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CONSIDER A GERIATRIC WORKUP FOR YOUR AGING PET

At Family Pet Animal Hospital, preventative medicine is the most important kind of medicine that we can provide. Our goal is to extend your pet's life for as long as "quality" describes his or her daily experiences. Together, we can work as a team to uncover problems before they are beyond our control.

Our aging pets are prone to many of the same diseases that we see and are familiar with in people. As our pets approach their geriatric years, we can expect a certain amount of "slowing down" and weight loss. Too often, however, there can be subtle health changes taking place which are masked by our pet's innate ability to compensate or to appear fairly normal even though something significant may be occurring internally. The Geriatric Workup is designed to be a complete check of all your pet's body systems. Performed yearly after the age of ten in small breeds of dogs and cats and at the age of eight for larger breed dogs, it becomes our best chance of revealing problems early, when we can initiate the best and most effective treatments.

1. For your pet's Geriatric Workup, we always start with a **complete physical examination**:

This is the most important procedure performed on your pet by your veterinarian. Looking at the mouth, eyes, ears, coat, skin, and the way the limbs move provides information about general health. Listening to the chest (auscultation) can detect abnormalities in heart rhythm and lung sounds, while feeling the abdomen (palpation) can reveal masses or changes in internal organs.

There are limitations to a physical exam. For example, we may hear a normal heart rhythm but the heart may still look enlarged on a radiograph or show changes on an electrocardiogram. Lungs may sound normal with a stethoscope yet appear abnormal on a radiograph if the problem is subtle and not affecting all the lung tissue. Finally, not all pets let us feel their abdomens easily and an abdominal radiograph and ultrasound allow us to see the organs instead.

2. Next, from a single blood sample, we run several **blood tests**: a complete blood count, biochemistry profile, and thyroid screen; plus a heartworm test for dogs, or a combination feline leukemia virus and feline immunodeficiency virus test for cats.

Complete blood count (CBC): Complete Blood Count (CBC): This test examines the various cells coming from the bone marrow. WE evaluate the red blood cell count screening for anemias. The white blood cell count, as well as the distribution of the various kinds of white blood cells, tells us if there is any sign of infection, inflammation, or cancer. The limitations of this test become apparent when infection is localized and the body deals with it through a lymph node. The CBC will then be normal. If abnormal cells in the CBC suggest cancer, then we may need a bone marrow aspirate to get further information.

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Biochemistry profile (Chem): This is a screening process to evaluate the general health of internal organs. It includes liver and kidney enzymes, blood glucose (sugar), cholesterol, protein (albumin), and all the electrolytes. A change in one of these values helps us focus on a specific organ system. The limitation of this test is that it does not tell us the cause or extent of the problem. Often this requires additional studies. For example, people and pets need to lose 75% of kidney function before there are changes in the blood test! That's why a urinalysis, fractional excretions and other tests help us further evaluate the kidney function when necessary. The elevation of liver enzymes may be a primary problem or secondary to another disease.

Thyroid Profile: The thyroid levels are critically important to monitor as animals age. Cats are prone to thyroid tumors causing an increase in numbers, while dogs are affected by inactive glands that produce low numbers. Both diseases are serious and need to be treated. The limitation to this test is that hormone levels fluctuate with the time of day and sometimes need to be repeated. Thyroid levels can also be falsely suppressed by other diseases.

Heartworm Test (HW): FOR DOGS ONLY. Heartworm disease is a fatal parasitic infection of the heart on the rise in this area. Although you may be extremely good at giving the preventative medications, it is important to verify that the medication has done its job.

Feline Leukemia Virus (FeLV) and Feline Immunodeficiency Virus (FIV): FOR CATS ONLY. Even if your cat has been tested before, these viruses are screened for again. Both these viruses are devastating to the immune system and may cause infections, as well as certain cancers. We know that up to 20% of FeLV infections can be latent or hiding in the bone marrow and show up late in life. FIV has a four month incubation period. These facts make it possible for a cat to test positive at unexpected times.

