

Other Supplements

Proteolytic Enzymes

Enzymes for healing body tissues, not “just” for digestion.

Article by Mary Straus, published in the **Whole Dog Journal**

(http://www.whole-dog-journal.com/issues/15_7/features/Proteolytic-Enzymes-For-Dogs_20566-1.html), July 2012

Enzymes given with food are used for digestion, but certain enzymes (proteases, which break down proteins) can also help with inflammation, pain, recovery from injury, and more when given apart from food. Systemic enzyme therapy, also called metabolic or proteolytic enzyme therapy, allows enzymes to enter the body where they can be used for healing rather than for digestion. Examples of proteolytic enzymes include pancreatin, trypsin, and chymotrypsin (from the pancreas); bromelain (from pineapple); and papain (from papaya). Proteolytic enzymes work best for inflammation when given away from meals and combined with bioflavonoids such as quercetin or rutin (rutosid).

■ **BENEFITS:** Systemic enzyme therapy is theorized to work by breaking down proteins in the blood that cause inflammation, and by removing fibrin, which prolongs inflammation. Proponents say that systemic enzyme therapy promotes health in every part of the body by reducing pain and inflammation, speeding healing, supporting a healthy immune system, shrinking tumors, and preventing metastasis from cancer.

Enzyme therapy may also help to prevent soreness and injury during and after exercise when taken routinely. Holistic veterinarians may prescribe systemic enzyme therapy for arthritis and other conditions involving inflammation; injuries; skin and coat problems; cancer; autoimmune disorders; and before and after surgery to reduce swelling, bruising, and pain.

Studies in the U.S. are limited, but systemic enzyme therapy has been studied and used in Germany for decades.

For example, a 2008 German review (<http://www.ncbi.nlm.nih.gov/pubmed/19116226>) of “rigorous clinical studies” published in the journal *Integrative Cancer Therapies* found that “systemic enzyme therapy significantly decreased tumor-induced and therapy-induced side effects and complaints such as nausea, gastrointestinal complaints, fatigue, weight loss, and restlessness and obviously stabilized the quality of life. For plasmacytoma patients, complementary systemic enzyme therapy was shown to increase the response rates, the duration of remissions, and the overall survival times.”

- **CAUTIONS:** Proteolytic enzymes can thin the blood and increase the risk of bleeding, especially at higher doses. Do not give to dogs with clotting disorders, gastric ulcers, or those receiving blood-thinning medications. If anemia or signs of bleeding develop, discontinue right away. High doses may cause diarrhea.
- **DOSAGE:** Give enzyme products between meals (at least one hour before or two hours after) for systemic effects. Follow product dosage instructions, adjusting human dosage for the size of your dog. Companies that make products for both people and dogs suggest giving 3 tablets twice a day for adult humans, 3 tablets once a day for dogs weighing 51-100 pounds, 2 tablets daily for dogs weighing 21 to 50 pounds, and 1 tablet daily for dogs weighing 13 to 20 pounds. Higher doses are recommended for a variety of conditions.
- **RECOMMENDED SOURCES:** The most popular enzyme formulas contain pancreatin, bromelain, papain, rutin, trypsin, and chymotrypsin, and are enteric coated to protect the enzymes from breaking down in the stomach. Some companies make canine versions that have the same ingredients as their human products, but those made for humans are generally more economical. Recommended sources include:
 - **Garden of Life's Wobenzym N** (<http://www.gardenoflife.com/Products-for-Life/Immunity-Support/Wobenzym-N.aspx>) (available at Amazon (<http://www.amazon.com/gp/search/?ie=UTF8&keywords=wobenzym&tag=dogawacom-20&index=aps&linkCode=ur2&camp=1789&creative=390957>)). Fido-Wobenzyme, the canine version, appears to have been discontinued.
 - **Vitacost's FlavenZym** (<http://www.vitacost.com/vitacost-flavenzym-systemic-enzymes-180-enteric-coated-tablets-1/?NttSR=1>) (available at Amazon (http://www.amazon.com/s/?_encoding=UTF8&tag=dogawacom-20&linkCode=ur2&camp=1789&creative=390957&rh=i%3Aaps%2Ck%3AFlavenZym&field-keywords=FlavenZym&url=search-alias%3Daps))
 - **Naturally Vitamins' Medizym, Medizym V**, (<http://naturally.com/naturally-products/systemic-enzyme-products/>) and **Medizym-Fido** (<http://naturally.com/naturally-products/systemic-enzyme-products/>) (available at Amazon (http://www.amazon.com/s/?_encoding=UTF8&tag=dogawacom-20&linkCode=ur2&camp=1789&creative=390957&rh=i%3Aaps%2Ck%3AMedizym&field-keywords=Medizym&url=search-alias%3Daps)).
 - **Enzymatic Therapy's Mega-Zyme** (<http://www.enzymatictherapy.com/Products/Digestion/Occasional-Heartburn-and-Indigestion/04250-Mega-Zyme.aspx>) (available at Amazon (http://www.amazon.com/s/?_encoding=UTF8&tag=dogawacom-20&linkCode=ur2&camp=1789&creative=390957&rh=i%3Aaps%2Ck%3AMega-Zyme&field-keywords=Mega-Zyme&url=search-alias%3Daps))
 - **Bromelain** supplements, alone and in combination with bioflavonoids and other ingredients, are available from many companies, such as **Now Foods' Quercetin with Bromelain** (<http://www.nowfoods.com/Supplements/Products-by-Category/Immune-System-Support/Seasonal-Immune-Support/M003365.htm>) (available at Amazon (<http://www.amazon.com/gp/search/?ie=UTF8&tag=dogawacom-20&linkCode=ur2&camp=1789&creative=390957&rh=i%3Aaps%2Ck%3ANow%20Quercetin%20Bromelain&field-keywords=Now%20Quercetin%20Bromelain&url=search-alias%3Daps&ajr=0>))

