

# Nutritional Management of Feline Hyperthyroidism

## *Common Questions*

### **Does feeding a limited-iodine food cause hyperthyroidism in cats?**

There are no published studies that show decreased dietary iodine intake causes hyperthyroidism in cats. One study revealed that lack of an iodine supplement on the pet food label was associated with an increased risk for hyperthyroidism; however, the amount of iodine was not measured in the foods. Because dietary iodine amount varies greatly depending on ingredients and their source, it is impossible to determine if a food is low or high in iodine by evaluating the pet food label.

Based on results of published studies to date, the cause of feline hyperthyroidism is unknown. It is likely that a combination of factors (e.g., genetic, environmental, nutritional) is involved, resulting in development of disease in predisposed cats.

### **Is Hill's® Prescription Diet® y/d™ Feline an iodine-deficient pet food?**

The minimum iodine requirement is unknown for hyperthyroid cats. However, it is known that feeding a limited-iodine food ( $\leq 0.3$  ppm iodine) as the sole source of nutrition returns 90% of hyperthyroid cats to a euthyroid state (i.e., normal thyroid hormone concentrations) without signs of iodine deficiency.

A key factor for establishing nutrient deficiency is documented signs of deficiency, which has not been observed in normal or hyperthyroid cats eating limited-iodine foods containing the amount of iodine in Hill's® Prescription Diet® y/d™ Feline.

While the amount of iodine in Prescription Diet y/d Feline has been safely fed to normal cats for one year, it is not recommended as their sole source of nutrition. If healthy cats are fed y/d Feline, they should receive at least 1 tablespoon (dry or canned) of a lifestage appropriate regular food each day to supply additional iodine.

### **Should nutritional management of feline hyperthyroidism be considered a replacement for radioactive iodine therapy?**

No. Feeding a limited-iodine food (Prescription Diet y/d Feline) provides another option for managing cats with hyperthyroidism. Based on results of our clinical studies conducted over the past 10 years, 90% of hyperthyroid cats are returned to a euthyroid state, with normalization of thyroid hormone concentration, when limited-iodine food ( $\leq 0.3$  ppm iodine, dry matter basis) is the sole source of nutrition.

We recommend that all options (nutritional management, anti-thyroid medications, radioactive iodine and thyroidectomy) be discussed with owners of hyperthyroid cats so they can make an informed decision with advice of the healthcare team.

## Nutritional Management of Feline Hyperthyroidism *(continued)*

**Does Prescription Diet y/d Feline contain enough protein to meet the needs of hyperthyroid cats?**

Yes. Based on multiple feeding studies and protein intake recommendations established for cats by the National Research Council and Association of American Feed Control Officials (AAFCO), the amount of protein in y/d Feline (34-36% dry matter) is more than adequate to meet the nutritional needs of cats, including maintenance of lean body mass (muscle). In addition, animal feeding tests using AAFCO procedures substantiate that Prescription Diet y/d Feline provides complete and balanced nutrition for maintenance of adult cats.

Cats are carnivores and they have a higher protein requirement than dogs; however, once their requirements are met, any excess protein is used as a source of energy (calories). Unlike carbohydrates and fat, protein is not stored by the body in a reserve pool. When there are adequate non-protein calories (from fat or carbohydrate) to meet energy demand, and cats consume their minimum requirement for protein, the body is able to spare proteins from catabolism.

Protein quality should also be considered when evaluating foods for cats. The protein found in y/d Feline is of high biological value and provides all the essential amino acids needed by cats, and the protein digestibility of y/d Feline is very high (90%).

**Is there enough animal protein in y/d Feline to meet the nutritional needs of cats?**

Yes. Essential amino acids (i.e., those that cannot be synthesized and must be included in the diet) may be supplied from both animal and non-animal sources. It's not the source of protein that determines its quality, but whether it supplies the essential amino acids.

The protein-containing ingredients in dry y/d Feline (corn gluten meal, finely ground whole grain corn and dried egg product) were strategically selected to:

- 1) provide highly digestible protein with essential amino acids
- 2) avoid excessive phosphorus and sodium, which could worsen kidney disease
- 3) maintain dietary iodine intake at a level that effectively manages hyperthyroidism

**Is nutritional management with Prescription Diet y/d Feline associated with adequate control of hyperthyroidism in cats?**

Yes. Within 3 weeks of feeding y/d Feline as the sole source of nutrition to a newly diagnosed cat, serum T<sub>4</sub> concentration will be significantly decreased compared with baseline. Most cats will have normal T<sub>4</sub> concentrations within 8 weeks. Based on evaluation of hyperthyroid cats managed for 10 to 36 months with y/d Feline, 88% achieved T<sub>4</sub> concentrations < 2µg/dl, which is well within the recommended range for effective management of hyperthyroidism.