

Date _____

Patient _____

Thyro-Tabs® administration schedule _____

Dosage _____

Comments _____

Next appointment _____

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800-831-0004
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Vet-A-Mix is a division of



Thyro-Tabs® (levothyroxine sodium tablets, USP)

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION: Synthetic crystalline levothyroxine sodium, USP.

INDICATIONS: For use in dogs for correction of conditions associated with low circulating thyroid hormone (hypothyroidism). Low serum circulating L-thyroxine (T4) concentrations, coupled with clinical signs, are suggestive of hypothyroidism. The following parameters for T4 concentrations in canine serum have been established: normal (euthyroid)—18 to 32 ng/mL (1.8 to 3.2 µg/dL); possible hypothyroid—10 to 18 ng/mL (1.0 to 1.8 µg/dL); hypothyroid—less than 10 ng/mL (<1.0 µg/dL). A resting serum T4 concentration of 18 ng/mL or above signifies that hypothyroidism is unlikely. A dog with a T4 below 18 ng/mL that is exhibiting signs of hypothyroidism should be considered for levothyroxine replacement therapy. Confirmation of the diagnosis could include withdrawal of the levothyroxine sodium therapy. A recurrence of clinical signs following cessation of therapy further supports the diagnosis. Correct diagnosis of hypothyroidism is important, since a diagnosis normally commits an animal to life-long replacement therapy. The principle objective of levothyroxine sodium administration is to achieve and maintain normal metabolism in the patient by providing an exogenous supply of synthetic L-thyroxine in amounts sufficient to maintain levels of the hormone within the animal's normal physiologic range. Animal adaptation may necessitate regular monitoring of serum T4 concentrations during the first several months of treatment to establish proper maintenance doses. Thyroid-stimulating hormone (TSH) testing may be used to provide a definitive diagnosis in dogs with borderline resting T4 values.

MODE OF ACTION: Levothyroxine sodium provided by Thyro-Tabs® tablets cannot be distinguished from L-thyroxine endogenously secreted by the thyroid gland. The primary regulator of thyroid function is thyroid-stimulating hormone, which is synthesized and secreted by the pars distalis of the adenohypophysis (anterior pituitary). The mediator from the hypothalamus, which exerts a continuous influence over the pituitary release of TSH, is the thyrotropin-releasing hormone (TRH). Thyroid hormones influence virtually every body organ, either by their effect on growth and development or by the hormone's metabolic effects.

HYPOTHYROIDISM IN THE DOG: Hypothyroidism usually occurs in middle-aged and older dogs although the condition will sometimes be seen in younger dogs of the larger breeds. Neutered animals of either sex are also frequently affected, regardless of age. The condition is primary failure of the thyroid gland because of lymphocytic thyroiditis or other loss of follicular epithelium and resulting atrophy of the gland. Secondary hypothyroidism is relatively rare and usually due to a destructive pituitary tumor.

CLINICAL SIGNS: Not all dogs with hypothyroidism will have classic signs and laboratory findings. The following list of clinical signs and laboratory findings may vary depending upon the degree and length of time of the thyroid dysfunction. **Nerve and muscle function:** lethargy, lack of endurance, increased sleeping, reduced alertness

and interest, impaired cerebral function and dulled mental attitude, hypotonus, stiff and slow movements, dragging of forelimbs, head tilt, disturbed balance. **Metabolism:** decreased oxygen consumption and lower metabolic rate, sensitivity and intolerance to cold, low body temperature, cool skin, preference for warmth, increased body weight, constipation, poor exercise tolerance, slow heart rate, weak pulse, weak apex heart beat and low voltage on ECG. **Reproduction:** reproductive failure, abortion, still-birth, live birth of weak young, delayed puberty, reduced libido, impaired spermatogenesis, irregular estrus and anestrus, galactorrhea. **Skin and hair:** myxedema of face; blepharoptosis; atrophy of epidermis; thickening of the dermis; surface and follicular hyperkeratosis; hyperpigmentation; coarse and sparse coat; dry, dull and brittle hair; slow regrowth and retarded turnover of hair; bilateral alopecia. **Laboratory findings:** low serum T4 concentrations, hypercholesterolemia, hypertriglyceridemia, elevated serum creatine kinase, anemia (normochromic, normocytic).

CONTRAINDICATIONS: Levothyroxine sodium therapy is contraindicated in thyrotoxicosis, acute myocardial infarction, and uncorrected adrenal insufficiency. Other conditions in which the use of L-thyroxine replacement therapy may be contraindicated or should be instituted with caution include primary hypertension, euthyroidism, and pregnancy.

WARNINGS: The administration to dogs to be used for breeding purposes or in pregnant bitches has not been evaluated. There is evidence that administration to pregnant bitches may affect the normal development of the thyroid gland in unborn pups.

