

Blood Pressure Guidelines for Senior and Geriatric Cats

The SunTech Medical veterinary monitoring devices provide a method of measuring blood pressure that is easier, quicker, and less stressful for companion animals. Such a device enables veterinarians to provide more blood pressure screening services to those populations that most need it. One such population with unique healthcare challenges and requirements is senior and geriatric cats. A number of guidelines and recommendations have been published regarding when, how often, and how to take the blood pressure of older cats.

Senior cats are defined by the American Association of Feline Practitioners (AAFP) as being between 11-14 years old. Geriatric cats are those that are 15+ years old.¹ Older cats are at a higher risk for developing high blood pressure and may not always exhibit apparent symptoms. In one study, hypertension was found in greater than 5% of apparently healthy older cats. A cat with chronic kidney disease (CKD) is even more likely to have hypertension.² One study found that 61% of cats with chronic renal failure also had systemic hypertension.³ Another disease commonly associated with hypertension is hyperthyroidism. Around 87% of cats with untreated hyperthyroidism have systemic hypertension.³

The most common type of hypertension in cats is secondary. It is typically found to be a consequence of kidney disease, hyperthyroidism, or diabetes.⁴ Often a cat with secondary hypertension exhibits symptoms in one or more of the following systems:

- Ocular system (sudden blindness)
- Renal system (weight loss, increase in urination)
- Neurologic system (seizures, disorientation)
- Cardiovascular system (trouble breathing)

Frequency of Blood Pressure Checks

It is important to have a baseline blood pressure established in order to identify any changes in blood pressure later in life. The AAFP recommends including blood pressure as part of a feline patient's "minimum database" starting at age 7.¹ After obtaining a baseline, blood pressure should be checked regularly (at least annually) and with increasing frequency as the cat ages.² The American College of Veterinary Internal Medicine (ACVIM) suggests starting the baseline measurements even earlier, around age 2 or 3, with checks at 4-6 years and 7-9 years before beginning regular screening at

age 10.⁵ Overall, a senior or geriatric cat should be receiving exams every 6 months.¹ Many veterinary clinics have wellness plans developed for specific ages and species of pets. VCA hospitals have such a plan for senior cats that includes 5 exams per year and blood pressure checks.⁶

Measurement Protocol

The "white coat effect" is commonly found in cats because of the stress associated with visiting the veterinarian's office. In order to reduce the likelihood of a falsely high reading, it is important to follow certain procedures when attempting to measure a cat's blood pressure. The cat should be in a quiet room without other animals present. Allow the cat to acclimate for at least 5 minutes before beginning and be sure to measure blood pressure prior to the rest of the exam. Ideally the cat should be in a relaxed position during the measurements. Additionally, choosing the correct cuff size for the patient is essential to get an accurate reading.⁷ Between three and seven consecutive and consistent measurements should be taken and then averaged to determine the blood pressure.⁵ Some blood pressure monitors, such as the SunTech Vet20 BP Monitor, have a built-in averaging feature to assist the user with these calculations. It is also considered good practice to discard the first measurement to give the cat a chance to get used to the process.

Diagnosing Hypertension in Cats

Building a database of various measures for each patient can help identify the changes in those measures as the cat gets older. However, determining the point at which to diagnose hypertension can be more difficult. The International Society of Feline Medicine reports that the risk to organ damage is minimal until systolic pressure is consistently measured at greater than 180 mmHg.⁷ The ACVIM guidelines for blood pressure categorize systolic blood pressure ranges by the risk they pose of future target-organ damage (TOD), as seen in the following table.⁵

Risk Category	Systolic BP	Diastolic BP	Risk of future TOD
I	<150	and ³ <95	Minimal
II	150–159	95–99	Mild
III	160–179	100–119	Moderate
IV	≥180	≥120	Severe

In a cat with CKD, the risk of organ damage comes at lower pressures. The AAFP guidelines for cats with CKD are to treat for hypertension when blood pressure is 160-179/100-119 mmHg.¹

Cats have been known to be vulnerable to stress-induced or white-coat hypertension when visiting the vet's office. Due to the possibility of an artificially high reading at the clinic, it may be beneficial to lend the blood pressure monitor to the cat owner for them to use in the less stressful environment of their home.⁸

SunTech Medical is a leading global provider of blood pressure monitors and non-invasive blood pressure technologies (OEM). We have always recognized the need for highly specialized equipment for different markets and environments. Our focus on blood pressure for almost thirty years has allowed us to study various patient populations and design equipment specific to the needs of that patient group.

References

1. Pittari, J., Rodan, I., Beekman, G., Gunn-Moore, D., Polzin, D., Taboada, J., Tuzio, H., Zoran, D. (2009). American Association of Feline Practitioners Senior Care Guidelines. *Journal of Feline Medicine and Surgery*, 11, 763-778.
2. Bellows, J., Center, S., Daristotle, L., Estrada, A., Flickinger, E., Horwits, D., Lascelles, B., Lepine, A., Perea, S., Scherk, M., Shoveller, A. Evaluating Aging in Cats. (2016). *Journal of Feline Medicine and Surgery*, 18, 551-570.
3. Brooks, W. High Blood Pressure (Systemic Hypertension) in our Pets. (2002). *Veterinary Partner.com*. <http://www.VeterinaryPartner.com/Content.plx?P=A&A=1216>
4. Hypertension (high blood pressure) in cats. *International Cat Care*. <http://icatcare.org/advice/cat-health/hypertension-high-blood-pressure-cats>
5. Brown, S., Atkins, C., Bagley, R., Carr, A., Cowgill, L., Davidson, M., Egner, B., Elliott, J., Henik, R., Labato, M., Littman, M., Polzin, D., Ross, L., Snyder, P., Stepien, R. Guidelines for the Identifications, Evaluation, and Management of Systemic Hypertension in Dogs and Cats. (2007). *Journal of Vet Intern Med*, 21, 542-558.
6. Senior Cat Wellness Plan. *VCA Animal Hospitals*. <http://www.vcahospitals.com/main/pet-care/care-club/wellness-plans>
7. Sparkes, A., Blundell, C., Cannon, M., Baut, N., Harvey, A., Jacmenikova, Z., Taylor, S., Turner, A., Zoltowska, A. Practical recommendations on the measurement of indirect blood pressure in cats. *International Society of Feline Medicine*, 52, 433-451.
8. Coates, J. Diagnosing Feline Hypertension. (2011) *petMD*. http://www.petmd.com/blogs/thedailyvet/jcoates/2011/aug/feline_hypertension_diagnosis_11531