

Impact of Climate Change on Iodine Deficiency and Thyroid Disorders in Global Health

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DESCRIPTION

A number of health outcomes are impacted by climate change, making it one of the most important global issues of the twenty-first century. Thyroid issues and iodine insufficiency are two of the many health issues that climate change exacerbates. The creation of thyroid hormones, which control growth, development and metabolism, requires iodine, an important vitamin. The relationship between iodine deficiency and climate change has significant effects on world health, especially for vulnerable groups. A major global public health concern, iodine deficiency affects around two billion people and can cause a variety of illnesses such as goiter, thyroid diseases and intellectual deficiencies. Because it may lead to serious developmental problems and affect cognitive function, iodine deficiency is especially dangerous during pregnancy and the early years of children. Iodine deficiency is one of the main avoidable causes of intellectual impairments, according to the World Health Organization (WHO). In the past, iodine insufficiency has been common in locations with low soil iodine levels, which are frequently found in hilly and distant from oceanic areas. But additional threats to the world's iodine status are being brought about by climate change. Iodine availability and consumption can be impacted by modifications to food production, agricultural methods and environmental variables.

The influence of climate change on agriculture is one of the main ways that it affects iodine levels. Iodine is present in soil and is absorbed by plants, which provide iodine for human consumption. However, agricultural operations can be impacted by climate change and the makeup of the soil. Reduced iodine levels in crops, nitrogen depletion and soil erosion can be caused by temperature fluctuations, increased precipitation and extreme weather events. For instance, a lot of rain can cause iodine to leak from the soil, which lowers the iodine level in food crops. These modifications have the potential to drastically reduce the availability of iodine in areas where agriculture plays a major role in the food chain, such as populations that practice subsistence farming. Climate change affects food systems in ways that go beyond farming methods. Disruptions brought on by climate

change, such as temperature rise and harsh weather, can have an impact on food delivery networks and reduce the availability of foods high in iodine. Coastal communities that rely on seafood for iodine may potentially face issues as rising sea temperatures and ocean acidity damage fish numbers and availability.

Dietary patterns may also alter as a result of climate change. People may start consuming fewer iodine-rich alternative foods if some areas become less conducive to agriculture. For example, the rising intake of processed foods, which frequently have inadequate amounts of vital micronutrients, might make iodine deficit worse. Iodine deficiency is a major cause of thyroid-related ailments, such as goiter and hypothyroidism and there is a well-established link between it and thyroid problems. There are several ways that climate change might affect thyroid function, but iodine shortage is a major one. Thyroid problems can impact development, metabolism and general health, among other aspects of health. Thyroid problems are more common in communities with low iodine consumption, according to research. Given that thyroid hormones are critical for both foetal development and cognitive function, this is especially problematic for youngsters and pregnant women. The incidence of thyroid problems is expected to rise when iodine levels are impacted by climate change, especially in communities where a deficit is already possible.

CONCLUSION

Global health faces serious issues as a result of the effects of climate change on iodine shortage and thyroid conditions. Particularly among disadvantaged communities, the risk of iodine deficiency is expected to rise as climate change continues to impact food systems, agricultural methods and environmental circumstances. An all-encompassing and well-coordinated approach involving environmental, agricultural and public health policies are needed to address this issue. We may lessen the negative effects of climate change on human health and strive towards a healthier future for everybody by emphasizing iodine nutrition and encouraging sustainable activities.

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