



- The original joint nutrient with bioflavanol antioxidant added to glucosamine and hydrolyzed collagen
- Only a 5-day loading dose
- Fast acting and effective - Guaranteed!
- Highly palatable chewable tablet for dogs and cats

Indications:

For use in the nutritional management of various degenerative joint diseases including hip dysplasia and for supporting orthopedic post-operative recovery.

Main ingredients:

Glucosamine HCl, Hydrolyzed Collagen, Bioflavanol, Ascorbic Acid, N-acetyl-Cysteine, Manganese, Zinc, liver flavor and beef flavor

Veterinarians can use ProMotion® as nutritional support for animals with:

- Arthritis
- Degenerative joint disease
- Hip dysplasia
- Elbow dysplasia
- Exercise trauma in working/sporting dogs
- Heavy field trial work
- Post-operative care
- Urinary tract disorders
- Ununited anconeal process

ProMotion® includes **glucosamine** for joint health, **bioflavanol (grape seed extract)** to minimize both joint tissue deterioration and collagen degradation caused by elastase and collagenase enzymes and oxygen free radicals, and **hydrolyzed collagen** to regenerate cartilage. Glucosamine will activate chondrocytes in cartilage to produce more hyaluronic acid, which enters the ground substance of the tissue and maintains lubrication for cartilage regeneration. However, if amino acids, such as hydroxyproline, found in hydrolyzed collagen are not present in sufficient quantities, new cartilage will not be constructed. The anti-oxidative activity of bioflavanol is valuable in cases of joint deterioration. The beneficial effects are recognized as animals begin to move more freely.

The synergistic balance of ProMotion® extends into the vitamin/mineral pack of vitamin C, manganese, cysteine, and zinc. Vitamin C is necessary for proper collagen synthesis and manganese is important for proteoglycan synthesis. Deficiencies of manganese can lead to bone loss, connective tissue fragility, and swollen joints. N-acetyl-cysteine is an important source of sulfur and supports the body's glutathione supply. Zinc is important for healing and as a coenzyme for metabolism. All four are excellent antioxidants and may control oxidative damage to connective tissue.

Antioxidants are likely beneficial in joint-related conditions for several reasons. First, cartilage is avascular, anervic and alymphatic and the supply of nutrients to joint tissue is often not adequate to maintain normal cell regeneration or to regenerate damaged tissue. Daily free radical load and resulting oxidative damage are particularly destructive in joint tissue due to lack of sufficient blood supply. Injuries and trauma may also result in excessive generation of free radicals and even more joint tissue damage.

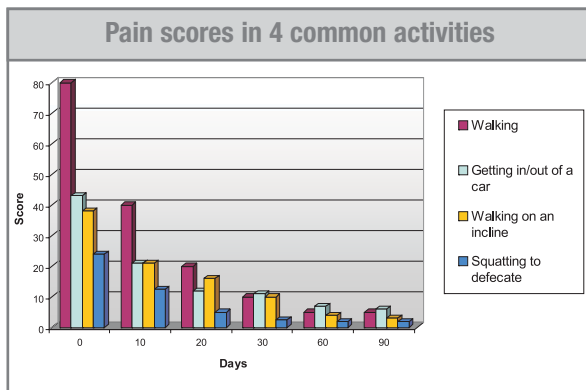
ProMotion® is useful in post-operative care for ruptured anterior cruciate ligament (ACL) and in post-operative care for osteochondrosis dessicans (OCD) of the shoulder joint. Injury or surgery can cause free radical increases and therefore more cellular damage and inflammation. The antioxidants in ProMotion® help control further free radical damage and oxidative stress to the knee and shoulder joints.

Another benefit of ProMotion® may be seen in urinary tract health. Glucosamine is a building block for glycosaminoglycans, which form a protective lining on the urinary tract wall. In feline and canine urinary infections, glycosaminoglycan levels are decreased and waste products are able to damage the urinary tract cells. In addition, bioflavanol prevents infectious agents such as E. coli from attaching to the urinary tract cells.



"My dog Odin is a 75 lb. Norwegian Elkhound. At 8.5 years of age, he had been on ProMamine for about 1 year. Now I have switched him to ProMotion. He has done wonderfully on both products, but has done exceptional on the ProMotion. His activity level has increased and he has lost some weight, which was much needed. I have recommended ProMotion to my clients, and they are happy with the results as well. Thank you!"

— Amy Pascale, LVT - New York



ProMotion® has been shown in trials to benefit animals with joint problems. In one study of 63 dogs with osteoarthritis, pain scores were recorded for four common activities: walking, getting in/out of a car, walking on an incline, and squatting to defecate (Fig. 1). As illustrated, all resulted in marked improvement over a 90-day period.

Research:

- Hawkins, Clare, and Michael J. Davies. "Oxidative Damage to Collagen and Related Substrates by Metal Ion/Hydrogen Peroxide Systems: Random Attack or Site-specific Damage?" *Biochimica et Biophysica Acta*. 1360 (1997): 84-96.
- Kuttan, R., et al. "Collagen Treated with (+)-Catechin Becomes Resistant to the Action of Mammalian Collagenase." *Experientia*. 37 (1981).
- Tixier, J. M. "Evidence by In Vitro Studies that Binding of Pycnogenols to Elastin Affects its Rate of Degradation by Elastases." *Biochemical Pharmacology*. 33.24 (1984): 3933-3939.
- Karzel, K. and R. Domenjot. "Effects of Hexosamine Derivatives and Uronic Acid Derivatives on Glycosaminoglycan Metabolism of Fibroblast Cultures." *Pharmacology*. 5: 337-345 (1971).
- Kim, J. and H. Conrad. "Effects of D-Glucosamine Concentration on the Kinetics of Mucopolysaccharide Biosynthesis in Cultured Chick Embryo Vertebral Cartilage." *The Journal of Biological Chemistry*. Vol. 249, No. 10, Issue of May 25, pp. 3091-3097 (1974).

Q: What is the expected response time?

A: In a 90-day trial on 63 dogs, 50% showed improvement within 10 days. At completion, 93.7% had improved.

Q: Why is the loading dose only 5 days?

A: The bioflavanol in ProMotion® is key. Glycosaminoglycans (GAG's) such as glucosamine and chondroitin sulfate require 4-6 weeks to start being effective. Bioflavanol benefits joint pain and inflammation by scavenging free radicals in the joint. Research has shown that bioflavanol helps bind and strengthen collagen fibers, which provide structural support. These factors encourage faster response, which leads to a more economical and effective product.

Q: Why is there no chondroitin sulfate (CS) in the formula?

A: Bioflavanol prevents enzymatic degradation in the joints and is absorbed more efficiently than CS. Also, supplementation with glucosamine has been shown to increase synthesis of chondroitin sulfate by 70%. When ingested, both glucosamine and CS ultimately promote the production of new CS in cartilage, but CS is molecularly too large to be immediately effective, while glucosamine is highly bioavailable and stimulatory. CS is also much more expensive, thus increasing the cost of products without providing additional benefits already gained with glucosamine alone.

Q: Are label claims guaranteed?

A: We employ a national independent laboratory to perform post-production analyses on our products. With this extra quality control measure, we can ensure label claims and guarantee safety.