

Veterinary KINsights

The Unique Feline 4.0 Unintentional Weight Loss

Key Points

- Unintentional weight loss is a clinical sign and can seriously impact feline health
- Weight loss may only represent the tip of the iceberg
- Maintenance of healthy body weight is a multi-factorial process
- Calorie intake, gastrointestinal function, and illness all play a role
- Cats are heavily influenced by smell, taste, and texture
- Diagnostic evaluation is recommended in all patients
- There is no “one size fits all” approach to unintentional weight loss
- Early recognition and intervention are key
- Management of weight loss is multi-modal and patient specific

Christina Fernandez DVM, MRCVS, DACVECC

The Tip of the Iceberg

Unintentional weight loss can seriously impact the health and wellness of feline patients.¹⁻⁴ Although a clinical sign, and not a disease itself, weight loss may only represent the tip of the iceberg for most patients. When assessing the feline patient with weight loss it is important to determine underlying causes. Diseases that affect caloric intake, absorption of nutrients across the gut, and utilization of those nutrients should be considered. If prolonged, inadequate nutrition resulting in weight loss may lead to the development of serious clinical sequelae such as hepatic lipidosis.^{2,5} A rational approach to the patient with unintentional weight loss is based upon a sound understanding of the relevant biologic, pathophysiologic, and environmental factors that may be playing a role.

Pathogenesis

Body Weight Maintenance

Hyporexia is a reduction in food intake, which has been further defined as “a quantitative, In humans, the key determinants for maintenance of body weight include adequate calorie intake, reliable absorption of nutrients across the gut, and efficient utilization of nutrients and energy

sources balanced with appropriate loss.⁶ Alteration of these components will affect the ability of a patient to maintain body weight and can ultimately lead to unintentional weight loss. These same factors play a role in maintenance of healthy body weight in cats. When assessing cats for weight loss it is important to consider all components of body composition; which include body weight, body fat, and lean muscle.

Calorie intake

When it comes to adequate caloric intake, feline patients are heavily influenced by their preferences for smell, taste, and texture.⁷ “Mouth feel” is an important part of the cats’ willingness to eat. The cat must also find the texture of the food being offered equally as appealing as the smell and taste. Environmental factors will also influence calorie intake in cats. Changes in diet, feeding routine, or access to food (such as increased competition) can ultimately affect the number of calories consumed per day. Cats that are ill or stressed may not be as willing or able to compete with other cats for access to food or simply may not have enough energy to move to the food bowl. Diseases that cause vomiting and nausea will also affect the cats’ willingness to eat sufficient calories. As diseases progress patients who fail to consume adequate calories will ultimately experience unintentional weight loss. Once this process has begun it is a slippery slope and early recognition is key.

Utilization of nutrients

Whether or not the patient is eating is only one part of the equation. Adequate absorption and efficient utilization of nutrients from the gut is an important part of maintaining optimal body weight. Diseases that alter gastrointestinal integrity, absorptive capacity, gut motility, or general function may contribute to unintentional weight loss. The presence of infectious organisms or alterations in normal microbiota can result in changes in structure and function of the gut. Failure of nutrients to cross the gut wall at normal rates may be associated with diseases that result in maldigestion and or malabsorption. Failure of normal absorptive processes result in inability to maintain body weight and ultimately weight loss.

Disease states can also affect the rate of nutrient loss from the body. Protein losing enteropathy (PLE) is a broad term which encompasses intestinal disorders characterized by gastrointestinal protein loss resulting in hypoalbuminemia. Non-gastrointestinal disease can also play a role in nutrient or calorie loss as well. For example, patients with renal disease will exhibit an increase daily loss of calories due to increased metabolic rate within the kidney. In humans, inflammatory cytokines such as tumor necrosis factor and interleukins are suspected to play a role in development of unintentional weight loss by altering gut function and metabolism.⁶

Clinical Assessment & Evaluation

On initial assessment, the focus is directed at obtaining a thorough history and completing a physical exam. Body composition assessment including evaluation of body condition, muscle condition, and body weight are essential and should be performed in every patient. Evaluating trends in these parameters over time will help to recognize changes early. Early intervention may allow for improved patient outcomes.

