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DHEA - A Healthier Alternative Against Depression?

DHEA (dehydroepiandrosterone) is a natural hormone produced by your body. It acts as a precursor to both male and female sex hormones, including testosterone and estrogen. DHEA levels begin to decrease after the age of 30, as part of a general age-related decline in hormones. Because of this, DHEA has been examined for use in hormone replacement for the middle-aged and elderly.

Recent studies have demonstrated DHEA's ability to increase lean muscle mass while decreasing fat mass, help regulate the immune system, increase bone density, reduce menopausal disturbances, and improve mood and sense of well-being. A particularly interesting use of DHEA that has been studied is for depression. Prescription antidepressants often cause problems because of their adverse effects, which are often due to their chemical structures. These typically include drowsiness, sleeplessness, weight gain, sexual dysfunction, excess sweating, dry mouth, nausea and upset stomach. For this reason, other alternatives are being sought for depression. One such alternative is DHEA.

A recent study published in the American Medical Association's *Archives of General Psychiatry*¹ examined the use of DHEA as stand-alone therapy for moderate depression in men and women aged 40 to 65. The study concluded that six weeks of daily DHEA therapy significantly improved symptoms of depression, and that DHEA can be considered an effective treatment for moderate depression in middle-aged patients. The study found the hormone was equally effective for both men and women.

The results of this study are encouraging for those who wish to treat their depression but are wary of traditional prescription antidepressants. While this is good news, it is important to remember that as with any hormone, risks are involved in DHEA's use, so consult your doctor before taking it. Since DHEA can cause higher-than-normal levels of sex hormones in the body, it could theoretically increase the risk of some types of cancers. Its hormonal effects may also lead to acne, facial hair, and voice-deepening in women as well as enlarged breasts and increased aggressiveness in men. DHEA's long-term side

effects have not been clarified in-depth just yet, but for now the scientific evidence is strong that DHEA works well as a treatment against depression.

Prevention and Management of Vitamin B₁₂ Deficiency

Vitamin B₁₂ is a water-soluble vitamin that aids in red blood cell formation and nerve cell maintenance. It is naturally found in meat, fish, poultry, eggs and milk, but may also be obtained from fortified breakfast cereals for vegetarians. For adults, the recommended dietary allowance of vitamin B₁₂ is 2.4 mcg/day. However, sufficient dietary supply is not enough, as patients must consistently be able to absorb the B₁₂ they ingest. Without proper vitamin B₁₂ levels, a patient may develop a specific type of anemia known as megaloblastic anemia. Symptoms of this disorder include fatigue, weakness, constipation and neurological effects such as numbness and tingling of the hands and feet. In addition, a person might experience difficulty in maintaining balance, depression, confusion, and soreness of the mouth or tongue known as "beefy red tongue." Obviously, it is best to avoid this by ensuring proper intake and absorption of vitamin B₁₂.

B₁₂ is bound up by protein in food when it enters the body, and is not freed up until it encounters the acid in your stomach. Thus, it is important that the stomach releases an adequate amount of acid to allow sufficient vitamin B₁₂ absorption. Antacid drugs such as Prilosec, Nexium, Zantac, and Pepcid diminish acid release into the stomach, so they can interfere with vitamin B₁₂ absorption. In addition, Metformin, a common drug used to treat Type 2 Diabetes, is known to decrease B₁₂ absorption indirectly. This is why it is important for patients on these drugs to supplement their B₁₂ intake.

Strict vegetarianism is another concern for B₁₂ deficiency. Since B₁₂ is found primarily in animal products, vegetarians must pay special attention to supplementing their diet. Pregnant or breast-feeding vegetarians must be especially attentive, because vitamin B₁₂ deficiency in the early years of infancy can cause permanent neurological damage. Other conditions that warrant B₁₂ supplementation include old age, heart



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disease, pernicious anemia, and GI disorders such as celiac disease or Crohn's disease.

Deficiency in this vitamin can be addressed through supplementation. Several B₁₂ (cobalamin) products are available to this end, including intramuscular injections that bypass absorption problems. They come as methylcobalamin (the active form) and hydroxycobalamin (the form typically found in food). Both of these forms are better absorbed and retained than the standard commercially available form, cyanocobalamin.

Veterinary Corner - Doggie Dental Care

Periodontal disease, an inflammatory condition affecting the tissue that surrounds and supports the teeth, is extremely common among dogs. In fact, it has been estimated that by the age of four, 85% of dogs have some stage of the disease. It is the #1 diagnosed condition among companion animals. The disease escalates with accumulation of bacteria-filled plaques, and hastens to the point of tooth loss when these bacteria eat away at the tooth's support structures. It can also lead to bad breath, kidney and heart disease, as well as a drastic reduction in the quality of life of your pet. The good news is that periodontal disease is very easy to prevent.

The most effective way to prevent periodontitis is to consistently brush your dog's teeth at least twice a week. Unfortunately, recent studies estimate that only 2% of dog owners brush their pet's teeth frequently enough to maintain proper oral health. However, canine tooth-brushing is an easy thing to learn, and becomes second-nature when undertaken regularly. For correct technique, follow these steps:

Pick an appropriate pet toothbrush. For dogs, an ideal toothbrush will have a long handle, an angled head, and extra soft bristles. Finger toothbrushes that fit over the tip of the finger are also available. Avoid children's toothbrushes, as they are usually too hard for dogs.

Pick appropriate toothpaste. Ideally, a good paste will be enzymatic and contain fluoride. Enzymes degrade plaque while fluoride helps kill bacteria. Avoid toothpastes with baking soda, detergents, or salt. These are typically found in human pastes but can actually harm your dog.

Place the paste on the toothbrush the correct way.

Instead of placing the paste on top of the brush, try to place it between the bristles. This ensures that

the paste spends the most time next to the teeth during brushing.

Gently get your dog accustomed to the brush in its mouth. Most pets accept brushing if they are approached in a gentle manner. Start slowly. At first, you can just use a washcloth or piece of gauze to wipe the teeth, front and back, in the same manner you will eventually be using the toothbrush. Do this for about two weeks and your dog will grow familiar with the approach. Then you can take the toothbrush, soak it in warm water and begin brushing daily for several days. Once your dog accepts this brushing, you are free to add the toothpaste.

Place the toothbrush bristles at the gum margin where the teeth and gums meet at a 45° angle. Move the brush around in an oval pattern. Gently push the bristle ends into the spaces between the teeth as well as the area around the bases of the teeth. Cover an area of three or four teeth at a time. Use about 10 short back-and-forth motions per area. Concentrate most of your attention on the outside of the upper teeth.

There are several other ways to keep your dog's teeth clean. Oral rinses containing chlorhexidine gluconate have antibacterial activity for up to 48 hours and are recommended, with a veterinarian's consent. Rawhide treats were once discouraged because it was thought they upset dogs' stomachs, but recent studies indicate otherwise. Not only is rawhide easily digestible, but it also helps control plaque and tartar. The best rawhide chews to buy are ones with calcium-sequestering substances like sodium hexametaphosphate.

http://www.dentalvet.com/patients/periodontics/could_my_dog_or_cat_have_periodo.htm

2 Mayers M. Dentistry basics: brighten your patients' smiles and their teeth. *Veterinary Technician*. 2002;80-86.

3 Dental Care importance – recognized yet ignored. *Vet Practice News*. December 13, 2001.

4 "Taking a bite out of dental problems.(OraVet Plaque Prevention Gel for dogs)." *Dog Watch* 11.2 (Feb 2007): 2(1).