



“Kelp Care™ is veterinary recommended as an adjunctive therapy in chronic skin cases and as part of a multimodal management of chronic osteoarthritis in dogs”

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Clinically trialed Kelp Care has multiple benefits

The benefits of feeding kelp have been researched in several animals, as well as humans. From a nutritional point of view, kelp seaweed provides a good source of minerals, omega fatty acids, soluble fibre and vitamins (Kandale *et al.*, 2011). Recent analyses published by Pereira *et al.* (2012) showed that seaweed (*Chlorophyta ulvaria*) contained high levels of polyunsaturated fatty acids (PUFA), especially n3 omega fatty acids, and α -linoleic acid (an essential nutrient for skin and coat health in dog food). In general, consumption of seaweed is associated with anti-viral, anti-tumour and anti-cancer effects (Gupta and Abu, 2011) as well as preventing digestive disorders, urinary tract and respiratory disease (Kandale *et al.*, 2011).

Dogs typically suffer from similar dental, immune, arthritis and inflammatory problems as in other mammals, and so the use of kelp in their diets would be beneficial in resolving such cases, especially where the problem is subclinical or poor to respond to conventional veterinary treatments. An initial investigation on a variety of pet dogs has been conducted, using animals with a history of such problems, to identify whether a seaweed supplement could assist in resolving them. The commercial petfood product, Kelp Care™, was used in the trial. This product is readily eaten by dogs (with a palatability rating of over 90% from feeding studies) and can be used as a long term supplement without the problems associated with long term veterinary drug use.

Kelp Care™ seaweed ingredients are grown in controlled Atlantic environments and monitored constantly ensuring the seaweed never comes into contact with any external factors. The kelp is grown at a specific level in the water column and absorbs the nutrient rich waters around it combining sub tidal kelp species and also Irish seaweed farms located off the south west coast of Ireland. Seahorse Atlantic has its own unique production process which yields a high quality unique premium seaweed blend to form Kelp Care™



Skin conditions and allergies

Flaky skin, eczema, dermatitis and other skin problems formed the majority of clinical cases in a feeding study using dogs with poor skin or coat condition, which was monitored throughout a 60 day Kelp Care™ feeding trial. Interestingly, there was a significant improvement in these problems with 90% of affected animals showing major improvements in skin and coat health. Typically, many owners spend a great deal of time and money seeking solutions to extreme skin conditions, such as Primary Ichthyosis, often with poor outcomes. Two dog owners reported major improvements when using Kelp Care™ in their dog's diets within a few weeks, with the problem then being resolved completely. The dogs involved no longer have chronic itchiness, inflamed skin, flaky skin or poor coat, which typifies such diseases. Long term use of the product has prevented any recurrence.



Urinary tract health

Urinary tract benefits have previously been reported in mammals fed kelp. This is thought to be due to an effect of balancing the pH of urine. If urine pH changes, it alters the solubility of minerals, leading to the development of bladder and kidney stones, which are painful and require veterinary intervention to clear them. In a feeding trial, nineteen dogs were subjected to urine comparisons at the start and end (60 d) of the trial. Out of these, 77% showed changes in urine pH. This demonstrated that feeding Kelp Care™ could be an important factor in the prevention or management of dogs with the clinical history or potential to be susceptible to such problems.



Immunity

In human studies, feeding seaweed has shown several important immune benefits. Trials by Negishi *et al.* (2013) investigating immunomodulatory properties in elderly humans (>60 years old), showed that feeding 300 mg/d of isolated seaweed polysaccharides increased response to the influenza vaccine. There was also a strong trend ($P=0.08$) in the numbers of natural killer cells nine weeks after supplementation was initiated. Research in agricultural animals reported that immune function increased when feed was supplemented with seaweed (Allen *et al.*, 2002). In the same report, a 1% seaweed extract fed to pigs resulted in 2.95 kg higher weekly weight gain and increased resistance to PRRS disease – which is associated with low antioxidant intake and suppressed immune response. This was attributed to the antioxidant component of the seaweed, for example the levels of active polyphenols such as 1, 3, 5 trihydroxybenzene.

In the feeding study with Kelp Care™ in dogs, blood analysis from 20 dogs showed that 65% had a reduction in white blood cells after 60 days of consumption. Higher levels of white blood cells can be an indicator of subclinical infections or autoimmune diseases triggered by the diet, e.g. soyabean meal intolerances, and are often manifested as skin problems. The data showed that the immune system was modulated to more normal levels in dogs fed the Kelp Care™. It can be postulated that these animals had been experiencing an over activity of the immune system previously, which was resolved by the Kelp care™. In many animals, where the immune system is overactive or incorrectly responding to non-harmful stimuli, energy is diverted to sustain the production of immune cells, resulting in a poor energy balance in the animals and weight loss. Immuno-modulatory products, such as kelp, can provide secondary benefits in maintaining body condition in affected animals.

Inflammation

Seaweed supplements have been linked to a decrease in inflammatory disease such as rheumatism and arthritis (Kenicer *et al.*, 2000). This is attributed to the anti-inflammatory properties of photochemicals in seaweed as well as antioxidant nutrients. In a veterinary survey of benefits, dogs that were fed Kelp Care™ for 60 days were assessed for joint problems, including those symptoms typically related to osteoarthritis and rheumatism. The results showed that dogs had improvements in joint health, with more mobility being reported as the main improvement.

Dental health

For dental health, a report produced by Wikner *et al.* from the Karolinska Institute of Sweden recorded a significant decrease (33%) in plaque deposits in human subjects fed a seaweed supplement after 28 days on the dietary treatment, with further improvements (66%) after eight weeks. Under veterinary assessment, fourteen dogs fed Kelp Care™ were monitored for dental changes – and 14% reported improvements in dental health, typified by reduction in plaque on the teeth. Longer term use of Kelp Care™ could resolve these issues further, as dental responses tend to take longer (eight weeks of feeding or more), from the previous research findings.



Gut health

A review published by Sheffield Hallam University in the UK (Brownlee *et al.*, 2012) showed that seaweed can have antibiotic properties against common pathogens such as *Bacillus*, *Staphylococcus* and *Listeria* spp, as well as the common gastric pathogen *Salmonella typhimurium*. Many dogs are affected by digestive disorders from time to time due to their habit of scavenging – and these are often triggered by intake of contaminated materials containing these common pathogens. Kelp Care™ containing probiotic properties can assist in controlling digestive disorders in dogs.