

their lives, and if so, for how long. Probably, if the virus damages a significant part of the basal cells and / or olfactory sensory neurons, the recovery time of the olfactory epithelium may take much longer.

**Conclusion.** Thus, the coronavirus disease COVID-19 in most patients is accompanied by anosmia or hyposmia. Several mechanisms of development of the olfactory function have been identified, among which the main one is damage to the cells of the olfactory epithelium, as well as the neurons of the brain.

## THE ROLE OF IODINE IN THE PREVENTION OF THYROID DISEASES

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**Introduction.** The thyroid gland is a small but an important organ that looks like a butterfly. It regulates the activity of almost all body systems. The dysfunction of it can cause very serious problems. According to the data of the World Health Organization, thyroid diseases are among the most common endocrine pathologies in the world, second only to diabetes. The number of these patients is growing every year. In Ukraine thyroid diseases include such nosologies, as thyroiditis (13.8%), hypothyroidism (7.5%) and hyperthyroidism (4.1%). Iodine, as a chemical element, is one of the components of the thyroid hormones.

**Aim.** Investigate the effects of iodine on the human body.

**Materials and methods.** Review of scientific literature.

**Results and discussion.** Iodine is a vital trace element, without which the human body is unable to function properly. The main physiological role of iodine is participation in the production of thyroid hormones, which regulate metabolic processes in the body. Daily, with sufficient trace elements, the thyroid gland produces approximately 100 mg of thyroxin and 5–10 µg of triiodothyronine (thyroid hormones). THYROXIN (T<sub>4</sub>; Greek thyreos - shield + oxys - caustic, acidic) is a thyroid hormone, which belongs to the thyroid gland and is chemically structured iodinated derivative formed from the amino acid tyrosine. Thyroxine enhances oxidative processes in cells throughout the body, especially in brain cells. If the body does not get enough iodine, the thyroid gland produces a small amount of thyroxine. This condition is called iodine deficiency. At iodine deficiency there are certain symptoms on which it is possible to suspect lack of this element:

- general weakness, drowsiness, fatigue from simple work;
- headaches, apathy, irritability;
- weight gain;
- constipation;
- dry skin and mucous membranes;
- lower blood pressure and heart rate.

Every day everyone needs a certain amount of iodine. Recommendations for iodine use for people of all ages:

- pregnant women - 250 mcg per day;
- breastfeeding period for women - 250 mcg per day;
- women of reproductive age - 150 mcg per day;
- children under one year - 50 mcg per day;
- children under 2-3 years - 90 mcg per day;

- children from 12 years and adults - 150 mcg per day.

More recently, it has been thought that iodine deficiency in Ukraine is felt mainly by residents of the western regions. Why is there so little iodine in some areas? Iodine compounds are easily soluble in water, so in mountains or rocky areas that are far from the seas, they are simply washed away by rain and water currents. Today, the situation has worsened due to the Chernobyl accident - frequent pathologies of the thyroid gland are registered throughout the country. Iodine deficiency has caused an increased accumulation of radioactive iodine in the thyroid gland in a significant number of residents (especially children) and it is considered as a risk factor of developing cancer.

Iodine deficiency can lead to stillbirth, congenital anomalies, neurological and mental disorders. However, all iodine deficiency and excess conditions can be prevented by taking the recommended amount of iodine. Organic changes caused by iodine deficiency diseases cannot be corrected and restored. They are difficult to treat and rehabilitate. Therefore, people who live in areas of iodine deficiency or have congenital features of micronutrient metabolism, need special supervision. These groups also include pregnant women, breastfeeding women, newborns and children under 3 years of age.

To reduce the risk of iodine deficiency, for everyday meals, replace common salt with iodized salt as the simplest, cheapest and most affordable product that contains this trace element, which affects not only health but also the intelligence of the nation. Also consume:

- white fish and seafood (pollack, hake, cod, mussels)
- seaweed (kelp)
- vegetables (potatoes, radishes, garlic, beets, tomatoes, eggplant, asparagus, green onions, sorrel, spinach)
- fruits (bananas, oranges, lemons, melons, persimmons)
- eggs
- milk
- beef
- walnuts

**Conclusions.** After analyzing the scientific literature, they described the effect of iodine on the human body and its role in the prevention of thyroid disease.

## CAUSES OF DEATH IN COVID-2-2019 INFECTION

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**Introduction.** Infection COVID-2-2019 (SARS-CoV-2) causes a number of dangerous syndromes and on 09.03.2021 is the cause of death of 2612554 people in the world, and 27204 in Ukraine. The study of critical and lethal syndromes is important to reduce mortality and reduce societal losses associated with the pandemic.

**Aim.** The aim of the work is to study the main syndromes that are the direct cause of death of patients with COVID-2-2019.

**Materials and methods.** The study was conducted using open scientific sources and official statistics. Clinical, laboratory, histological results of research of patients are analyzed.