Scientific Review Paper:
The importance of iodine during menopause

Summary

Whilst awareness of menopause symptoms and ways to support women during this time of life has grown dramatically in recent years, an under-realised issue that can impact the symptoms and severity of menopause is thyroid function.

The thyroid is a gland in the neck that requires iodine to function normally. Most women across Europe are deficient in this essential nutrient iodine. Research carried out on menopausal women with thyroid dysfunction found that there was a marked improvement in the menopause-related symptoms once the thyroid disorder had been treated. By offering a natural iodine source from PureSea® seaweed, EFSA approved health claims can be achieved linked to supporting normal thyroid function which can benefit women at all stages of their menopause and into later life.

Abstract

Iodine is an essential nutrient that is required throughout life. While it's needed for both men and women, it generally plays a greater role in women's health and there are specific times during a woman's life when iodine intake is particularly important in order to ensure optimum health outcomes.

Since iodine has an integral role in the production of thyroid hormones, deficiency can result in hypothyroidism (an underactive thyroid), which can cause a range of unwanted symptoms including weight gain, tiredness and fatigue and dry skin. Iodine cannot be produced by the body and so must be consumed in the diet, with the main dietary sources being white fish and dairy products. However, with recent data demonstrating that consumption of plant-based alternatives is accelerating, particularly so in women[i], the risk of iodine deficiency and hypothyroidism in this group is greater than ever.

Finding natural solutions to the increasing prevalence of iodine deficiency that can suit all dietary needs and improve various aspects of women's health is of vital importance. One of the most viable solutions is through the use of PureSea®

seaweed ingredients within food, beverage and nutrition products to provide a good natural and plant-based source of iodine.

Hypothyroidism and Menopause

Hypothyroidism is a condition in which the thyroid gland is unable to produce the thyroid hormones required for normal health. The group most at risk of hypothyroidism is middle-aged women – it is at this age that women may also start to go through the menopause. This often leads to misdiagnosis since hypothyroidism and the menopause share many similar symptoms. Despite evidence thus far being unclear, the often simultaneous transition into hypothyroidism and the menopause has led researchers to believe that there might be a connection between perimenopause and thyroid function[ii].

Estrogen and Thyroid Function

During menopause, estrogen levels are significantly reduced in the body – this is what causes most of the associated symptoms. However, it is thought that this change in estrogen levels can also affect thyroid function. Research has evaluated the influence of estrogen levels on thyroid receptors - the molecules that bind to the thyroid hormones and direct them into the cells where they are needed. The research concluded that estrogen levels may be linked to decreased thyroid function, and subsequently, hypothyroidism[iii].

Women experiencing menopausal symptoms caused by the change in estrogen levels are commonly given hormone therapy in order to alleviate symptoms. However, the medical management of menopause can impact thyroid disorder symptoms, and vice versa. It is for this reason that one study concluded that the decision to use hormone therapy for the treatment of menopause symptoms should be more specifically tailored for women who are experiencing thyroid disorders such as hypothyroidism[iv].

Hypothyroidism and Menopausal Symptoms

Both estrogen and thyroid hormones act on a number of different cells within the body. Both types of hormones have an integral role to play in regulating body temperature, bone structure, energy, menstruation, metabolism and mood. Because of this, it is unsurprising that many of the symptoms of hypothyroidism and menopause overlap. Enduring both menopause and thyroid disorder simultaneously can both increase the risk of experiencing symptoms, as well as increasing the severity of them. For reference, the table below shows the potential overlapping symptoms[ii].

Symptom	Low Thyroid	High Thyroid	Perimenopause	Menopause
Menstruation changes	✓	✓	✓	✓
Low energy	✓		✓	✓
Weight gain	✓		✓	
Depression	✓			✓
Temperature changes	✓	✓	✓	✓
Digestive issues	✓	✓	✓	✓

Research carried out on menopausal women with thyroid dysfunction found that there was a marked improvement in the menopause-related symptoms once the thyroid disorder had been treated[v]. These findings suggest that treating thyroid disorders should be first considered when attempting to manage menopause symptoms.

Hypothyroidism, Menopause and Health Complications

Hypothyroidism during the menopause may also increase the risk of long-term complications. A common complication that arises during menopause is osteoporosis, which is the medical term used to describe a loss of bone density. As thyroid hormones are essential for the normal development and function of the skeleton, thyroid disorders also effect bone density. A review on this topic concluded that hypothyroidism likely leads to an increased risk of fractures[vi].

Conclusion

With iodine deficiency rates at worrying levels, particularly among women, more needs to be done to support women's iodine status in a natural way. The PureSea® range of seaweed ingredients are sustainably wild harvested from the pristine Scottish Outer Hebrides and are carefully processed using proprietary technologies to ensure the gold-standard of seaweed ingredients. The PureSea® range is Organic and Kosher certified, with each batch tested for safety, quality and nutrition – including iodine levels - ensuring the ingredients are suited for use in any application.

PureSea® ingredients are delivered in powder and granule formats, providing ease-of-use and application in almost any food, beverage, or nutrition product to deliver both

health and flavour benefits. Including a small amount of PureSea® in your product also allows use of six EFSA approved health claims surrounding:

- Thyroid Function
- Energy-Yielding Metabolism
- Cognitive Function
- Development in Children
- Healthy Skin
- Nervous System

About the Authors

Dr Craig Rose is a marine biologist, founder and managing director of Seaweed & Co. Craig has worked commercially and on research projects on the benefits of seaweed for around 15 years, and leads several research projects with university partners, is on industry advisory bodies and has presented at numerous conferences and to the media.

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Seaweed & Co. as a company advise on, supply and accredit seaweed, using proprietary technologies and techniques. Their Organic and Kosher certified PureSea® seaweeds are supplied into the food, health and nutrition markets. Their seaweeds are sustainably wild harvested, naturally rich in iodine, uniquely DNA Authenticated for world class analytical traceability, and extensively batch tested and accredited for safety and quality.

FOR ADDITIONAL INFORMATION ON PURESEA®

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