

Wakame: A Nutritional and Therapeutic Powerhouse

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ABSTRACT

Introduction: Seaweeds are often consumed in natural thrives in temperate coastal waters and is widely found in the seas surrounding Japan, Korea and China, where it is cultivated on a large scale. They are of many types, like green seaweed, etc. One of them is brown seaweed, commonly known as Wakame (*Undaria pinnatifida*). Despite its multifaceted potential, the consumption of Wakame remains relatively limited in many parts of the world. A lack of awareness regarding its health benefits contribute to this limited usage. Wakame should gain momentum, with initiatives focusing on its health benefits and environmental sustainability as a functional food.

Aim: This review explores the nutritional profile, diverse food applications and therapeutic benefits of Wakame, highlighting its value as a functional food. Hence, it discusses an initial effort to promote Wakame's global availability and its role in promoting sustainable food systems.

Materials and Methods: A total of 350 articles from CAB abstracts, Scopus, and Food Science and Technology Abstracts were studied. The keywords used were seafoods, blue foods, and edible algae. The articles signifying the edible and therapeutic uses were selected.

Results: Wakame is a highly nutritious food rich in vitamins (A, C, and E), essential minerals (calcium, magnesium, and iodine), dietary fibre, and polyunsaturated fatty acids. It also contains bioactive compounds such as fucoxanthin, fucoidan, and laminarin, which possess strong antioxidant, anti-inflammatory, and anti-cancer properties. Incorporating wakame into various dishes and food products enhances their nutritional profile while providing therapeutic benefits, including improved metabolism, immune support, and cardiovascular health. Additionally, its high iodine content is vital for thyroid function. Wakame's versatility in cooking further reinforces its value as a functional food.

Conclusion: Wakame serves as a sustainable and health-promoting food with significant nutritional and therapeutic benefits. Its iodine content is particularly valuable in combating iodine deficiency disorders. Its integration into modern diets can help address prevalent health issues like obesity, diabetes and inflammation. Strategies are required to optimise its bioavailability and expand its functional applications in the food and health sectors.

Keywords: Food, Functional, Iodine, Nutrition, Therapeutic uses, Wakame

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