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The Calanus® Company

Zooca® Calanus® Oil

White paper

The Arctic Secret to Empowering Women's Health

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Empowering Women's Health

Introduction

Women's nutritional requirements evolve throughout their lives, adapting to the distinct demands of each life stage – from childhood and adolescence to adulthood, childbearing years, and ultimately, senior years[1]. Women's health issues span across various domains, including reproductive health, hormonal balance, cardiovascular health, mental health, and the aging process. Conditions such as menstrual disorders, endometriosis, and menopausal symptoms are unique to women and require specialized care.

Cardiovascular disease (CVD) is a major concern for women, as they are at a greater risk of developing heart-related problems, particularly after menopause, due to hormonal changes and lifestyle factors[2-3]. Additionally, women are at an increased risk of developing conditions such as osteoporosis and autoimmune diseases[4-5]. Mental health concerns like anxiety and depression also disproportionately affect women. As such, understanding and addressing these health issues are crucial for ensuring a healthy and fulfilling life for women.

Incorporating Zooca Calanus® Oil into a balanced diet can provide women with a comprehensive nutritional foundation, empowering them to thrive at every stage of life. By harnessing the benefits of this remarkable marine-derived oil, rich in full-spectrum fatty acids and policosanols, women can access a powerful ally in their quest for lifelong health and vitality.

In light of the importance of women's health, researchers have recently conducted a pure female clinical study examining the metabolic impact of Zooca Calanus® Oil in combination with an active life. The study aims to offer valuable insights into the potential benefits of this unique marine oil on women's metabolism, particularly when combined with physical activity.

Did you know...

The key components in Zooca Calanus® Oil include omega-3 fatty acids, specifically eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), and stearidonic acid (SDA); monounsaturated fatty acids (MUFAs) such as cetoleic acid and gondoic acid; astaxanthin, a powerful antioxidant; and policosanols, a group of lipids with potential health-promoting properties.

