

HYDRO-P PREMIUM



HYDRO-P PREMIUM: HYDROLYZED COLLAGEN TO IMPROVE JOINT HEALTH

Hydro-P Premium is an food grade hydrolyzed collagen. It can be characterized as a type I collagen. In the production process the collagen is heated to a liquid phase and extracted. After a filtration and further concentration step the enzymatic hydrolysis takes place. The liquid product is then sterilized, spray dried and packed for delivery to the customer. Hydrolyzed collagen is used in a wide range of health products, including joint, skin, gastric and wound healing products for humans, pets and performance horses.

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APPLICATION OF HYDRO-P PREMIUM

Though absent of blood vessels, cartilage tissue in the joints is a living tissue composed of specialized cells called chondrocytes. Collagen fibrils make up a part of the extracellular matrix. This matrix further consists of 60-80% water and other macromolecules of which chondroitine and glucosamine take part. Their main function is lubrication and support (shock absorption). The collagen fibrils provide the cartilage with its tensile stiffness and strength.

Osteoarthritis (OA) causes degeneration, loss of cartilage matrix, and inflammation with a release of pro-inflammatory cytokines. This (may) lead(s) to chronic pain, lameness and disability. More than 90% of dogs over 5 years of age may be affected by OA. (Bennet 1991). Research has shown that orally administered radio-labeled collagen hydrolysate is absorbed by the intestine and accumulated in cartilage tissue (Bello and Oesser, 2006).

Weide (2004) reported a positive effect of collagen hydrolysate in dogs with OA, though no placebo was taken in. Beynen et al. (2009) carried out a double blind placebo-controlled trial with privately owned osteoarthritic dogs (N=30).

During 8 weeks dogs received daily either 10 g of a placebo (soy protein hydrolysate) or 10 g hydrolyzed collagen (Hydro-P Premium) as a top dressing over their meal. This would reflect approximately a 2.5% inclusion level in a dog food. Dog owners were asked to score their dogs every week on a scale from 0 to 10 for different aspects. Comparison of the score on week 8 with that at the start showed a



THE ADVANTAGES OF HYDRO-P PREMIUM

- Hydrolyzed collagen, food quality
- High protein content (> 90%)
- Helps to soothe the negative effects of Osteoarthritis
- Hypoallergenic
- It is heat stable and can be used in extruded diets

significant improvement in the scores for activity, stiffness and lameness for those dogs receiving daily Hydro-P Premium (Fig 1). The improvement in pain reduction tended to reach statistical significance ($p=0,13$). New studies have been started meanwhile using the advanced measuring system 'force platform gait analysis'. Initial results from these trials are promising (Fig 2).

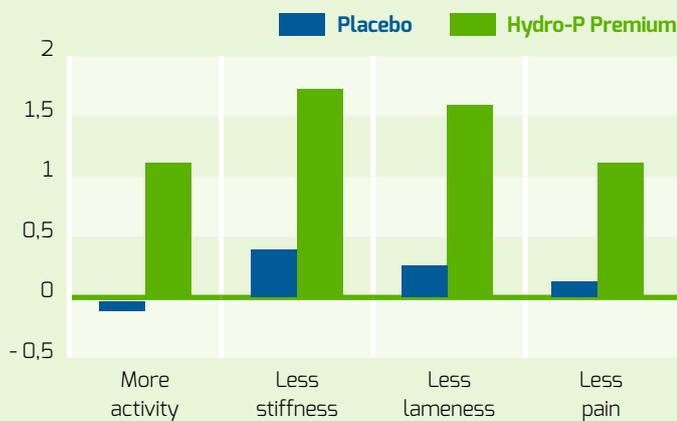


Fig 1: Improvement in score after 8 weeks of feeding hydrolyzed collagen (Beynen et al., 2009). A higher score means positive improvement: less stiffness, more activity, less lameness, less pain.



Fig 2: Average Force Platform Gait Analysis. Vertical Impulse (VI).

Sonac is a leading manufacturer of reliable ingredients of animal origin. With an active R&D program, reliable processes and sustainable end products Sonac continuously adjusts to market needs. A good geographical spread of locations and a broad portfolio of fats, proteins, minerals and specialties make Sonac a trusted partner for many international producers in food, pet food, feed and fertilizers, worldwide. Sonac is part of Darling Ingredients.



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