

Something Sneaky Could Be Draining Your Pup's Spark

It's a big mistake to wait until every last symptom shows up. By then there's no holding back, and it often takes heavy meds for the rest of your pet's life to control. Too many vets gloss over this key early warning sign. Dogs don't suddenly wake up with this, so this is important.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Cushing's disease (hyperadrenocorticism) is a condition characterized by an ongoing release of too much cortisol by the adrenal glands
- Cushing's can produce a variety of diverse symptoms, including increased thirst and urination, hair loss and abdominal weight gain
- Typical Cushing's disease involves the overproduction of cortisol and can be either adrenal dependent, or more commonly, pituitary dependent; 'atypical' Cushing's involves the overproduction of aldosterone or sex hormones
- Many veterinarians disregard elevations in serum Alkaline Phosphatase (ALP), an enzyme commonly out of range with Cushing's patients, and a common reason why many cases are diagnosed only after the disease is full-blown
- Cushing's happens over time, so identifying pre-Cushing's syndrome as early as possible and reducing the risk for full-blown disease is the best approach

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Cushing's disease is most often seen in dogs — especially Terriers, Poodles, Dachshunds and the American Eskimo/Spitz. It rarely occurs in cats.

The medical term for this condition is hyperadrenocorticism. Hyper means too much, adreno refers to the adrenal glands, and corticism refers to a syndrome involving the hormone cortisol. Simply put, hyperadrenocorticism describes a condition in which too much cortisol is released by the adrenal glands.

Overproduction of This Hormone Can Trigger Health Problems

In a healthy dog's body, cortisol, known as the fight-or-flight hormone, is released in small amounts by the adrenal glands in response to perceived stress, so the dog can prepare to battle or run for his life. A release of cortisol also triggers a release of glucose from the liver. Glucose provides energy to the cells of the muscles used to fight or take flight.

Cortisol also impacts a number of other important functions in your dog's body, including blood pressure, electrolyte balance, bone and fat metabolism, and immune function. Cortisol is secreted in response to any type of stress in your pet's body; physical or emotional, short-term or long-term.

If for some reason your dog's body up-regulates its demand for cortisol, the adrenal glands begin overproducing the hormone, which can lead to a state of toxicity. In dogs who experience chronic stress in any form, the adrenals release more cortisol than their bodies need.

This situation can result in a number of serious disorders, including elevated blood sugar that can lead to diabetes, elevated blood pressure that can result in heart and kidney disease, extreme hunger in response to lots of excess glucose being burned, thinning of the skin and coat, decreased muscle and bone mass, and increased risk of infection.

If your dog's body is continuously overproducing cortisol, his immune function is compromised, which opens the door for infections anywhere in the body — especially the gums, eyes, ears, skin and urinary tract. If your dog has recurrent infections or a persistent infection, it's possible too much cortisol is the cause.

Symptoms of Cushing's Disease

Most dogs have a few, but not all of the symptoms of the disorder unless diagnosis comes very late in the disease. Symptoms most commonly seen in dogs with early Cushing's include:

- Increased thirst and urination, which can lead to incontinence
- Bruising
- Increased panting
- Hair loss
- Abdominal weight gain (pot belly appearance), despite a reduction in calorie intake
- Irritability or restlessness
- Thinning skin and change of skin color from pink to grey or black, symmetrical flank hair loss
- Much less commonly, rear limb weakness and blood clots

These symptoms are so diverse and can affect so many organs because every inch of a dog's body contains cortisol receptors.

Typical or Atypical Cushing's?

If your dog is diagnosed with hyperadrenocorticism, it's important to know which type of Cushing's she has. Typical Cushing's is either adrenal dependent or, much more commonly, pituitary dependent. About 85% of affected dogs develop the latter form, in which the pituitary gland sends too much stimulating hormone to the adrenals. The adrenal glands respond by over-secreting cortisol.

The remaining 15% of cases are adrenal dependent, in which a tumor develops in an adrenal gland and triggers an up regulation of cortisol production. It's not uncommon for veterinarians to unintentionally trigger typical Cushing's by prescribing a too-high dose of oral prednisone (synthetic cortisone), or a course of prednisone therapy that is too long in duration. If your dog has taken prednisone for any length of time, she's predisposed to Cushing's disease.

The atypical form of hyperadrenocorticism occurs when the adrenals overproduce aldosterone, a hormone that balances electrolytes in the body. Atypical Cushing's can also result from an overproduction of sex hormone (estrogen, progesterone, and rarely, testosterone) precursors.

Diagnosing Hyperadrenocorticism Can Be Challenging

The actual diagnosis of Cushing's is often complicated. It's typically done with blood tests like the ACTH stimulation (stim) test and the low-dose dexamethasone suppression test. Both these tests require at least two blood draws to compare cortisol levels for a definitive diagnosis of Cushing's.

When Cushing's is confirmed, your veterinarian will want to determine if it's pituitary or adrenal dependent. The best way to rule out an adrenal gland tumor is with a noninvasive ultrasound test. However, some vets prefer to do a third blood test called a high-dose dexamethasone suppression test.