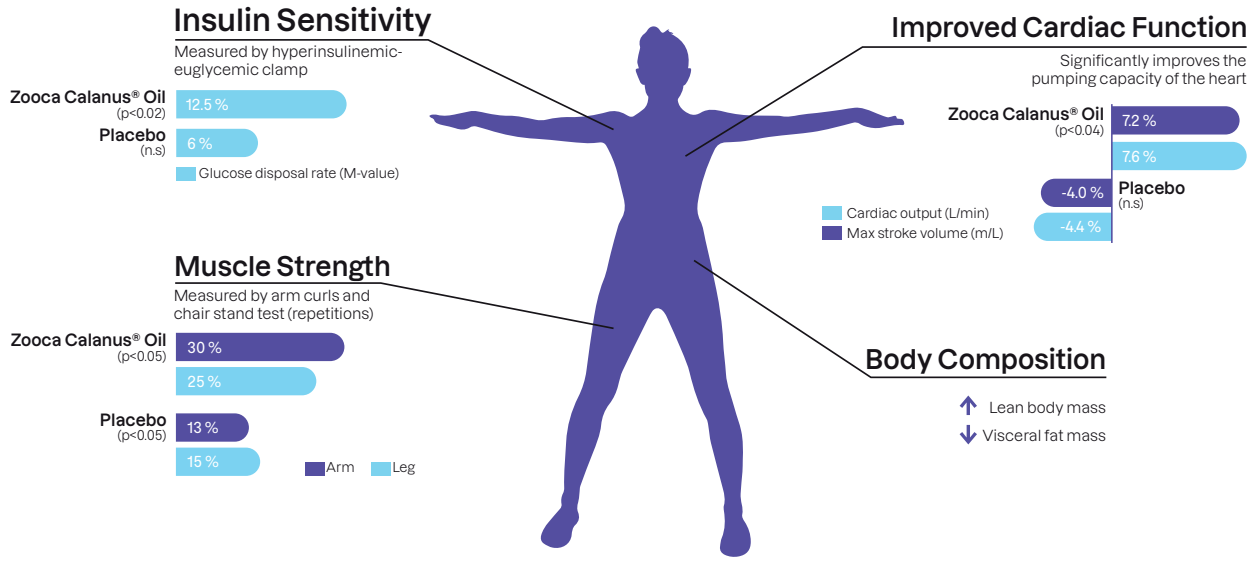


Figure 1: Zooca Calanus® Oil clinically studied

Effect of Exercise training and Zooca Calanus® Oil on elderly women

This study aimed to investigate the combined effects of exercise training and Zooca Calanus® Oil supplementation on adipose tissue dysfunction, insulin resistance, physical performance, and cardiorespiratory parameters in elderly women. Fifty-five healthy sedentary women aged 65-80 were enrolled and randomly assigned to two groups: exercise training plus Zooca Calanus® Oil supplementation or exercise plus placebo (sunflower oil) supplementation.

The 16-week intervention consisted of functional circuit training twice a week (45 minutes with an additional 15 minutes of stretching and balance training) and Nordic walking once a week (60 minutes). Senior fitness tests, exercise stress tests on bicycle ergometers, hand-grip strength, and body composition were evaluated before and after the program.

As exercise alone is known to have beneficial effects, both interventions led to improvements in metabolic health parameters for the participants. However, the addition of Zooca Calanus® Oil supplementation resulted in notable differences between the two groups. The supplemented group experienced significant improvements in body composition, with a 14% reduction in visceral fat area (cm^2), enhanced maximum heart function marked by an increase in maximum stroke volume, maximum cardiac output, and a 2.7% increase in maximum heart rate. Furthermore, there was a 12.5% increase in whole-body insulin sensitivity (measured as glucose disposal rate) and a substantial improvement in functional strength.

Overall, this study is highly relevant for women as it demonstrates the potential benefits of combining exercise training with Zooca Calanus® Oil supplementation in addressing age-related health concerns, improving physical performance, and promoting overall well-being in elderly women[6-9].

Objective	To investigate in older women, the effects of an exercise program with aerobic and resistive training, combined with Zooca Calanus® Oil, on metabolic health and function, and inflammatory status of adipose tissue.
Type of study	Double blinded randomized interventional clinical trial.
Population	55 women, aged 62-80 years, BMI 25 – 30 kg/m2.
Dose of Intervention	2,5 g Calanus Oil (with 230mg of EPA + DHA), or placebo.
Duration	16 weeks.

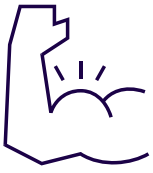
↑ Staying active helps women keep their hearts and bodies healthy and strong.

Cardiovascular Health

Men and women have different biology, and recent studies reveal that heart diseases also play out different between genders[3]. Despite more women dying of heart disease than men, cardiovascular research around the female body remains limited[10].

First, women live longer than men, and they may often go for a long time with undetected high blood pressure. This can lead to what is called a rigid heart, i.e., a heart with less elasticity and poorer ability to pump blood in and out of the heart. Oestrogen contributes to keep the heart flexible. This advantage decreases with menopause, and both heart and blood vessels pump less efficiently due to stiffening.

Second, the sugar and lipid metabolism are directly modulated by oestrogen and testosterone hormones. Consequently, the menopausal transition, where the impact of oestrogen is lost, is highly associated with an increased central body fat distribution, ie the increase of visceral fat mass, often in combination with a reduction in lean body mass (skeletal muscle).



An unhealthy increase in visceral fat mass is concerning because it promotes a pro-inflammatory, hyperlipidaemic and insulin resistant environment. Such an environment contributes and increases the risk of developing type 2 diabetes. This disorder is more often followed by heart complication and mortality for women, than for men.