Using a problem-oriented approach can be valuable when evaluating cats with unintentional weight loss. The problem list is generated based on the results of history and physical exam. Once the

problem list is known, one can consider specific differential diagnoses for each problem and create a tailored diagnostic plan for the patient, in-order to rule diagnoses “in” or “out”. There are a wide variety of diseases that can result in weight loss.

The following lists broad categories of differentials to consider (*note – this list is not exhaustive, not specific, and additional causes should be considered based on the individual patient):^{7,8}

- Endocrine disease (hyperthyroidism and diabetes mellitus are more commonly diagnosed in older cats)
- Neoplasia
- Renal disease
- Gastrointestinal disease
- Hepatic disease
- Dental disease (periodontal disease)
- Infectious disease
- Neurologic disease (dysphagia, disorders affecting level of consciousness, absent gag reflex)
- Iatrogenic – use of drugs that result in appetite suppression
- Environmental factors - Poor nutrition, inadequate nutritional supply or access
- Trauma resulting in abnormal prehension or inability to prehend food (oral facial trauma)
- Pain from any source (can cause a reduction in appetite or reluctance to eat)

Differentiating cachexia (muscle and fat loss due to disease) from sarcopenia (muscle loss associated with age) is important and may require a thorough diagnostic investigation. Once the diagnostic evaluation is underway, management for unintentional weight loss can begin.

Management Strategies

There is no “one approach fits all” for feline patients experiencing unintentional weight loss. Management and support are multi-modal and should be tailored to the individual patient based on the suspected underlying cause for weight loss. Various therapeutic and supportive strategies exist. Some patients will require assisted feeding in the form of feeding tubes, which can be used for both in hospital and outpatient support. The use of intravenous nutrition may be considered for the critically ill feline patient on a case by case basis.³ Dietary manipulation including altering flavor, kibble shape, texture, or moisture content of the diet can be attempted.

Whether the patient is receiving medications that could suppress appetite should be considered. Medications that may lead to anorexia in the cat include; antibiotics, non-steroidal anti-inflammatory drugs, narcotics, chemotherapeutic agents, and cardiac glycosides.⁷ Attempts at modifying the environment may be made, including; moving feeding areas, segregating cats during feeding, and free choice feeding. In addition, pharmacologic support to promote weight gain should be considered. Ultimately, it is important to remember that prolonged inadequate nutrition may be more detrimental to the patient than the primary disease process itself.⁴

Summary

Unintentional weight loss is a clinical sign and may only represent the tip of the iceberg for feline patients. Knowledge of the various physiologic processes that control maintenance of body weight is essential for understanding why a cat may be losing weight. There are various diseases that can result in weight loss and the use of a problem-oriented approach can prove valuable for the veterinarian when assessing these cases. Differentiating cachexia from sarcopenia is important and early recognition is key in-order to optimize outcomes for feline patients. While there is no “one approach fits all” for feline patients experiencing unintentional weight loss, management can be multi-modal and tailored to the patient, based on the results of a comprehensive evaluation.

References

1. Baez JL, Michel KE, Sorenmo K, et al. A prospective investigation of cachexia in feline cancer patients and its prognostic significance J Feline Med Surg. 2007;9:411-417.
2. Armstrong J, Blanchard G. Hepatic Lipidosis in Cats. Vet Clin Small Anim 39 (2009) 599–616.
3. Chan D. The inappetent hospitalised cat: clinical approach to maximizing nutritional support. J Feline Med Surg. 2009;11:925-933.
4. Agnew W, Korman R. Pharmacological Appetite Stimulation; Use of appetite stimulants in cats. J Feline Med Surg. 2014;16:(749–756).
5. Macdonald M, Rogers Q and Morris J. Nutrition of the domestic cat, a mammalian carnivore. Annu Rev Nutr 1984;4: 521–562.
6. Bouras E, Lange S, Scolapio JS. Rational Approach to Patients with Unintentional Weight Loss. Mayo Clin Proc. 2001;76:923-929
7. Michel KE. Anorexia In the Cat. J Feline Med Surg. 2001;3:3–8.
8. Pittari J, Rodan I, Beekman G et al. American association of feline practitioners. Senior care guidelines. J Feline Med Surg. 2009;11(9):763-778.