

# Blood Pressure Test (Indirect Method)

- An (indirect) blood pressure test measures the pressure of blood against the walls of large arteries.
- It is a noninvasive, painless procedure that can be performed on an outpatient basis.
- Your veterinarian may recommend a blood pressure test if your pet shows signs of high blood pressure or has been diagnosed with a disease associated with high blood pressure.
- High blood pressure is usually treated by identifying and treating the underlying disease. Prescription medications may be necessary.

### What Is a Blood Pressure Test?

A blood pressure test measures the pressure of blood against arterial walls as the blood is pumped through the body. As a general rule of thumb, blood pressure should not exceed about 160/100 mm Hg in dogs and cats. The first number is the systolic blood pressure, or the pressure when the heart contracts. The second reading is the diastolic blood pressure, which is lower because it is the pressure when the heart relaxes between contractions. Blood pressure is measured in millimeters of mercury (mm Hg).

### Which Pets Should Have a Blood Pressure Test?

In most cases, a blood pressure test is performed to determine if your pet's blood pressure is too high. When blood pressure is too high, bleeding may occur, which can damage internal organs. The organs that are most vulnerable to damage are the eyes, kidneys, heart, and brain. The most common sign of high blood pressure is sudden or gradual blindness. Blindness caused by high blood pressure may be reversible, if caught early. Other signs of high blood pressure include dilated pupils, disorientation, and, less commonly, seizures.

In dogs and cats, high blood pressure is typically caused by another disease or condition, such as:

- Hyperthyroidism (too much thyroid hormone)
- Kidney disease
- Cushing disease, or hyperadrenocorticism (too much adrenal hormone)
- Diabetes mellitus (too much blood sugar)

Your veterinarian may recommend a blood pressure test if your pet shows signs of high blood pressure or has been diagnosed with a disease associated with high blood pressure. Because cats older than 10 years are at high risk for kidney disease and hyperthyroidism, veterinarians often recommend screening them for high blood pressure.

Your veterinarian may recommend a blood pressure test if your pet shows signs of high blood pressure or has been diagnosed with a disease associated with high blood pressure.

Pets that are critically ill or under general anesthesia are often monitored to ensure that their blood pressure doesn't become too low. Maintaining normal blood pressure is important so that organs receive the oxygen necessary to maintain proper function.

### How Is Blood Pressure Measured?

In most cases, a blood pressure test is noninvasive and painless for your pet and can be performed during a regular office visit. Anxiety and stress can raise your pet's blood pressure, so the test should be done in a quiet, relaxed environment and should be

## Tests and Procedures

performed several times to ensure the results are not influenced by stress.

With the most common technique, a blood pressure cuff is placed around one of the pet's limbs or around the base of the tail. The cuff is inflated to a pressure above the systolic pressure, so it momentarily presses against the artery and stops the blood flow. The cuff is then slowly deflated, and a machine determines the systolic and diastolic blood pressures. This method is called *the indirect method* and is fairly accurate. The most accurate blood pressure measurement is accomplished by placing a catheter directly into an artery. This type of monitoring is more painful and typically only done for

patients that are critically ill and/or under general anesthesia and need constant blood pressure monitoring.

### How Is High Blood Pressure Treated?

Because high blood pressure is usually caused by another disease, identifying and treating that disease can help return blood pressure closer to normal.

Occasionally, additional medications that dilate the blood vessels are required to help reduce blood pressure. If your pet has been diagnosed with high blood pressure, a blood pressure test should be done every few months to make sure the condition is properly controlled.