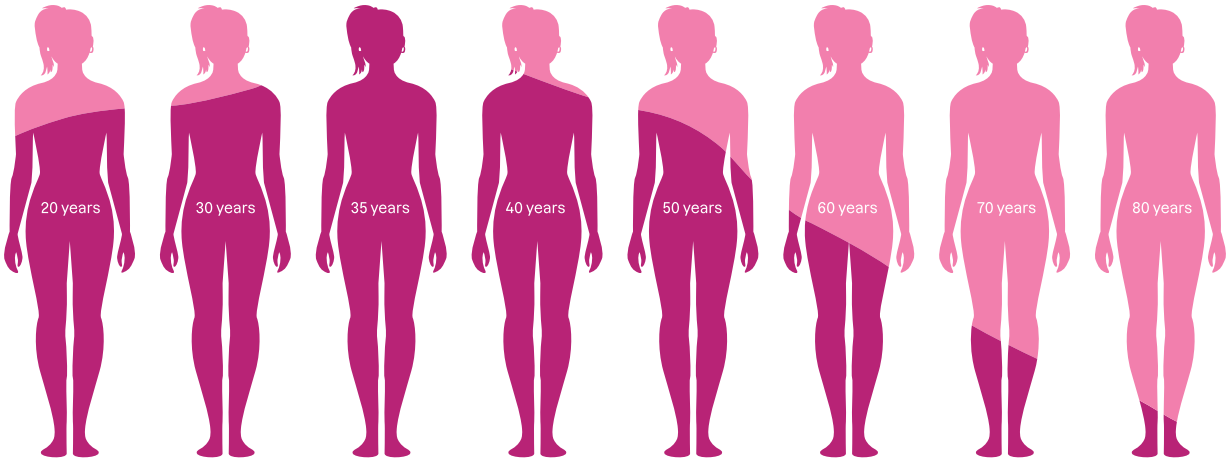
Hypertension, dyslipidaemia, and diabetes are the most crucial risk factors contributing to cardiovascular disease death in women.

There are several measures to be made in order to secure a healthy body and a high quality of life despite the lack of support from one's own hormones. In addition to physical activity, nutrition is a factor that plays an important role for a woman's metabolic health.

Zooca Calanus® Oil consist of a natural mixture of highly bioactive lipids and several studies show that supplementation with Zooca Calanus® Oil may be used to target specifically the metabolic health of women.

In addition to the beforementioned pure female study EXODYA, a similar study with Zooca Calanus® Oil on untrained healthy participants add to the body of knowledge[11]. There is a documented increase in lean body mass, including skeletal muscles, along with a reduction in visceral fat mass. The skeletal muscles not only grew in size but also in strength, accompanied by a decrease in fat mass[12]. This phenomenon may be attributed to an increase in fatty acid oxidation or "fat drainage," in which the skeletal muscles burn more fatty acids for fuel.

The benefits extend to improved skeletal muscle health, as confirmed by measuring insulin sensitivity using the glucose clamp technique. A significant improvement in whole-body insulin sensitivity is observed, explained by the role of skeletal muscles in maintaining normal blood glucose levels[6].



↑ Estrogen levels in women by age.

The study also found that cardiodynamic function in postmenopausal women improved considerably[9], impacting both the heart's contractility and the elasticity of blood vessels. As a result, the heart muscle can work harder, become more flexible, and encounter less resistance in the bloodstream.

The combination of exercise training and Zooca Calanus® Oil supplementation offers a promising non-pharmacological approach to women's heart health, particularly since there are limited approaches specifically tailored for women. It provides an accessible, holistic, and personalized strategy that can be used alone or in conjunction with existing strategies to improve cardiovascular outcomes in women.

It's all linked together; unhealthy lifestyle, undetected and untreated high blood pressure, increased fat deposition around the waist as we get older, and menopause causes oestrogen levels to decrease – all contributing to a less flexible and efficient pumping capacity of the heart and less ability to turn over the energy consumed.

Heart disease is much more common in women than many people realize. In fact, it's the leading cause of death for women.

Many women who have heart disease don't have any symptoms. Confer with your doctor early to determine your risk of heart disease and how you can reduce this risk.

Zooca Calanus® Oil, rich in bioactive lipids, has been shown to specifically benefit women's metabolic health when combined with exercise. It promotes increased lean body mass, reduced visceral fat mass, improved skeletal muscle health, and enhanced cardiodynamic function. Recognizing and addressing these gender-specific factors can help reduce the risk of heart disease and improve overall health for women.