Whichever method is used, it's important not only to establish a definitive diagnosis for Cushing's, but also to determine whether the form of the disease is adrenal or pituitary dependent.

Unfortunately, in the majority of cases, the disease is diagnosed only after it is full-blown and there's no holding it back. Once a dog has full-blown Cushing's, she will live with the disease for the rest of her life. It's a horrible illness that can be managed in many cases, but never cured.

Many veterinarians tend to ignore repeated and progressive elevations in serum Alkaline Phosphatase (ALP), one of the commonly elevated enzymes found on routine bloodwork, until several Cushing's symptoms are present, or a pet parent becomes concerned that their dog is suddenly urinating in the house or losing her hair.

The better, proactive approach is to try to prevent the disease from taking hold. That's why you should get a copy of your pet's yearly bloodwork results. Your pet should age with picture-perfect bloodwork, or there's work to be done.

Never let a veterinarian tell you your pet's abnormal bloodwork is "normal for their age," as this means disease is taking place without anyone addressing it. If your dog's ALP is two to three times higher than normal, ask your vet if your dog could be in the early stages hyperadrenocorticism.

The Importance of Catching This Disease Early

Most of the drugs currently available to treat Cushing's disease have many undesirable side effects. It's extremely important to discuss your concerns about possible side effects with your veterinarian. Do your own research as well.

Avoid using Lysodren and other potent Cushing's drugs because the side effects are often worse than the symptoms the animal is dealing with. If Cushing's drugs must be used, use Trilostane, which has fewer side effects. Obviously, the goal is to catch the disease before high drug doses are required.

If, however, your dog requires drugs to manage full-blown Cushing's, start with the lowest possible effective dose, and using it in conjunction with a natural protocol to reduce potential side effects. Identifying pre-Cushing's syndrome as early as possible and reducing your pet's risk for full-blown disease is the recommended approach. Dogs don't suddenly wake up with this disease — it happens over time.

Unfortunately, many conventional veterinarians ignore the early signs of adrenal dysfunction because they don't know what to do about it until a dog fails the ACTH stim test. The problem with this approach is it takes months and sometimes years for an animal to be officially diagnosed with Cushing's.

Waiting this long to take action often means waiting too long. A dog has pre-Cushing's syndrome when he exhibits classic symptoms but is still able to pass the stim test. Often there are minor changes in bloodwork, for example, the UCC (urine cortisol:creatinine ratio) is slightly elevated, there are elevated cholesterol levels, and/or the elevation in ALP has been proven to be cortisol induced (your vet can check what fraction of ALP is coming from cortisol vs. other sources).

There have been many pre-Cushing's patients whose condition was reversed with nutraceuticals, Chinese herbs, homeopathics, nutritional therapy, and lifestyle management (reducing biologic and metabolic stress).

Be proactive by having your pet's ALP level checked annually, which should be a part of a basic "wellness blood test," along with a physical exam that evaluates muscle mass, coat condition, and an environmental stress assessment. Ask your veterinarian to establish baseline blood levels and address any elevation from the baseline through a screening test like the UCC or CiALP to determine if your dog's body is over-secreting cortisol.

Never accept steroids prescribed for your pet unless they're required to dramatically (and temporarily) improve quality of life (e.g., if your pet has acute head trauma and steroids are needed to control brain inflammation, etc.).

Having this information will help you better manage a pre-Cushing's situation before it develops to full-blown disease. And don't ignore symptoms. If your pet has consistent Cushing's-type symptoms, no matter how minor, they are absolutely worth investigating for a possible endocrine or adrenal disorder.

It's during the development of Cushing's disease that many dogs are also over-prescribed aggressive traditional drug protocols for full-blown Cushing's disease, often with disastrous results.

When these potent drugs are prescribed for mild adrenal dysfunction, the result is often an acute Addisonian crisis in which there are insufficient adrenal hormones necessary for normal physiologic function. A natural protocol to manage pre-Cushing's is essential to avoid drug-induced hypoadrenocorticism (Addison's).

Prevention Tips

There are some common-sense steps you can take to reduce your dog's risk of developing hyperadrenocorticism, including:

- Feed a moisture rich, nutritionally optimal, species-appropriate anti-inflammatory diet to reduce biologic stress; this means eliminating all grains and carbohydrates from the diet, since carbs trigger insulin release and insulin triggers cortisol release
- Exercise your dog daily to help combat stress and promote the release of endorphins
- Instead of spaying or neutering, consider a sterilization procedure that leaves your dog's testicles or ovaries in place; if that's not possible, wait until your pet has reached his or her full adult size, and in the case of females, after the first and preferably two estrus cycles
- Minimize your pet's exposure to xenoestrogens

- Investigate adaptogenic herbs and adrenal-supportive natural substances like magnolia rhodiola, ashwagandha, and phosphatidylserine
- Address abnormal hormone levels early on with natural support, such as melatonin, DIM, glandular therapies and high lignan flax hulls

Sources and References

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