OUR AGING PETS

Longer lives mean addressing new problems in our furry companions

For many years, small animal veterinary medicine was focused on wellness and preventive medicine. Puppies, kittens and healthy adult pets coming in for vaccinations, well-pet checks and spay/neuter surgery were the heart of most practices, with the occasional broken bone and laceration. It's not that older pets weren't getting sick; it's simply that options for treatment were scarce, diagnostic tests rudimentary and a different mindset about dogs and cats prevailed.

But times have changed. Pets are increasingly viewed as important members of the family, with pet owners dedicated to their health and well-being. Pets also are living longer. This growth in the senior pet population has seen a corresponding increase in demand for geriatric veterinary medicine. Older pets mean coping with age-related health problems, including cancer, arthritis, diabetes, kidney disease, neurological conditions and other health concerns more common in older animal patients.

What defines the age of a senior pet? It depends. You can have a geriatric Great Dane at age 7, or a Chihuahua that lives into its late teens or even early 20s. The age parameters of being a senior pet vary, but needs to be considered with identifiers such as species (dog or cat), breed and signs of aging. That said, in most cases, dogs are considered to be senior between 5 and 10 years old (breed-dependent) and cats between 7 and 10 years old.

To help our pets have the best lives possible, Morris Animal Foundation invests in studies that advance senior pet care. From nutrition and lifestyle to new tools for early diagnosis and treatment, from cancer care to regenerative medicine, we are leading the way in researching the critical health issues affecting our senior pets today.

IN THE UNITED STATES ALONE ..... 29+ MILLION SENIOR CATS

WITH AGING, COME SOME HEALTH CHALLENGES

ARTHRITIS

Pain, reluctance to move and decreased range of motion are common signs of joint-related arthritis or osteoarthritis. This progressive disease affects an estimated one in five adult dogs and may be more common in older cats than previously thought.

OBESITY

In the United States, 60 percent of cats and 56 percent of dogs are considered overweight or obese. Extra body fat increases the risk of many diseases, including diabetes, heart disease and joint problems.

HEART DISEASE

Mitral valve disease is the most common heart condition in older small-breed dogs and makes up about 75 percent of the cardiac cases seen by veterinarians. The disease is progressive and can result in heart failure. Hypertrophic cardiomyopathy (HCM) is the most common heart disease in cats, typically affecting middle-age and senior cats. HCM often goes undiagnosed until a cat develops heart failure or blood clots, at which point the disease is usually difficult to treat.

CANCER

Pets get cancer at nearly the same rate as humans, with the prevalence increasing as cats and dogs get older.

HYPERTHYROIDISM IN CATS

Hyperthyroidism is the most common hormonal disease of cats. In veterinary hospitals, the disease is diagnosed in one out of every 300 cats, with the average cat age of 13. Symptoms include weight loss, weakness, vomiting and heart disease.

KIDNEY DISEASE

About 10 percent of cats over the age of 10 and more than 30 percent of cats over the age of 15 develop chronic kidney disease. While older dogs also are impacted by this disease, the condition is about three times more frequent in cats than in dogs.

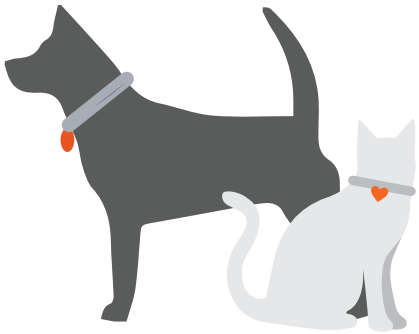
DIABETES

Diabetes affects about one in 300 dogs and one in 200 cats. The disease is common in older pets and can be managed through insulin injections and modified diets.

EYE/VISION PROBLEMS

Failing vision often is a sign of aging. Common reasons for vision loss in older pets are cataracts, glaucoma and progressive retinal atrophy (degenerating retinal tissue).