Fun fact

Zooca Calanus® Oil is an eco-friendly and sustainable resource in the Norwegian Sea due to its abundant nature and short life span. It's extracted without solvents using a gentle low-heat process, and with no additives.

Reducing stress nurtures women's mental health by promoting emotional balance and enhancing overall well-being.

Mental Health and Cognitive Function

Mental well-being and cognitive performance are vital components of a woman's overall health, as they significantly impact daily activities, relationships, and decision-making. By emphasizing mental health, women can cultivate resilience, manage stress effectively, and maintain a balanced life, empowering them to reach their full potential in personal and professional domains.

Lifestyle factors, such as sleep, exercise, nutrition, social interaction, stress management, and work-life balance, play a pivotal role in shaping mental health[13]. Bioactive components in Zooca Calanus® Oil, including omega-3 fatty acids and astaxanthin, may contribute to improve mental well-being and cognitive performance due to their positive influence on brain function and inflammation.

Omega-3 fatty acids, particularly EPA and DHA, are crucial for brain health and cognitive function[14]. They support neuronal function, reduce inflammation, and improve neurotransmitter balance. Studies have demonstrated that omega-3 supplementation can alleviate symptoms of depression, anxiety, and other mental health disorders. Incorporating omega-3-rich foods or supplements into one's diet can positively impact mental health and overall brain function.

Astaxanthin, a powerful antioxidant, provides anti-inflammatory and neuroprotective benefits that support mental well-being. It protects the brain from oxidative stress, which is linked to anxiety, depression, and neurodegenerative diseases. Additionally, its anti-inflammatory properties help reduce chronic inflammation associated with the development of depression and other psychiatric disorders[15].

Zooca Calanus® Oil, rich in bioactive lipids such as omega-3 fatty acids and astaxanthin, can be particularly advantageous for cognitive health in women due to their unique properties and roles in brain function. These components have been shown to enhance memory, learning, and cognitive performance while preventing cognitive decline and reducing the risk of neurodegenerative conditions.

An ongoing study investigating the effectiveness of Zooca Calanus® Oil in managing ADHD symptoms may offer further insights into the supplement's cognitive health benefits[16]. If the study produces positive results, it will demonstrate that Zooca Calanus® Oil supports overall cognitive health and specifically alleviates ADHD symptoms, such as inattention, impulsivity, and hyperactivity. This could further broaden the research into Zooca Calanus Oil's possible impact on cognitive health.

Women's longer life expectancy means they face a higher lifetime risk of cognitive decline and dementia[17]. A healthy diet, including Zooca Calanus® Oil, combined with a balanced lifestyle can positively influence cognition, memory, and overall health. Essential nutrients like omega-3 fatty acids and the potent antioxidant astaxanthin support brain health by reducing inflammation, protecting cells from oxidative damage, and enhancing blood flow. Along with regular exercise, quality sleep, and stress management, these factors promote optimal brain function, neural connections, and neuroplasticity, and may contribute to increased cognitive health.

Skin Health

Women's skin health is an important aspect of overall well-being and plays a crucial role in self-confidence[18]. Common skin issues faced by women include acne, hormonal fluctuations, dryness, hyperpigmentation, sun damage, fine lines, and wrinkles. These conditions can be influenced by factors such as genetics, hormonal changes, lifestyle, and environmental exposure. Acne, an inflammatory condition, is one of the most prevalent dermatological afflictions, particularly for women in their first 30 years of age[19]. Nutrition has been found to play a significant role in addressing these skin issues, with Zooca Calanus® Oil emerging as a potentially beneficial supplement.

