



GOLDEN RETRIEVER LIFETIME STUDY INITIATIVE 2016

Since 1948, Morris Animal Foundation has invested more than \$100 million toward 2,400 studies that have led to significant breakthroughs in veterinary care for animals worldwide. Our groundbreaking Golden Retriever Lifetime Study Initiative – the first study developed, funded and managed by the foundation – will provide much-needed disease incidence rates and establish risk factors for canine cancer and other major health problems that not only affect golden retrievers, but all dogs.

MORRIS ANIMAL FOUNDATION GOLDEN RETRIEVER LIFETIME STUDY:

- follows more than 3,000 purebred golden retrievers – a breed with a high incidence of cancer – over their entire lifetime
- collects health, environmental and behavior data on a regionally diverse group of dogs from all states in the contiguous United States
- fills a critical knowledge gap on the incidence of, and risk factors for, many major canine diseases, including cancer
- supports a unique, collaborative partnership among dog owners, veterinarians and researchers
- is modeled after the ongoing Framingham Heart Study, launched in 1948, that has established risk factors for heart disease and cancer in people

A VISION OF HEALTH FOR DOGS

Longitudinal cohort studies – where data is collected on the same individuals during an extended period of time – are common in human medicine, but rare in the veterinary world due to high cost and extensive time commitment. Morris Animal Foundation is allocating significant financial support, time and scientific expertise to the largest longitudinal study in dogs ever conducted in the United States. This study will identify genetic, environmental and nutritional risk factors for many canine diseases. Data collected over the lifetime of thousands of dogs will help veterinarians anticipate and manage their patients' care and help the foundation determine critical canine health areas in need of research support.

BY THE NUMBERS

COMMITMENT

FOR INITIATIVE:

\$25 million research study

10+ years funding

FOCUS

TOP CANINE HEALTH CONCERNS:

- hemangiosarcoma
- lymphoma
- osteosarcoma
- mast cell tumors
- hypothyroidism
- allergies
- heart failure
- epilepsy
- hip dysplasia
- kidney disease

IMPACT

CHANGE DISEASE STATISTICS:

100% dog breeds impacted by cancer

60%+ golden retrievers that get cancer

1 IN 5 hemangiosarcoma

1 IN 8 lymphoma

1 IN 13 mast cell tumors

1 IN 20 osteosarcoma

OUR INVESTMENT IN CANINE HEALTH

Since our founding, Morris Animal Foundation has invested \$39 million in more than 900 canine health studies. In 2012, Morris Animal Foundation launched its groundbreaking, 10-year, \$25 million Golden Retriever Lifetime Study, as part of our ongoing effort to improve the quality of life for our canine companions. Full study enrollment of 3,000+ purebred dogs under the age of 2 was successfully completed in early 2015. This study will provide comprehensive data on diseases and other health challenges in dogs.



canine cancer

Golden retrievers are at increased risk for developing many cancers, including osteosarcoma, mast cell tumors, hemangiosarcoma and lymphoma. Purebred golden retrievers were selected for this study to help pinpoint genetic factors, and lifestyle and environmental influences, that contribute to the high cancer incidence in this breed. Findings will help us understand cancer dynamics in all dog breeds.

nutrition and obesity

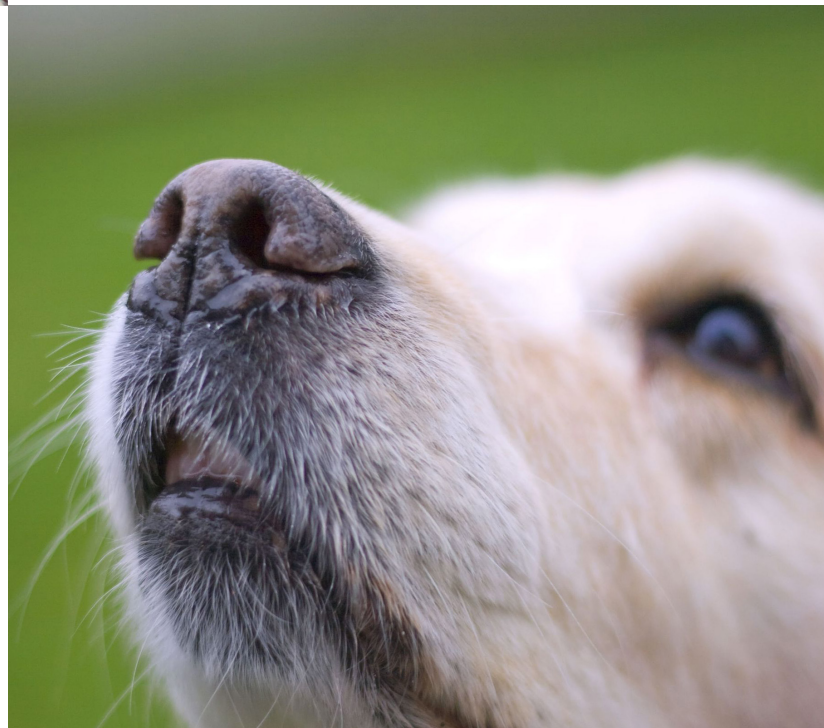
Studies have shown that fat stimulates the secretion of inflammatory hormones into the blood stream. Inflammatory hormone molecules affect all organ systems in the body and contribute to a host of problems from bone growth to sexual reproduction. As of 2015, veterinarians rated 28 percent of dogs enrolled in the study as mildly or moderately fat. The study is tracking obesity rates to determine if body condition and nutrition are linked to major health issues in dogs.

environmental influences on canine health

Environmental influences naturally vary between different geographical regions of the country. These include exposure to pesticides in agricultural areas and differences in water composition depending on a community's primary water source. Geographical data will be compared to known regional data as well as to information collected from study participants. Findings will help us identify associations between environmental factors and canine diseases.

spaying and neutering at a young age

Studies show that early spaying reduces mammary cancer in both female dogs and cats. However, an ongoing debate continues on when pets should be spayed and neutered to minimize other disease risks. Dogs at initial enrollment in the study are almost evenly split between spayed and intact females, and neutered and intact males. Data collected will advance our understanding of benefits and risks associated with early and delayed spaying and neutering in dogs.



ABOUT MORRIS ANIMAL FOUNDATION:

Morris Animal Foundation is a nonprofit organization that invests in science to advance animal health. The foundation is a global leader in funding scientific studies for companion animals, horses and wildlife. Learn more at morrisanimalfoundation.org.

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