3. In addition, we run two other **laboratory tests:** a fecal floatation, and urinalysis:

Fecal Flotation (FECAL): This test screens for intestinal parasites by looking for the eggs passed into the stool by adult worms living in the intestines. We live in an endemic area for roundworms, hookworms, and whipworms. These worm infestations may not show clinical problems immediately, even though they are already causing scarring in the intestines and need to be treated. This test has several limitations. Some worm types do not shed eggs often and are therefore difficult to detect without multiple samples. For example, tapeworms cause rice-like pieces around the anus or in the stool yet eggs are rarely discovered in a routine fecal sample. Furthermore, fecal flotation will not reveal all types of parasites, such as giardia, a common protozoal parasite.

Urinalysis (UA): Checking the urine provides information about the kidneys, the urinary bladder, the liver, and the body's overall hydration status. The concentration of the urine, the pH of the urine, as well as the cells that are looked at microscopically all provide significant information. Urine may reveal infections, tumors in the urinary tract, hypertension (high blood pressure), or kidney failure. The limitation of a UA is the body's natural fluctuations in hydration, and that very diluted urine samples (caused by disease) give us fewer cells to learn from.

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4. Also included in the Geriatric Workup are **radiographs**:

Thoracic Radiographs (chest x-rays): These films reveal the size and shape of the heart, the vessels going to and from the heart, and the lung tissue. Most of the time taking two pictures from different angles gives a good three dimensional screen and rules out worrisome heart changes as well as diseases of the lungs like pneumonia, bronchitis, and tumors. For the heart, the limitation is that the radiographs will not tell you which valve of the heart is creating a murmur, whether a specific heart chamber is mildly enlarged, or if the muscles of the heart are the correct thickness and are functioning normally. In some cases, a **cardiac ultrasound** may be recommended to provide more in-depth information. In the lungs, there is a minimum size a disease must be before it will show up on a radiograph, therefore x-rays may need to be repeated at a later date to see whether worrisome areas are changing.

Abdominal Radiographs (abdominal x-rays): These films reveal the size, shape, and location of the abdominal organs. We can evaluate the liver, spleen, kidneys, bladder, intestines, and sometimes lymph nodes in the abdominal cavity. In a very thin or fat animal, there is a limitation to the detail visualized. Because organs blend together, it may be difficult to tell if there is a very small tumor. Radiographs will not show you inside the organs. In some cases, your doctor may recommend an **abdominal ultrasound**, which can delineate organs from each other and show various tissue changes if the organs are unhealthy. Although radiographs and ultrasounds are a non-invasive way to get information, they do not tell us why an organ is damaged. A **biopsy** is necessary to tell us more specifically what is happening to an organ.

The Spine: The thoracic and abdominal radiographs show the spinal vertebra and help us evaluate the spine for arthritis, disc disease, and tumors. If your pet has been having hip pain, we may add a pelvic radiograph to evaluate the hip joints.

5. Finally, your pet will receive an **electrocardiogram** and **blood pressure** check:

Electrocardiogram (ECG): This test measures the electrical function of the heart. We take six different leads and a rhythm strip. The ECG helps identify cardiac arrhythmias, changes in heart size, and abnormalities in electrical communications between heart chambers. If abnormalities in the ECG exist, a **cardiac ultrasound** will be recommended even if the chest radiographs are normal.

Blood Pressure (BP): This test screen for hypertension which can be damaging to the kidneys and the heart. Although high blood pressure is not common, it is important to screen for and treat elevations. Systolic pressure is the only accurate reading we can obtain in very small animals.

Geriatric Workups are performed in a single day. Within the next few days, an appointment is scheduled for you to discuss test results with your pet's doctor. Recommendations concerning diet, exercise, and possible treatment may be made at this time. Occasionally some test results require an additional day, and results will then be discussed by telephone. One benefit to scheduling a Geriatric Workup for your pet (in addition to the medical and health benefits) is that, as a package, a Geriatric Workup costs less than if your pet received the same tests individually over the course of a year.

The Geriatric Workup is an excellent way to get a good overview of your pet's health. Please do not hesitate to discuss the Geriatric Workup with us; we will be happy to answer all of your questions and address all your concerns as your pet enters his or her geriatric years.