

Ioduria

Introduction

The supply of iodine to the human body must be regular and in the necessary amount throughout life. The Czech Republic is one of the countries where all measures have been taken to ensure optimal iodine intake in the population. A group of experts for the solution of iodine deficiency in the Czech Republic works at the SZU (Státní zdravotní ústav Praha (<http://www.szu.cz/>)) and annually declares March 6 as Iodine Day. Cases of severe iodine deficiency associated with the risk of health disorders are rare in our conditions, the focus is more on monitoring the context of possible damage to the body due to excessive supply of iodine to the body. The basic parameter that indicates the supply of iodine to the body is the determination of its concentration in the urine, the so-called iodine.

Suitable for laboratory determination of analyte

A suitable sample for laboratory determination is morning urine in the amount of about 50 ml. Repeated examination revealed that the sample taken after overnight rest and fasting reached the highest values of iodine individually, samples taken and examined in the same individual with each subsequent urination always show lower and lower values of iodine.

The examination is not routine, only some laboratories can determine iodine, an example of examining laboratories is the Endokrinologický ústav Praha (<http://www.endo.cz/cz/>), Biolab spol. s r.o. Klatovy (<https://www.biolab-kt.cz/>).

The daily requirement of iodine

The daily requirement of iodine varies depending on the age of the individual. In infants and young children it is 50–100 µg / day, in children and adolescents 150 µg / day, in adults 150–200 µg / day, in pregnant and lactating women 250 µg / day. Iodine has the only known function in the body, it is an essential component of thyroid hormones.

Iodine excretion from the organism

Food iodide is 100% absorbed in the small intestine. Renal iodine excretion accounts for about 80–90% of daily iodine intake, much less is excreted in the feces, sweat, and breath. During lactation, a significant amount of iodine is also excreted in milk.

Other possibilities for objective measurement of iodine deficiency

This involves determining the size of the thyroid gland using an imaging method, sonographic examination. The volume of the thyroid is larger the smaller the supply of iodine to the body.

Iodine deficiency

Iodine deficiency threatens the human body from conception for life. Adequate supply is essential for normal cell metabolism, growth and development of organs, prevents the development of endemic cretinism and cognitive impairment.

Sources of iodine

- Sea fish and fish products,
- milk products,
- instant soups,
- table salt is enriched with potassium iodate (KIO₃) according to the standard,
- multivitamin preparations, food supplements eg Kelp..

Rating Ioduria

150–200 µg/l	optimal concentration
150–250 µg/l	in pregnancy and lactation
≤ 49 µg/l	severe iodine deficiency
≥ 300 µg/l	excessive iodine saturation

References

Related articles

- Iodine
- Urine examination
- Glomerular filtration

References

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