■ More information:

Senior Supplements

These nutraceuticals may offer hope for treating Canine Cognitive Dysfunction.

Article by Mary Straus, published in the **Whole Dog Journal** (http://www.whole-dog-journal.com/issues/15_11/features/Senior-Dog-Supplements_20643-1.html), November 2012

Canine cognitive dysfunction (CCD), also called cognitive dysfunction syndrome, is comparable to Alzheimer's disease in humans. Dogs with CCD may show signs such as confusion, disorientation, anxiety, irritability, apathy, reduced interaction, house soiling, forgetfulness, and aimless wandering or pacing, especially at night. CCD can rob a dog of quality of life, and make living with an old dog difficult.

Anipryl (selegiline, l-deprenyl) is the only medication approved for use in dogs to treat CCD. It is a monoamine oxidase inhibitor (MAOI), which can cause negative side effects and is unsafe to combine with a number of other drugs, including antidepressants, such as fluoxetine (Reconcile, Prozac) and clomipramine (Clomicalm); amitraz (Certifect, Preventic collar); and dl-phenylalanine (DLPA), used to treat chronic pain. There is evidence that it provides some benefit for dogs with CCD, but it is not a cure.

In the last few years, several companies have introduced supplements designed to help dogs with CCD. While the scientific evidence presented for each is limited and often weak (many studies are not placebo-controlled or double-blinded, most are sponsored by the manufacturer, and results are not always statistically significant), studies and anecdotal reports indicate that these supplements can help many dogs.

Newest to the market

Neutricks (<http://www.neutricks.com/>), from Quincy Animal Health, was released in November 2010. It contains a calcium-binding protein called apoaequorin, derived from jellyfish. The parent company, Quincy Bioscience, markets a comparable product for humans called Prevagen.

The company commissioned a couple of small studies to be conducted by CanCog Technologies on senior laboratory dogs that appear to demonstrate improvement in learning and memory when compared to controls and to those given Anipryl. Gary Landsberg, DVM, Dipl. ACVB, Dipl. ECVBM-CA, a veterinary behaviorist and adjunct professor at Ontario Veterinary College in Canada who is also director of scientific affairs for CanCog, feels the product has demonstrated

effectiveness.

Dog owners who participated in a 30-day trial reported an overall improvement of 24 percent, primarily in sleep, disorientation, and especially housetraining, with less improvement in interaction, disposition, and pain. Very few side effects are reported, and the supplement has no known interactions with other medications. Improvement is commonly noticed within a few days of starting the supplement.

