

I understand Westie puppies are prone to Addison's disease. Can you tell me more about this problem?

Addison's disease, also referred to as hypoadrenocorticism, is an immune disease, which attacks the adrenal glands. It can be difficult to diagnose since the signs may be very subtle. It occurs primarily in dogs but has also been reported in cats.

With this disease the adrenal glands (the two glands located near the kidneys) can no longer produce the normal amount of certain hormones, which are needed to maintain basic life functions.

These hormones are called mineralocorticoids and glucocorticoids. The body requires a low level of these hormones to maintain gastrointestinal health and to help the body adapt to stressful situations.

Mineralocorticoids help maintain the balance of sodium and potassium in the blood, which are both very important for fluid balance and heart rate and rhythm. Usually this problem results from immune destruction of the adrenal glands, causing the cells that produce these hormones to die.

The disease occurs more in females than in males and affects young to middle-aged dogs more commonly. While it can occur in any breed of dog, breeds such as Standard poodles, West Highland white terriers ("Westies"), and Rottweilers seem to have a higher incidence of this disease.

The signs for Addison's disease can be very nonspecific and include sporadic vomiting, diarrhea, poor appetite, and at times, drinking and urinating too much.

Another presentation, which is more serious, is referred to as an "Addisonian crisis" and can be life-threatening. These dogs present with weakness, collapse, hypothermia (low body temperature), and shock. These signs develop very fast (within 24 hours) and require emergency intervention.

Your veterinarian may suspect Addison's disease if your dog has compatible clinical signs, is dehydrated, has a slow heart rate and has corresponding blood tests, which reveal a high potassium, low sodium, low glucose (blood sugar), and possibly poor kidney function.

In this crisis situation, treatment should not be delayed. To prove that a dog has Addison's disease, a special blood test (called an ACTH stimulation test) is performed to test the body's ability to produce glucocorticoids (one of the hormones lacking in Addison's disease). Dogs with Addison's disease will not have a response to the ACTH injection and, therefore, not produce this hormone.

Currently there is no test that can predict whether Addison's disease will develop prior to the onset of the disease. So the disease is always diagnosed after signs have developed.

Once a diagnosis is made, if the dog is in a "crisis," intravenous fluids and intensive treatment and monitoring in the hospital is required.

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Maintenance therapy (long term) requires replacement of the hormones, which the dog can no longer produce. This treatment will be needed for life, since the adrenal glands cannot function properly.

The most common treatment consists of a monthly injection of a replacement hormone. There is an daily oral medication available; but it is more expensive than the injection.

Your veterinarian will also need to recheck blood tests periodically to monitor response to the treatment. The good news is that most dogs can be well controlled with these medications and live a long happy life as long as they continue to receive the hormone replacement.

This column is provided by the faculty of the OSU Boren Veterinary Medical Teaching Hospital. The large volume of questions does not allow us to directly respond to specific email questions so please watch for your answer in the column. Email your questions for the column to dvmoncall@postoffice.cvhs.okstate.edu and watch for your answer.

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