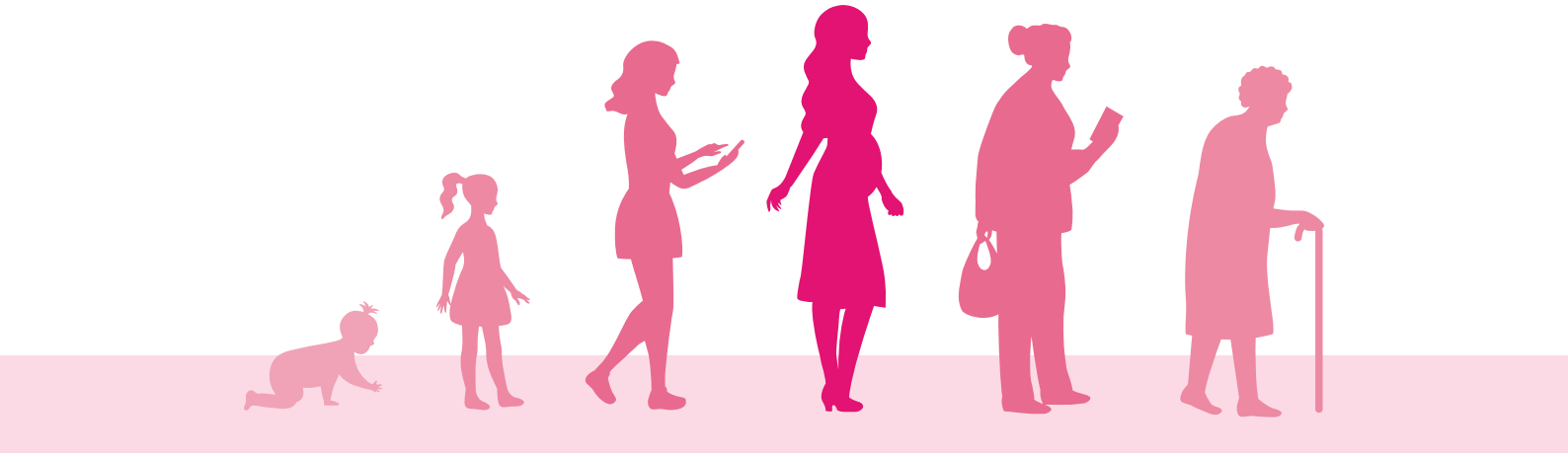
Zooca Calanus® Oil contains several bioactive molecules well-known for their anti-inflammatory effects. In addition, the long-chain monounsaturated fatty acid cetoleic acid, found in Zooca Calanus® Oil, has recently been acknowledged for its benefits for improving skin health, according to a recent study[20]. This discovery suggests that Zooca Calanus® Oil may be an effective natural solution for promoting skin health and addressing various skin issues.

A primary cause of external aging is ultraviolet (UV) radiation, which leads to skin damage called photoaging. This damage mainly comes from reactive oxygen species (ROS) and related inflammation. Carotenoids like astaxanthin, found in Zooca Calanus® Oil can help prevent aging, stimulate collagen and elastin production, reduce inflammation, and protect against UV damage[21]. Studies have shown that they improve skin elasticity, hydration, and texture, minimize water loss, lighten skin, reduce discoloration, and delay photoaging signs.

The policosanol fraction, another important component of Zooca Calanus® Oil, is known for its antioxidative effects and has been studied for its anti-aging capacity and tissue-regeneration properties[22]. These qualities further support the potential benefits of Zooca Calanus® Oil for skin health and aging.

In conclusion, women's skin health can be significantly impacted by factors such as genetics, hormonal changes, and environmental exposure. Zooca Calanus® Oil, rich in bioactive molecules with anti-inflammatory, antioxidative, and UV-filtering properties, offers promising benefits for addressing common skin issues and promoting overall skin health for women.

↑ Adequate nutrition may benefit skin health.



↑ A womans life cycle from infancy to old age.

Women's life cycle challenges; hormones and reproductive health

Hormones are crucial for mental, physical, and emotional well-being, regulating appetite, weight, and mood. Factors like sedentary lifestyles, Western diets, and aging can disrupt hormonal balance, affecting some women more than others[23]. Physical activity promotes hormonal health by improving blood flow to muscles and enhancing hormone receptor sensitivity, resulting in better nutrient delivery and hormone signalling. A nutritious diet, healthy lifestyle habits, and regular exercise can improve hormonal health and overall well-being.