PRECAUTIONS: The clinical effects of therapy are slow in being manifested. Overdosage may produce the signs of thyrotoxicosis including, but not limited to, polydipsia, polyuria, polyphagia, reduced heat tolerance, and hyperactivity or personality change. Thyro-Tabs® 0.7 mg tablets contain FD&C yellow #5 (tartrazine) which has been associated with allergic-type reactions (including bronchial asthma) in susceptible humans. It is unknown whether such a reaction could occur in dogs.

ADVERSE REACTIONS: There are no specific adverse reactions associated with levothyroxine administration at the recommended dosages. Overdosage will result in the signs of thyrotoxicosis.

DOSAGES: The initial recommended daily dose is 0.1 to 0.2 mg/10 pounds (4.5 kg) body weight in single or divided doses. Dosage is then adjusted by monitoring T4 blood levels of the dog every four weeks until an adequate maintenance dose is established. The usual daily maintenance dose is 0.1 mg/10 pounds (4.5 kg). A maximum of 0.8 to 1.0 mg total daily dose will be sufficient in most dogs over 80 pounds in body weight.

ADMINISTRATION: Thyro-Tabs® may be administered orally or placed in the food.

HOW SUPPLIED: Thyro-Tabs® is available as scored, color-coded tablets in nine concentrations: 0.1 mg—yellow, 0.2 mg—pink, 0.3 mg—green, 0.4 mg—maroon, 0.5 mg—white, 0.6 mg—purple, 0.7 mg—orange, 0.8 mg—blue, 1.0 mg—tan; in packaging of 28, 120, and 1,000 count.










STORAGE: Store at controlled room temperature, 15°-30°C (59°-86°F), and protect from light.

What is canine hypothyroidism?



Questions and answers to help you understand your dog's treatment.



-  0.1 mg
-  0.2 mg
-  0.3 mg
-  0.4 mg
-  0.5 mg
-  0.6 mg
-  0.7 mg
-  0.8 mg
-  1.0 mg



If your veterinarian has told you that your dog may have hypothyroidism, this means your pet's thyroid gland is not producing enough thyroid hormones. Your pet's condition can be treated safely and simply with thyroid hormone replacement therapy taken daily or as prescribed by your veterinarian. The good news is that with proper treatment your pet will be able to live a normal, healthy life.

The following questions and answers will help you better understand your pet's condition. If you have other questions or concerns, please talk to your veterinarian.

What is hypothyroidism and is it life threatening?

Hypothyroidism is defined as a subnormal amount of thyroxine circulating in the blood and the resulting disease. It is not life threatening if properly treated.

What is thyroxine?

Thyroxine, or T4 as it is commonly called, is a natural hormone produced by the thyroid, a small endocrine gland located near the larynx or Adam's apple. Regulation of thyroxine production is complicated and influenced by the hypothalamus and pituitary glands, both associated with the brain. Circulating T4 is converted to T3 in body tissues and organs. T3 acts like an activated thermostat and increases the rate of metabolism. Dogs and humans with hypothyroidism can simply run out of energy.

How is hypothyroidism diagnosed?

Clinical signs are important. You may notice your dog seems old beyond its years. A hypothyroid dog is commonly listless and may become obese on normal rations. The dog will usually stay in warm places and is intolerant of cold. The skin is commonly thickened, dry, and scaly. The hair is usually dry and may become thin or missing, especially around the tail and under the abdomen. Breeding dogs may have low to absent libido. Females may also exhibit abnormally short estrus and overly long anestrus. Upon physical examination of your pet, your veterinarian may find a slow heart rate. He or she will probably draw blood and have it tested for T4, other thyroid components, and other blood parameters to confirm the diagnosis.

What causes hypothyroidism?

There are many possible causes of hypothyroidism, but, as in humans, the true cause in each case may not be known. Some breeds of dogs are more prone to the disease than others. It is also more common for this condition to occur as dogs get older.

How is hypothyroidism treated?

Treatment is simple and effective. Your veterinarian will probably dispense a four- to eight-week supply of Vet-A-Mix Thyro-Tab[®] (levothyroxine sodium tablets, USP) and have you dose your dog once or twice each day. These tablets can be placed on the back of the tongue or in a small amount of food. No other treatment is generally needed, but your veterinarian may also dispense a dietary supplement to facilitate the treatment response, such as Vet-A-Mix Geri-Form, Lipo-Form or Derma-Form.

Dogs and humans with hypothyroidism can simply run out of energy.

Your veterinarian may ask you to bring your dog back for retesting prior to your next refill. Because each animal responds differently to treatment, this procedure may be necessary two or three more times before the proper dose has been established. After that, an annual checkup may be all that is required.

How long must treatment continue?

Thyroxine replacement treatment for dogs, just as for humans, is needed for life. But it's a small price to pay for your canine best friend.

