

# Endocrine Disorders & Skin Diseases

## Dermatology Service



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Healthy skin and a normal hair coat are a result of many factors both internal and external. The body contains several glands which secrete hormones into the bloodstream. These glands and their hormones are called the endocrine system. These hormones are vital to normal skin and hair coat production, and are necessary for the regulation of other body functions.

A common cause of skin disease is a failure of an endocrine organ to secrete the proper amount of its hormone. This usually results in some degree of hair loss and abnormal skin quality. Depending on the hormone involved, there may be other subtle changes noted in the pet's history or found on the physical exam. This information may help us decide which organ is most likely involved and thus direct our testing. Hormonal disorders usually carry a good prognosis. Some are treated with lifelong medication, while others are cured surgically.

The following is a brief summary of the endocrine disorders which may cause skin disease in the dog:

### **HYPOTHYROIDISM**

**Cause**—Insufficient thyroid hormone production

**Signs**—Hair loss, dark skin, dandruff, overweight, lethargy, poor hair coat, recurrent infections

**Tests**—CBC, chemistry panel, thyroid panel, skin biopsy

**Treatment**—Thyroid (pills) supplement for life

### **CUSHING'S DISEASE**

**Cause**—Excessive cortisone production by the adrenal gland or due to a pituitary (brain) problem

**Signs**—Hair loss, thin skin, muscle wasting, weakness, excessive water intake, panting, pot-belly, recurrent infections, poor hair coat

**Tests**—CBC, chemistry panel, urinalysis, urine culture, skin biopsy, adrenal function tests, abdominal ultrasound

**Treatment**—Medication (lifelong) or surgery depending on whether the problem is the adrenal or the pituitary

### **SEX HORMONE IMBALANCE**

**Cause**—Abnormal estrogen, progesterone or testosterone levels

**Signs**—Hair loss, poor haircoat, change in coat color

**Tests**—Skin biopsy, sex hormone blood levels

**Treatment**—Surgical (spaying or neutering) or hormone replacement

### **SEASONAL FLANK ALOPECIA**

**Cause**—Unknown at this time, but it is believed to be related to photoperiod (length of day)

**Signs**—Hair loss especially in the flank and lateral trunk area, darkening of the skin, scaling

**Tests**—Skin biopsy

**Treatment**—Melatonin (?)

\*\*Please note that all the signs may not be present. Also, these disorders can mimic one another, so that it may be necessary to test for multiple endocrine disorders.