Neutricks is widely available online. The suggested retail price is \$60 for 60 tablets, with one-third off when you buy multiple bottles. Recommended daily dosage is 1 tablet for dogs under 40 pounds, 2 tablets for dogs weighing 41-80 pounds, and 3 tablets for dogs over 80 pounds. I found it discounted to as low as \$25.60 for 60 tablets at Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=neutricks&linkCode=ur2&rh=n%3A2619533011%2Ck%3Aneutricks&tag=dogawacom-20&url=search-alias%3Dpets), where 26 of 29 people gave it 4 or 5 stars in their reviews (\$34.20 and 65 of 81 reviews six months later).

Update: I received one anecdotal report of Neutricks helping a small, 15-year-old dog, who was acting confused, forgetting housebreaking, getting snappy with his owner, going outside and just standing and staring into space, sleeping most of the time, etc. After starting Neutricks, he started acting like a much younger dog much of the time, is interested in checking out new things, and runs and plays like he did when he was younger.

Not the same-o

S-adenosylmethionine (SAmE, pronounced “sammy”) is a supplement that has been around for a long time, but has only recently been used to treat CCD as well as dementia in humans.

Novifit (<http://www.virbacvet.com/products/detail/novifit-novisame-tablets/behavioral-health>) (NoviSAmE) was developed by Virbac Animal Health and tested on client-owned dogs. A favorable response was seen after one month and increased in the second month. After 4 and 8 weeks of treatment, there was a 44 percent overall reduction in problem behaviors (compared to 24 percent in placebo-treated dogs), including significant improvement in activity, playfulness, house soiling, and awareness. There was more moderate improvement in sleep problems, disorientation, and confusion, though no benefit was demonstrated for anxiety. Overall, 65 percent of dogs treated with SAmE had an acceptable or good response to treatment (compared to 37 percent of dogs treated with placebo). The dogs that did not respond had histories of anxiety that showed little improvement and more severe chronic behavioral disorders. CanCog also performed studies showing improvement in cognitive processes, such as attention and problem solving, but not memory, in laboratory dogs.

Novifit is packaged in foil blister packs to protect it from moisture, which is important with SAME. It is available in three strengths, with 100, 200, and 400 milligrams per tablet. The company recommends giving the following dosage once a day: 100 mg to dogs weighing up to 22 pounds, 200 mg to dogs weighing 22.1 to 44 pounds, 400 mg to dogs weighing 44.1 to 88 pounds, and 800 mg to dogs weighing over 88 pounds.

SAME also helps with liver disease, arthritis, and depression. Nutramax markets it as **Denosyl**, used for liver support, or you can buy SAME made for humans. It's absorbed faster when given on an empty stomach, as is generally suggested, but concentrations are maintained longer if SAME is given with a meal, according to Virbac. Minimal side effects are reported, and SAME is considered safe to use and to combine with other treatments.

Note that, while it is rarely mentioned, SAME requires certain B vitamins to produce full benefits. It may be best to give a B-complex supplement daily when using SAME.

Combination approach

Another nutraceutical that has been talked about for some time is **phosphatidylserine** (PS), a phospholipid that may improve learning and memory. Most PS is derived from soy lecithin, though a few supplements use other sources, such as sunflower lecithin. The percentage of PS in lecithin is low, so lecithin alone will not provide therapeutic doses.

Ceva Animal Health introduced **Senilife** (<http://www.ceva.us/us/Products/Product-List/Senilife-R>), which contains PS (from soy) along with ginkgo biloba, vitamin E, pyridoxine (vitamin B6), and resveratrol (grape skin extract), in 2008. The company says that its own studies show that Senilife produced significant improvement in sleeping problems, playful behavior, apathy, response to commands, and disorientation, with improvements starting within 7 days and increasing over 30 days. CanCog performed one study on Senilife that showed improved short-term memory that may persist for at least 70 days after the supplement was discontinued, indicating potential long-term benefits.

Senilife is available in two sizes, for dogs up to and over 50 pounds. This product has been on backorder, but I spoke with a company representative who said Senilife should be available by the time you see this. (Unfortunately, six months later the website indicates this product is still on backorder, but it can be found online at Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=senilife&linkCode=ur2&rh=n%3A2619533011%2Ck%3Asenilife&tag=dogawacom-20&url=search-alias%3Dpets) and elsewhere)

Plan B

Choline, usually grouped with the B vitamins, has been shown to be effective in treating cognitive disorders and seizures in both humans and pets. It is involved in the same chemical processes as SAME. Choline is a component of phosphatidylcholine, another phospholipid found in lecithin.

