BUSH VETERINARY NEUROLOGY SERVICE

# Cyclosporine

*Cyclosporine is a drug that suppresses the immune system and was originally used when organs were being transplanted from one person to another person to prevent rejection. This medication has proven very useful in modulating the immune response. A BVNS neurologist would use cyclosporine whenever it is suspected that the cause of organ dysfunction was not from infection or cancer but immune attack. Cyclosporine is very safe and used most commonly to reduce or eliminate the amount of steroid being used to treat an inflammation of the brain, spinal cord and meninges called granulomatous meningoencephalomyelitis (GME).*

### Other immune modulating drugs

BVNS neurologists also use azathioprine, leflunomide and mycophenolate to suppress the immune system. Typically cyclosporine is used first because of its cost, efficacy and safety profile, but these other medications maybe substituted or added-on to cyclosporine. Other times we may use true chemotherapy like procarbazine, cytosine arabinoside, and lomustine to treat GME and similar conditions.

## How it works

Cyclosporine works within white blood cells to adjust the levels of cytokines. Cytokines are chemicals that white blood cells use to activate and talk to each other.

## How it should be given

Cyclosporine should be given on an empty stomach, either 1 hour before or 2 hours after a meal.

## Side Effects

Side effects are rarely seen. However, a few patients experience side effects consisting of vomiting, diarrhea, anorexia, excessive shedding and excessive growth of gums (gingival hyperplasia). Please call us if these problems are noted. Cyclosporine should not be given while your pet is pregnant or lactating.

## Monitoring

Cyclosporine is primarily metabolized in the liver. At very high serum concentrations cyclosporine can cause liver toxicity or predispose animals to mild infections. Generally we recommend a follow-up neurologic examination after starting therapy to assess the response. A cyclosporine level is often recommended to insure we have achieved a therapeutic blood level.

**To learn more about neurologic diseases, treatments, medications and our practice, please visit www.bvns.net.**