

## Mucosal Absorption

During the past several years, scientists have discovered that the most effective method of delivery for drugs and nutritional supplements is via the mucous membranes, particularly, those in the mouth.

In the case of hyaluronic acid (HA), recent publications have noted that the mucous membranes of the mouth are lined with the receptor (CD44) that is specific for HA, thus allowing HA to be bound and rapidly pulled through the membrane into the blood stream. The key to this route of HA delivery is retaining the HA in the mouth long enough for absorption to occur.

MVP has developed two new HA-containing dietary supplements that allow absorption of this critical supplement via this most effective route.

### Cholodin®Flex

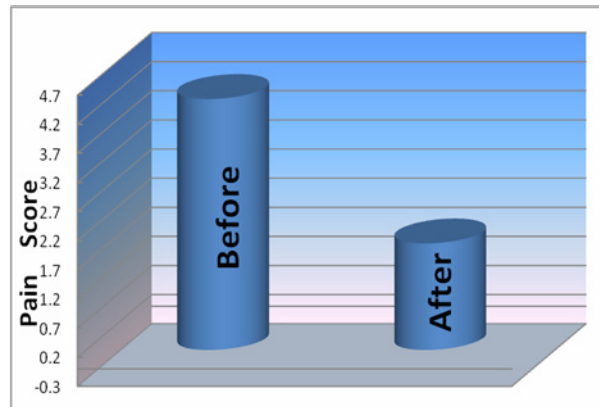
MVP Laboratories has been marketing the nutritional supplement, Cholodin® for over 25 years. It can be very helpful in geriatric and seizure dogs. Now, the advantages of Cholodin® have been combined with the body's natural anti-inflammatory component, hyaluronic acid (HA), to produce an effective, orally-absorbed product for dogs, called Cholodin®Flex.

Cholodin®Flex is a chewable tablet that may be given as a treat or broken up and mixed with food. It contains choline and lecithin, necessary ingredients for brain health, combined with HA which acts synergistically to support joint health and delay the aging process. Cholodin®Flex is recommended for the geriatric pet, starting at age 8-9. This supplement can improve the quality of life and delay the onset of "old age" diseases in younger dogs. Figure 1 demonstrates the effectiveness of this dietary supplement.

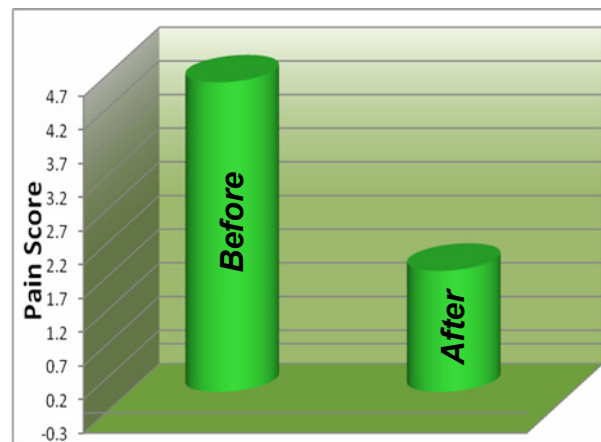
## Effectiveness

In a study conducted by Dr. Shawn Messonnier, both Cholodin®Flex and CholoGel™ Oral were evaluated for effectiveness in dogs with arthritis and joint pain. Dogs that had been given drugs or other supplements were taken off of their current treatment and then placed on either Cholodin®Flex or CholoGel™ Oral. Pain scores were recorded before and after use of each of the products. The results are shown in Figures 1 and 2. Reduction in pain was significant using either product.

**Figure 1** Reduction in Pain Using Cholodin®Flex in 29 Dogs



**Figure 2** Reduction in Pain Using CholoGel™ Oral in 15 Dogs



## CholoGel™ Oral

CholoGel™ Oral is a gel containing the highest concentration available of mucosally-absorbable, high molecular weight HA to provide optimal effectiveness in just a few days. It can be dropped directly into the mouth, rubbed onto the gums, or mixed with food. CholoGel™ Oral is particularly helpful for the canine athlete as it helps maintain joint health after stressful activities such as running, jumping, and strenuous activity. The effectiveness of CholoGel™ Oral is shown in Figure 2. Because CholoGel™ Oral contains a higher concentration of HA, higher doses can be given, if required. As a result, the gel product generally produces a faster response.

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For the geriatric dog taking Cholodin®Flex and still experiencing some joint or seizure problems, CholoGel™ Oral may be added to achieve the desired response. These two supplements can be used synergistically.

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**If you are currently using other products** such as Glucosamine and/or Chondroitin Sulfate, MSM or COX-2 inhibitors for your geriatric clients or for clients with various types of joint or muscle pain, contact MVP Laboratories for samples of Cholodin®Flex or CholoGel™ Oral.



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Tel: 800-856-4648 Fax: 402-331-8776