Most homemade diets I've analyzed have been short on choline, which is often omitted from multivitamin and mineral supplements. The National Research Council (NRC) recommends about 100 mg of choline daily for a 5-pound dog, 500 mg for a dog weighing 40 pounds, and 1,000 mg for dogs weighing 100 pounds. The best food sources I've found are eggs (126 mg choline per large egg) and liver, particularly beef liver (more than 100 mg per ounce).

Cholodin (<http://www.mvplabs.com/products/dietary-supplements>), a product of MVP Laboratories, provides choline, phosphatidylcholine, methionine, inositol, B vitamins, selenium, vitamin E, and zinc. One small study conducted by Shawn Messonnier, DVM, showed that 9 of 15 client-owned dogs had moderate to significant improvement in clinical signs of CCD after receiving Cholodin.

I also received two reports from people who felt that Cholodin had helped their dogs. One said that she had great results using cholodin for her 15-year-old Cairn Terrier. "One of her issues was not wanting to go outside, and consequently having a number of accidents in the house. These have virtually ended since putting her on the Cholodin. She's also happier and much more engaged. Basically she is very much like her 'old self'." A second person reported that her 14-year-old English Cocker Spaniel, who was blind and deaf, seemed more engaged after a few weeks on Cholodin.

Other supplements that may help with CCD include **DHA** (omega-3 fatty acid found in **fish oil**), **acetyl-l-carnitine**, and **antioxidants**, such as vitamins C and E (also found in fresh fruits and vegetables), **selenium**, **Coenzyme Q10** (CoQ10), **alpha-lipoic acid**, **N-acetyl cysteine**, and **resveratrol**.

All of these supplements should produce improvement within a few days to a month. If you don't see any changes by that time, it's unlikely that giving them longer will help.

Keep in mind that some studies have shown that older dogs do best when given **behavioral enrichment** along with nutritional supplements. The two together work better than either does by itself. Behavioral enrichment may include physical exercise such as walks, learning a new trick or other types of training, puzzle toys, or anything else that engages your dog's mind. Even dogs with little mobility can enjoy games such as scent discrimination.

Update: I received one report from someone who began giving her dog the herbs Hawthorne, Gotu Kola, Gingko, and Bacopa based on a YouTube video (<http://www.youtube.com/watch?v=1K36YgR5joQ>). Positive results in her 13-year-old Aussie were seen in four days. She continues to give these herbs, along with choline, four or five days a week.

Resources:

- **Neutricks** (<http://www.neutricks.com/>), Quincy Animal Health (also available from Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=neutricks&linkCode=ur2&rh=n%3A2619533011%2Ck%3Aneutricks&tag=dogawacom-20&url=search-alias%3Dpets)))
- **Novifit** (<http://www.virbacvet.com/products/detail/novifit-novisame-tablets/behavioral-health>) (NoviSAmE), Virbac Animal Health (also available from Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=novifit&linkCode=ur2&rh=n%3A2619533011%2Ck%3Anovifit&tag=dogawacom-20&url=search-alias%3Dpets))
- **Denosyl** (<http://nutramaxlabs.com/Vet/Products/Denosyl.aspx>), NutraMax Labs (also available from Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=denosyl&linkCode=ur2&rh=n%3A2619533011%2Ck%3Adenosyl&tag=dogawacom-20&url=search-alias%3Dpets))
- **Senilife** (<http://www.ceva.us/us/Products/Product-List/Senilife-R>), Ceva Animal Health (also available from Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=senilife&linkCode=ur2&rh=n%3A2619533011,k%3Asenilife&tag=dogawacom-20&url=search-alias=pets) (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=neutricks&linkCode=ur2&rh=n%3A2619533011%2Ck%3Aneutricks&tag=dogawacom-20&url=search-alias%3Dpets))
- **Cholodin** (<http://www.mvplabs.com/products/dietary-supplements>), MVP Laboratories (also available from Amazon (http://www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=cholodin&linkCode=ur2&rh=n%3A2619533011%2Ck%3Acholodin&tag=dogawacom-20&url=search-alias%3Dpets))
- **CanCog Technologies** (<http://www.cancog.com/>)

See Also:

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