Huperzine-A is a natural supplement that may help dogs with repetitive or compulsive behavior. Huperzine-A is a compound isolated from Chinese club moss that affects neurotransmitters in the brain. It is reported to have NMDA receptor blocking activity, anticholinesterase activity, and anticonvulsant properties.

In people, Huperzine-A has been used in the treatment of aging brain disorders such as Alzheimer’s. In dogs, Huperzine-A has been used with some success for treating compulsive disorders. As an NMDA receptor blocker, it blocks a neurotransmitter called glutamate, the main excitatory neurotransmitter in the central nervous system. Veterinary behaviorists became interested in trying this natural supplement because NMDA blocking medications were known to be effective in treating compulsive disorders.

In a published study of Huperzine-A administration in 20 affected dogs, 19 dogs showed improvement for their compulsive conditions that included circling or tail-chasing, shadow-chasing and flank sucking behaviors. The reported improvement response ranged from 40-90 percent! Only one dog in the study did not show improvement. Although this is a very small study, and further research is needed, the results are promising.

Another benefit of adding an NMDA blocker to an existing behavior treatment protocol that includes serotonin reuptake inhibitor medications (also known as SSRIs such as fluoxetine or sertraline) is that they seem to be synergistic together when it comes to improving compulsive disorders. It’s a case of 1 + 1 = 3. This synergism has been shown in mice studies and it has also been shown in humans.

There is also one published case study published in the veterinary literature using Huperzine-A for seizure control. A Bernese mountain dog with signs of star gazing and fly snapping along with concurrent signs of anxiety was diagnosed with complex partial seizures based on electroencephalogram (EEG) brain wave testing. Treatment with Huperzine-A produced dramatic suppression of the abnormal behavior.
When using over the counter natural supplements the quality of the product can vary greatly as there is no FDA regulation on the purity and bioavailability of these products. Some products have been tested through independent labs. If Huperzine-A is used, we recommend choosing the brands below.

**Recommend Brands of Independent Lab Tested Huperzine-A**

2. GNC Herbal Plus, 50-100mcg  

3. Source Naturals, 100-200mcg  

4. Swanson Superior, 200mcg  

**Dosing guidelines for Huperzine-A**

Extensive studies on dosing have not been performed, but the following doses have not shown toxicity and are recommended for the treatment of compulsive disorders in dogs. Huperzine-A appears to be a relatively safe compound from animal studies of toxicity and studies in humans showing no side-effects at dosages recommended for routine supplementation. Excessive salivation is one of the first signs of over dosage or toxicity and would require much higher doses than those listed below.

- 100 mcg twice daily for small (toy) dogs
- 200-400 mcg twice daily for mid-sized dogs.
- 400-600 mcg twice daily for large dogs.

It is recommended to start at the low end of the range and increase the dose to effect up within the dose range for the size of the dog.