

# **IODINE DEFICIENCY AS A RISK FACTOR FOR THE DEVELOPMENT OF THYROID PATHOLOGY**

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**Anotation:** Almost a third of the world's population lives in regions of iodine deficiency. When iodine intake is less than 50 mcg per day, goiter, as a rule, has an endemic distribution, and if it is less than 25 mcg, cases of iodine deficiency hypothyroidism may occur.

**Key words:** iodine, goiter, deficiency, hypothyroidism.

**Аннотация:** почти треть населения мира проживает в регионах с дефицитом йода. При поступлении йода менее 50 мкг в сутки обычно имеет место эндемическое распространение зоба, а при поступлении йода менее 25 мкг могут возникать случаи йодной недостаточности и гипотиреоза.

**Ключевые слова:** йод, зоб, дефицит, гипотиреоз.

Thyroid diseases (TG) are among the most common human pathologies. Their prevalence varies in different regions, which primarily depends on the level of iodine intake. Epidemiological studies of thyroid dysfunction have a number of limitations, for example, in terms of defining the concepts of overt and subclinical. With nodular goiter, functional autonomy of the thyroid gland can develop, leading to the development of thyrotoxicosis, the prevalence of which in this regard can significantly increase. At the beginning of mass iodine prophylaxis programs, especially among people over 40 years old. In addition, against this background, the prevalence of autoimmune thyroiditis and, as an outcome of this disease, hypothyroidism may increase. Iodine-induced thyrotoxicosis develops most frequently in areas of severe iodine deficiency, especially if there is a rapid and

excessive increase in iodine intake. There are few works devoted to the study of the prevalence of autoimmune diseases of the thyroid gland in the regions of iodine deficiency. The prevalence of functional autonomy of the thyroid gland was significantly higher in the area with iodine deficiency: 4.4% of the total volume of patients compared with 2.7% in iodine-free regions. In regions with normal iodine intake, most cases of thyroid disease are autoimmune, including primary atrophic hypothyroidism, thyroiditis Hashimoto's (autoimmune thyroiditis ) and Graves' disease. Total thyroxine (T<sub>4</sub>), levels of antibodies to thyroperoxidase and thyroglobulin (TG). According to the study, the prevalence of hypothyroidism in the general population was 4.6% (0.3% overt and 4.3% subclinical), which corresponds to more than 9.5 million people with unrecorded thyroid insufficiency, the prevalence of hyperthyroidism was 1.3% (0.5% manifest and 0.7% subclinical), which corresponded to 2 million 600 thousand people with unaccounted for hyperthyroidism.

The most common cause of thyrotoxicosis is Graves' disease, followed by multinodular toxic goiter in prevalence, followed by rarer causes such as solitary toxic adenoma, thyroiditis, etc. The peak incidence of Graves' disease is between 20 and 49 years, but in some ethnic groups it falls on older age (after 60 years) It should also be noted that studies use different points of distribution / separation of patients depending on the level of TSH - from 0.1 to 0.5 mU / l , which also reflects is based on the intermediate and final results of the research.

The provision of the region with iodine is also important, since even its moderate deficiency leads to a multiple increase in cases of thyrotoxicosis due to the presence of UTG, and this difference manifests itself in the older age group (50 years and older). Thus, according to the data available in the literature, the overall prevalence of subclinical hyperthyroidism, not counting unregistered cases of overt thyrotoxicosis, the prevalence of which, according to minimum estimates, is 1.5-2 times higher than official statistics, varies from 1.0 to 9.7% depending on the region., while it is highest among people over 50 years of age. Among the risk factors, only

the female gender can be unconditionally determined, since women are 5-10 times more likely to suffer from autoimmune diseases.

## **LITERATURE**

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