Zooca Calanus® Oil, rich in bioactive fatty acids may help maintaining a healthy hormonal environment. Omega-3 fatty acids can alleviate menstrual symptoms due to their anti-inflammatory properties and the analgesic effects of their metabolites called SPMs*. Consuming omega-3-rich foods or taking supplements under a healthcare professional's guidance can effectively manage menstrual symptoms.

Zooca Calanus® Oil contains a full spectrum of fatty acids. These healthy fats may contribute to regulating hormones, reduce inflammation, and improve blood flow, crucial for fertility, pregnancy, and postpartum recovery.

Astaxanthin, a potent antioxidant present in Zooca Calanus® Oil can support female hormone balance, including progesterone and estrogen levels, by managing oxidative stress.

Gestational diabetes mellitus affects 7% of pregnant women worldwide, increasing the risk of diabetes and cardiovascular disease for both mother and fetus[24]. Astaxanthin improves insulin sensitivity by activating insulin signalling and reducing inflammation in skeletal muscle, potentially alleviating gestational diabetes complications.

Omega-3 fatty acids play a critical role in pregnancy and postpartum recovery, providing potential benefits for both mother and baby[25]. During pregnancy, omega-3s contribute to the baby's brain, eyes, and nervous system development, while adequate intake reduces the risk of preterm birth and improves cognitive function in children.

For mothers, omega-3 fatty acids can alleviate postpartum depression and support overall mental health, reduce inflammation, promote healthy weight management, and support cardiovascular health during the postpartum period[26-27]. Consuming omega-3-rich foods or taking supplements as recommended by a healthcare professional can provide essential nutrients for a healthy pregnancy and postpartum recovery.

It is important to note that while these bioactive components can have potential benefits for reproductive health, they should not replace medical treatment. Anyone experiencing fertility issues or other reproductive health concerns should consult a healthcare professional.

SPMs

Specialized pro-resolving mediators (SPMs) a potent metabolites made from omega-3s They resolve inflammation, and promote tissue repair and healing, reduce pain and support the immune system .

Photocredit: i-cons

A healthy body composition and enhanced mobility in women promote longevity, reduce the risk of chronic diseases, and improve overall quality of life.

Maintaining mobility and a promoting a healthy body composition

Maintaining mobility, muscle strength, and joint health is vital for women's overall well-being, allowing them to participate in daily life and activities, while preserving their independence as they age. Age-related decline in skeletal muscle mass and strength, is more severe in women than in men. Factors impacting include hormonal changes, nutritional deficiencies, physical inactivity, and chronic inflammation. Decline in muscle mass is associated with increased risks of falls, fractures, loss of independence, and frailty[28-29].

Maintaining mobility is crucial for women, and it can be achieved by focusing on proper nutrition and consistent physical activity. Engaging in weight and resistance training helps preserve muscle mass and enhances overall mobility and functionality. Moreover, effective weight management reduces stress on joints and muscles, further contributing to improved mobility.

Zooca Calanus® Oil has been suggested to offer potential benefits for muscle health, strength, and prevention of muscle mass due to its bioactive components. Clinical studies combining Zooca Calanus® Oil and exercise have demonstrated significant improvements in muscle strength, increased lean body mass, and decreased fat mass[6-9].

The improvement of body composition and increased muscle mass and strength due to Zooca Calanus® Oil supplementation is relevant because these factors directly impact a woman's ability to maintain mobility, functional independence, and overall quality of life.

Enhanced muscle strength and increased lean body mass can reduce the risk of falls and fractures and alleviate the burden on joints, decreasing the likelihood of developing joint-related issues such as arthritis. Moreover, a better body composition with reduced fat mass may help prevent obesity-related health issues and improve overall metabolic health.

