DHEA

So there are hormone systems in the body which involve **testosterone** in males and **estrogen** in females. Those hormones are vital in the performance of the young male or young female reproductively, as well **as strength**, **endurance**, **overall health**, **muscle mass bone density fitness**. In <u>people</u> these crucial hormones are produced in the "gonads" which are the testicles or the ovaries. This is also true for animals. But let's stick a pin in that.

Science has discovered another hormone called "**DHEA**" which functions at the cellular level very much the way our sex hormones affect us. High levels of DHEA in male tissue can elicit some of the same changes as testosterone. In females high levels of DHEA may function beneficially as estrogen. In humans, DHEA is produced in the adrenal glands at a certain basic level. **In the dog however, DHEA is produced ONLY in the gonad.** So here's the thing, in a dog or cat when you spayed or neutered them, you are removing their sex hormones <u>as well as</u> their DHEA because they do not produce DHEA in their adrenal gland. The "adrenal" is the gland we leave behind when we performed 'gonadectomy' for a pet. So your animal has no hormonal support for its lifetime, not even DHEA. And there is a price to be paid (long-term) for that.

So a recent "fad – bandwagon" in television Vet practice is administering DHEA to animals hoping to appreciate some of the benefits of hormones support on those animals. And in fact the results are initially encouraging. However, when you put DHEA into an animal system, you are giving a signal for tissue building, and the activation of a lot of activity, *metabolically*. In other words the body suddenly needs the building blocks for the processes that the DHEA is calling up. Sadly there is **not** a limitless supply of these building blocks and so certain enzyme systems such as nADP and nADPH are exhausted with time, as DHEA is given. Does it matter in a *year*? Probably not.

But for **long-term** use of DHEA, *or high dose DHEA*, research has been done to determine what enzymes and compounds become deficient metabolically in animals given DHEA; and research is forging ahead to try to bring a product (of a safer nature) to market in 2019. In the meantime supplement of DHEA to dogs should be endeavored only when the benefits outweigh the negative side effect of metabolite exhaustion.

In my opinion any dogs that is ill, very old, suffering a deteriorating quality-of-life, <u>have little to lose in the effort to gather the benefits of DHEA therapy</u> versus the eventual exhaustion of certain metabolic processes. Anti-cancer benefit have been noted with DHEA supplementation, research on that is continuing.

Weight	Dose	Times Per Day
10-20 lb	4mg	1-2x
20-30 lb	4mg	2x
30-50 lb	25mg	1x
50-80 lb	25mg	1-2x
80+ lb	25mg	2x

Some dogs experience agitation. Which is why MORNING dosing is good.

Some dogs can have a very untoward reaction to DHEA. That is uncommon, but it looks like this: *Fever, joint pain, skin rash and even sores around the mouth and eyes.*

Obtaining DHEA can be simple, but there are caveats. For this to be even worth it, you might want to get a pharmaceutical grade DHEA which are available on Amazon.com and here are the names of two laboratories that will produce and sell pharmaceutical grade: "**Douglas Labs**" and "**Pure**". Both are commonly relied upon by medical professionals in the human field.

As with any promising nutritional supplement, the FDA has not had time to evaluate the many assertions made about DHEA, and we know there are some risks in terms of a reaction among certain dogs as well as eventual deleterious effects latently and possibly sub clinically. In the meantime the benefits probably outweigh those risks. If your pet is weak, very old, sick, or experiencing a deterioration in quality-of-life, which is the reason this information is being provided for you and this recommendation is being made.