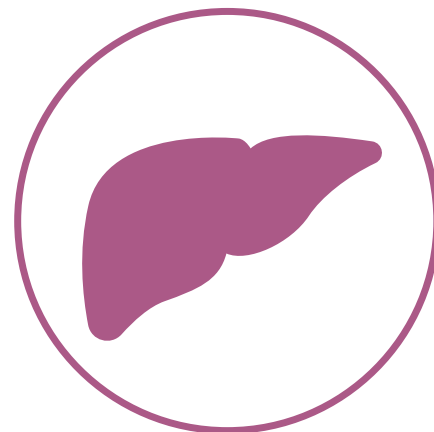


**Hepatic Disorders**

FELINE HEPATIC LIPIDOSIS



Hepatic lipidosis is the most common liver disease in cats. Affected cats present with a history of anorexia or hyporexia (lasting a few days to many weeks) and rapid weight loss.

Most cases of feline hepatic lipidosis occur secondary to anorexia or hyporexia caused by another disease, e.g., cholangitis, pancreatitis (acute or chronic), chronic enteropathy, diabetes mellitus, chronic kidney disease, or neoplasia.^{1,2} However, healthy cats can also develop hepatic lipidosis if they become anorectic or hyporectic, e.g., due to stress, a sudden change to a new diet that is not adopted, or a lack of access to food.¹⁻³

A period of anorexia or hyporexia places the cat in a catabolic state.¹ Adipose tissue breaks down, releasing fatty acids. The fatty acids are transported to the liver, where they shift lipid metabolic pathways out of balance, leading to an excessive deposition of triglycerides in hepatocytes. Swelling of hepatocytes blocks intrahepatic bile flow, causing cholestasis, and liver function is impaired.^{1,3}

While hepatic lipidosis can occur at any age, it typically occurs in middle-aged cats. Obese cats are predisposed due to the amount of fat that can be broken down, and insulin resistance to which obese cats are prone.¹

Cats often are dehydrated in addition to anorectic or hyporectic when presented, and may be jaundiced, lethargic, and vomiting. Institution of intensive nutritional support is fundamental to treatment of hepatic lipidosis.

Key Messages

- Stabilize pet and correct for dehydration and electrolyte abnormalities. Identify and treat underlying disease(s) if present. Begin intensive nutritional support as soon as possible.¹
- Cats with hepatic lipidosis are anorectic or hyporectic and require assisted feeding to correct their negative energy balance. Enteral feeding is preferred over parenteral feeding because it helps restore intestinal motility and resolve villous atrophy.¹
 - The use of an indwelling feeding tube allows convenient delivery of nutrients. The use of a syringe or “force” feeding is strongly discouraged since this causes additional stress and may potentially lead to food aversion or aspiration.²
 - A nasoesophageal feeding tube may be the best option for initial support since it can be inserted without sedation and used immediately. Only liquid diets should be used with these tubes due to the small diameter.

(continued on next page)

Key Messages (continued)

- In a patient stable for anesthesia, esophagostomy tubes are quick to place and well tolerated by most cats. (Videos from veterinary specialists are available online if an overview of the procedure for esophagostomy tube placement is needed.) A gastrostomy tube is also a good option.²
- Calculate resting energy requirements (RER) = $70 \times \text{body weight (kg)}^{0.75}$ to determine volume of food.¹ Start with 1/3 of the volume on the 1st day split over 6–8 feedings, then gradually increase to full RER over next few days. Feed slowly over 10–15 minutes and look for signs of nausea such as drooling or licking of the lips. If seen, temporarily stop the feeding and resume once resolved. Gradually decrease number of feedings by increasing volume provided per meal.^{1,2}
- Be careful not to overfeed or increase volume of food too quickly, especially initially, as this may cause refeeding syndrome.
 - Refeeding syndrome causes abrupt decreases in serum levels of potassium, phosphorus, and/or magnesium. Monitor serum levels closely, and supplement if needed.^{1,4}
- Feed a high calorie formula, such as a critical care or recovery formula, containing high protein (40–50% of metabolizable energy [ME]) unless pet is exhibiting signs of hepatic encephalopathy. If needed, blend food with small amount of water or liquid enteral diet to achieve consistency that will pass easily through the feeding tube. Be sure to flush the tube before and after each feeding with water.
- Before discharging patient with a feeding tube, instruct owner on proper use and care. Allowing the owner to feed the cat while in the clinic can help alleviate owner concerns. Voluntary food intake at home should be encouraged by offering various dry and wet cat foods prior to each tube feeding. Warm the food to room temperature to enhance aroma and taste. The feeding tube can be removed once the cat is eating nutritionally balanced food reliably.
- Monitor weight, body condition score, and muscle condition score. Once the cat is fully stable and eating well, diet and calorie intake can be adjusted as needed.

References

1. Valtolina, C., & Favier, R. P. (2017). Feline hepatic lipidosis. *Veterinary Clinics of North America: Small Animal Practice*, 47(3), 683–702. doi: 10.1016/j.cvsm.2016.11.014
2. Webb, C. B. (2018). Hepatic lipidosis: Clinical review drawn from collective effort. *Journal of Feline Medicine and Surgery*, 20, 217–227. doi: 10.1177/1098612X18758591
3. Center, S. A. (2005). Feline hepatic lipidosis. *Veterinary Clinics of North America: Small Animal Practice*, 35, 225–269. doi: 10.1016/j.cvsm.2004.10.002
4. Norton, R. D. (2016). Nutritional considerations for dogs and cats with liver disease. *Journal of the American Animal Hospital Association*, 52(1), 1–7. doi: 10.5326/JAAHA-MS-6292R2

The Purina Institute aims to help put nutrition at the forefront of pet health discussions by providing user-friendly, science-based information that helps pets live longer, healthier lives.