Researchers speculated that the reasons for the greater iodine levels in Queensland and Western Australia could be due to higher proportions of the populations in these states using iodised salt, as well as variations in the regional milk iodine content and higher iodine levels in drinking water.

There continues to be debate over the fortification of foods such as milk and bread.

There is evidence that the Australian population could benefit from iodine fortification.

An investigation by the health regulator, Food Standards Australia New Zealand, into mandatory fortification of foods, such as bread and salt with iodine, is well underway and is expected to be completed by the end of the year.

The ultimate decision will depend on a careful balancing of benefits against risks. Iodine deficiency causes problems ranging from goitre to mental retardation, particularly in unborn and young children, while too much iodine can cause hyperthyroidism (over-active thyroid).

The US and most European countries have introduced compulsory iodine fortification of salt.

Could you be at risk?

Signs and symptoms of iodine deficiency include:

- Low energy levels;
- Low body temperatures and intolerance to cold;
- Dry skin and hair;
- Brittle nails;
- Poor concentration;
- Weight gain.

It's a good idea to see a doctor for a thyroid test.

Depending on your age, the recommended daily intake (RDI) for iodine varies between 100 – 200 micrograms (ug).

Many multivitamins contain 50 ug to 150 ug, and you would usually get any necessary extra iodine from your diet. Even a supplement of up to 500 ug a day is safe. The optimum requirement for pregnant women is 250 ug a day.

Mineral-rich sea-kelp, either in whole or supplemental form, is an excellent source of iodine. It is generally regarded as safe and non-toxic.

It is essential to find a source that is harvested from clean waters.

Kelp can be milled into kelp meal which can be shaken onto food as a condiment, used as a seasoning for cooking, or mixed into a fruit drink.

Pip Morton is co-proprietor of Sea Health Products, Narooma NSW, a long-established Australian family company. The core product is Golden Kelp Meal, which is hand-harvested from pristine coastal areas, washed, sun-dried and milled into granules.

Ten grams of the product contains 16.2 ug of iodine. Ingestion of 100 – 200 ug of iodine per day is sufficient to prevent goitre in humans.

For more details phone 02 4476 1453 or www.seahealthproducts.com.au