Women are more susceptible to bone and joint issues such as osteoporosis and arthritis, which can result in decreased mobility and increased pain. These conditions are more common in women due to hormonal changes, especially during menopause, and lower peak bone mass compared to men. Omega-3 fatty acids and antioxidants play a crucial role in maintaining bone density and joint health[30-31]. They have anti-inflammatory properties, which can help reduce pain and inflammation in joints. They also support bone formation and reduce bone resorption, contributing to overall bone health[32-33].

Zooca Calanus® Oil, with its high content of omega-3 fatty acids and antioxidants, can potentially support bone density and joint health. Its anti-inflammatory properties may help alleviate joint pain and inflammation associated with arthritis, while also promoting bone health through improved bone mineralization.

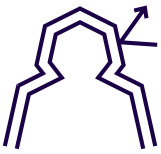
In conclusion, women's mobility, joint health, muscle capacity, and age-related muscle loss are interconnected aspects of overall health. A healthy lifestyle that includes proper nutrition, regular physical activity, and weight management can help prevent and manage these issues. Zooca Calanus® Oil rich in bioactive lipids and antioxidants, shows promise in supporting muscle, bone, and joint health, potentially improving mobility and quality.

Proper nutrition and exercise is important as part of women's daily routines for healthy aging.

Healthy aging

The role of immune function and healthy aging is critical in maintaining overall well-being, particularly for women. As women age, their immune systems may weaken, making them more susceptible to infections and chronic diseases[34]. Thus, it is essential for women to maintain a robust immune system throughout their lives to ward off illnesses and promote longevity.

Zooca Calanus® Oil, in particular, can be an invaluable supplement for supporting overall health in women, specifically by enhancing immune function and fostering healthy aging. Omega-3 fatty acids, notably eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), are crucial in regulating inflammation and sustaining immune balance. These fatty acids have been linked to a decreased risk of chronic inflammatory diseases and an enhanced immune responses[35]. Furthermore, astaxanthin assists in protecting the body from oxidative stress and inflammation. By neutralizing free radicals and reducing inflammation, astaxanthin may contribute to overall immune health[36].



Zooca Calanus® Oil also contains policosanols, monounsaturated fatty acids, and several polyunsaturated fatty acids which support immune function by preserving cell membrane integrity, alleviating inflammation, and promoting overall health. These components, along with omega-3 fatty acids and astaxanthin, may positively impact healthy aging. Omega-3s have been associated with decreased inflammation, enhanced cardiovascular health, and improved cognitive function, all of which contribute to healthy aging. Astaxanthin's antioxidant properties aid in protecting cells from oxidative stress and damage, potentially delaying the aging process.

Moreover, the recent study on elderly women highlights the potential benefits of combining exercise training with Zooca Calanus® Oil supplementation in addressing age-related health concerns, improving physical performance, and promoting overall well-being in elderly women. This research is highly relevant for women as it emphasizes the importance of integrating exercise and proper nutrition in their daily routines to achieve optimal health and longevity.

↑ Womens health starts at a young age.

Summary Womens Health

Women's health is multifaceted, with unique nutritional requirements that change throughout each life stage. Addressing these health concerns is vital to ensure a fulfilling life. One of the most significant concerns for women is cardiovascular disease, which becomes increasingly prevalent after menopause due to hormonal changes and lifestyle factors.

Zooca Calanus® Oil, a unique marine extract rich in various fatty acids, antioxidants, and policosanols, offers multiple health benefits for women. This marine-derived oil supports lifelong health and vitality by promoting cardiovascular, mental, and skin health, as well as addressing life cycle issues. Its distinct composition sets it apart from other marine and plant oils, making it a powerful ally for women's well-being. Incorporating Zooca Calanus® Oil and exercise into a balanced diet and comprehensive health regimen is invaluable for women seeking lifelong health and vitality.

In conclusion, by incorporating Zooca Calanus® Oil into a balanced diet and maintaining an active lifestyle, women can effectively support their cardiovascular health and overall well-being. Harnessing the power of this unique marine oil, women can successfully navigate the diverse health challenges they face throughout their lives.

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