

# Hepatic Lipidosis in Cats

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## BASIC INFORMATION

### Description

Hepatic lipidosis is infiltration of the liver with fat (lipid). This condition tends to arise when a cat suddenly stops eating or reduces its food intake for some reason. When the cat stops eating, fat reserves in the body are mobilized and move to the liver to generate energy. The fat cannot be processed properly if protein intake is also inadequate, so it remains in the liver cells. When the liver cells become filled with fat, they no longer work properly, which further makes the cat feel sick and less willing to eat. Because unwillingness to eat is at the root of this problem, the lipidosis gets dramatically worse.

### Causes

Cats that are overweight are more likely to develop lipidosis if they stop eating, but any cat can develop this problem. The main cause of the lipidosis is the cessation of eating, which may be secondary to many conditions, such as trauma to the jaw, dental disease, and various conditions of other organs (such as the kidney, pancreas, or liver). A large part of dealing with hepatic lipidosis is identifying the cause of the loss of appetite.

### Clinical Signs

The main sign is a loss of appetite. Vomiting, lethargy, depression, and dehydration are also common. The signs present may be associated with the lipidosis or with the underlying disease that led to the lipidosis. In some cats with severe lipidosis, jaundice (yellow color of the gums, whites of the eyes, and skin) develops from liver failure.

### Diagnostic Tests

Diagnosis of hepatic lipidosis usually requires several different diagnostic tests. Blood tests typically show increased liver enzyme activities, and an elevated bilirubin (the chemical that causes the yellow color) if the cat is jaundiced. An abdominal ultrasound is often recommended to examine the liver. Hepatic lipidosis is diagnosed by examination of a sample of liver tissue obtained by needle aspiration or biopsy. Needle aspiration provides a smear of individual cells that are examined under the microscope (cytology), whereas a biopsy provides a larger section of tissue.

Additional tests, including specialized tests for diseases of the small intestine and pancreas, are often recommended in an effort to identify the underlying cause. In many cases, treatment is started prior to obtaining all the test results, because delaying food intake further aggravates the situation.

## TREATMENT AND FOLLOW-UP

### Treatment Options

The most important aspect of treatment is to make certain food intake is adequate. Because most cats with hepatic lipidosis are not eating voluntarily, placing a feeding tube is often the easiest and best way to provide nutrients. