

Brain Aging and Related Behavioral Changes

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Nervous tissue is especially vulnerable to damage. As the brain ages, damage can manifest itself as behavioral changes or cognitive dysfunction. Age-related changes can include confusion, disorientation, decreased social interaction, wandering, pacing, frequent “accidents” in the house and altered sleep behaviors. This client education sheet will help you learn more about this condition and will review your veterinarian’s instructions for your pet’s care at home.

What You Should Know About Brain Aging and Related Behavioral Changes

Free radicals are a normal by-product of energy produced by the body. Your pet’s natural defense mechanisms render most free radicals harmless, but a small percentage remains active and causes cell damage. Over time, the body produces more and more free radicals. The brain is very susceptible to the effects of free radicals damage because it has a high oxygen demand, high fat content and limited defense and repair capabilities. Consequently, over time, brain cells are destroyed. Additionally, mitochondria that produce energy for brain cells produce less energy and more free radicals causing more damage to the brain. This damage impairs brain function and, in turn, induces behavioral changes. Behavioral problems attributed to these brain changes include confusion, disorientation, decreased social interaction, wandering and pacing. The first thing you may notice is your pet having frequent urinary or bowel accidents in the house.

Affected dogs may no longer seek attention or petting, or greet family members. They may appear confused or lost in the house or yard. Other clinical signs include sleeping more during the day and less at night. Since these changes usually occur slowly many pet owners may not notice them.

Treatment and Home Care

Your veterinarian will want to conduct a physical exam, and routine blood and urine tests to be sure some other underlying disorder is not the cause of the behavioral changes you have observed. Your veterinarian may also want to do X-rays or ultrasound.

Your veterinarian may prescribe medications to help improve brain function. Home care consists of giving all prescribed medications and following your veterinarian’s advice regarding practical exercise, mental stimulation and dietary management.

Nutritional Plan

Your veterinarian may recommend a special food that has: antioxidant vitamins E, C and beta-carotene; fruits and vegetables that contain carotenoids and flavinoids to inactivate free radicals; fatty acids (DHA and EPA) to promote cell membrane health; and lipoic acid and L-carnitine nutrients to help maintain healthy mitochondria and decrease production of free radicals. Also, older pets need foods low in sodium, with reduced levels of phosphorus and protein to help maintain heart and kidney health. Hill’s® Prescription Diet® b/d® Canine Aging and Alertness dog food provides for the special needs of older pets and also provides antioxidants and additional nutrients which may improve certain age-related behavioral changes in older pets.

Transitioning Food

Unless recommended otherwise by your veterinarian, gradually introduce any new food over a seven-day period. Mix the new food with your pet’s former food, gradually increasing its proportion until only the new food is fed.

If your pet is one of the few that doesn’t readily accept a new food, try warming the canned food to body temperature, hand feeding for the first few days, or mixing the dry food with warm water (wait ten minutes before serving). Feed only the recommended food. Don’t feed additional salt or any snacks that may contain sodium. Be patient but firm with your pet.

This is important because the success or failure of treatment depends to a large degree on strict adherence to the new food.

Presented as an educational service by



Home Care Instructions

Client's Name: _____

Patient's Name: _____

Medication(s): _____

Nutritional Recommendation: _____

Follow-Up Appointment: _____

(Hospital Stamp Area Above)

REGULAR VISITS WILL HELP OUR VETERINARY HEALTH CARE TEAM PROVIDE FOR YOUR PET'S BEST INTEREST.