

# Vitamin A treatment of dogs with pituitary-dependent Cushing's disease

## Study objectives

Cushing's disease is one of the most common endocrinopathies in dogs. It causes an array of symptoms including increased drinking and urinating, increased appetite, panting, weight gain with muscle wasting, high blood pressure, urinary tract and opportunistic infections among others. This disease is most commonly caused by a pituitary tumor that makes a hormone which causes the adrenal glands to make too much cortisol. Currently there is only one approved treatment for dogs, trilostane, which decreases the amount of cortisol made by the adrenal glands but does nothing to address the pituitary tumor. Retinoic acid (isotretinoin) has been shown to help with clinical signs of Cushing's disease and may even decrease the pituitary tumor. This drug, however, is expensive and tightly regulated because of its risk of birth defects in women. Vitamin A (retinol) is an over the counter nutraceutical that has been used with success in veterinary medicine for some skin diseases in which isotretinoin was initially recommended. Side effects from Vitamin A are very uncommon in dogs. The benefit of this study is that Vitamin A might be found to be an alternative affordable treatment for dogs with Cushing's disease with minimal side effects.

## Inclusion criteria

Dogs must be:

- Diagnosed with pituitary dependent Cushing's disease
- At least 7 kg in weight (15.5 pounds)
- Spayed or castrated
- Willing to return for up to 4 visits

## Exclusion criteria

- Recent steroid history (call to discuss this)
- Current treatment of Cushing's with standard medications (e.g. Trilostane or mitotane)
- Suspect or known adrenal tumor

Participation in this study is voluntary and withdrawal from the study is permitted at any time requested without any repercussions.



## Study benefits

Involvement in the study will last up to 5 months. Benefits provided at no cost for qualifying dogs include:

- Hospital visits
- Blood tests (ACTH)
- Ultrasound
- Vitamin A treatment

There will be no monetary compensation to you for participation in the study.

## Contact information

Contact Dr. Linda Frank to discuss a possible study candidate prior to making an appointment with UTCVM. These trials will be conducted in cooperation with the candidate's primary veterinarian. ***Please do not have the clients initiate contact.***

### Dr. Linda Frank

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