31+
MILLION
SENIOR
DOGS



HOW WE ARE HELPING

Aging is a natural process that comes with physical changes that are not always reversible. However, with advances in veterinary care and diet, veterinarians (with the help of pet owners) can control and manage many age-related health conditions for animals in their care. Highlights of aging-related research funded by Morris Animal Foundation include:

BETTER PAIN MANAGEMENT FOR ACHES AND PAINS

Thanks to Morris Animal Foundation-funded research, we now know that tramadol, a drug that was prescribed to dogs with osteoarthritis, isn't effective. The good news is there are other drugs on the market that do provide pain relief for arthritic dogs.

For cats, diagnosing pain is tricky as cats are masters at masking pain until disease has progressed to moderate or severe levels. We now have pain management scales to detect subtle signs of pain in cats. These new tools can help gauge how well pain medication and other treatments are working.

NEW AND IMPROVED IMAGING

Catching disease earlier opens avenues for better long-term treatment options. Thanks to our funding, we now have better imaging to help with earlier diagnosis of heart disease in dogs and cats. New imaging techniques also are changing the way we diagnose neurological problems, reducing the need for risky and invasive diagnostic testing.

DIET AND NUTRITION TO MANAGE DISEASE

Our work helped identify ingredients in cat food that influence thyroid health and has led to better diets to manage kidney disease in both cats and dogs.

FEWER SURGICAL COMPLICATIONS

Thanks to our funding, we now have drug-releasing lenses for cataract surgery that significantly reduce persistent inflammation and eye cloudiness in affected dogs, major complications associated with this surgery. Our work also has informed optimal pacemaker placement for dogs with heart conditions and improved cancer surgeries for both cats and dogs, including finding ways to make sure all cancer cells are removed to minimize cancer relapse.

8 TO 20 YEARS

AVERAGE PET LIFESPAN DEPENDING ON BREED

WHAT THE RESEARCH FUTURE HOLDS

Thanks to improved veterinary care and better nutrition, we are enjoying extra years with our pets. But, of course, we always want more. Here's what we are doing about it.

CANCER IMMUNOTHERAPIES

Heralded as a breakthrough to manage many human cancers, immunotherapies – agents that help stimulate the body's immune system to attack cancer cells – may one day be the norm, reducing our reliance on surgery, radiation and chemotherapy. Foundation-funded researchers are working on immunotherapies for osteosarcoma in dogs and oral cancer in cats.

MICROBIOME

Which types of good and bad bacteria reside in our gut and elsewhere in our bodies, (microbiomes) and how these bacteria affect our overall health, is a growing field of research. Researchers are looking at how specific intestinal microbiota can drive or exacerbate intestinal inflammation, contribute to many health conditions including inflammatory bowel disease and obesity, or influence disease outcomes in pets. Findings may point to novel, noninvasive ways to tweak microbiomes to solve a variety of common health issues in cats and dogs.

REGENERATIVE THERAPIES

The popularity of stem cells as treatment for a variety of conditions has grown in the last two decades. Researchers are continually working on why and how stem cells work and how to make them work even better for more patients. We do know that for senior pets that cannot endure general anesthesia during the stem cell-harvesting procedure, using stem cells from unrelated donors is safe for these dogs.

DRUG SAFETY AND EFFECTIVENESS A TOP PRIORITY

Whether it's a new drug, like a promising cancer drug that may help dogs with incurable cancers live longer, or a commonly used drug, like one used today to alleviate gastrointestinal issues in cats with chronic kidney disease, we are the unbiased source of funding to validate if a drug works safely and effectively in our pets. We are not backed by drug companies and the sole goal of these studies is ensuring existing drugs work as intended as well as finding new and safer drug options for our pets.

GENE-EDITING TECHNOLOGY

CRISPR (short for Clustered Regularly Interspaced Short Palindromic Repeats) is a groundbreaking genome-editing tool that may be able to correct genetic errors that cause diseases. While this technology is in its infancy, we are starting to fund our first gene-editing studies, including one looking at silencing a genetic mutation associated with degenerative myelopathy, an incurable, progressive disease of the spinal cord. How this technology will change the lives of our aging pets is yet to be seen, but it holds great potential to dramatically change how we treat disease.

ABOUT MORRIS ANIMAL FOUNDATION

Morris Animal Foundation's mission is to bridge science and resources to advance the health of animals. Founded by a veterinarian in 1948, we fund and conduct critical health studies for the benefit of all animals.

Learn more at **morrisanimalfoundation.org**.

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