

IODINE - Random (urine)

Iodine deficiency is re-emerging in many locations around the world. Since this essential mineral is required for the synthesis of thyroid hormones, the major indication of an iodine deficiency include hypothyroid symptoms. Furthermore, an iodine deficiency during pregnancy can result in cretinism, lowered intellectual quotients (IQ), mental retardation, autism, increased infant mortality, growth stunting and impaired movement. Iodine may also play a role in the maintenance of healthy breast tissue and cancer prevention. Its antioxidant, immune regulating and oestrogen modulating functions may be mechanisms by which these properties can be explained. Its antioxidant, immune regulating and oestrogen modulating functions may be mechanisms by which these properties can be explained. It is vital that all practitioners are aware of the effects of an iodine deficiency and investigate it in their patients.

Iodine Deficiency

Some believe that iodine deficiency is a thing of the past, that it was resolved in the 1930s with the iodisation practices. In actual fact current public health recommendations to restrict salt intake, combined with a decline in the use of iodophors by the dairy industry and in commercial bread production, has actually lead to the re-emergence of this mineral deficiency in many locations around the world. For example, recent research has indicated that severe iodine deficiency has more than quadrupled in America over the last 20 years; increasing from 2.6% to 11.7%. Even more disconcerting is the observation that nearly half of the pregnant women in these areas also have this mineral deficiency. Attention to this matter by practitioner is therefore urgently required because of the serious implications for maternal and child health.

SYMPTOMS AND CONDITIONS ASSOCIATED WITH AN IODINE DEFICIENCY

Hypothyroidism	Decreased fertility
Goitre	Prostate, endometrial, ovarian and breast cancers
Fibrocystic breast disease	Cardiovascular disease
Estrogen imbalance	Cretinism
Fatigue	Lowered IQ
Depression	Increased perinatal death and infant mortality
Dry skin	Growth stunting
Weight gain	Impaired movement
Myalgia	Speech and hearing problems

Urinary Iodine

Urinary iodine provides an accurate approximation of dietary iodine intake in view of the fact that the majority of iodine ingested (approximately 90%) is excreted via the urine.

Iodine's main action is involved in thyroid function. Due to the numerous actions carried out by the thyroid, the implications of iodine deficiency are vast. The major hormone secreted by the thyroid is thyroxine, also called T4 because it contains 4 iodine atoms. Thyroxine is converted by deiodinases (5'-iodinase) to T3 (triiodothyronine) by the removal of one iodine atom. This occurs mainly in the liver and other tissues where T3 acts, such as the brain. Other actions include the formation and integrity of normal breast tissue, foetal brain development and function, and antimicrobial effects.

IODINE – RANDOM TEST (spot urine) [Test code: 5016]

❖ Iodine

Other iodine tests available

- **Iodine – Loading (urine) [5015]:** Iodine (random), Iodine post loading, Iodine excretion %
- **Thyroid Essential Cofactors (urine):** Tyrosine, Iodine, Selenium
- **Thyroid Hormone Profile – Extensive (urine):** T4, T3, T4/T3 ratios, Tyrosine, iodine, Selenium

Thyroid tests available

- **Thyroid Profile - Basic (serum) [1113]:** TSH, free T4, free T3
- **Thyroid Profile - Extensive (serum) [1114]:** TSH, free T4, free T3; reverse T3, ratios, TPO Ab, ATG Ab, TSH Receptor Abs
- **Reverse T3 (serum) [1112]:** Reverse T3

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on 1300 688 522.



Phone **1300 688 522** for further details
www.nutripath.com.au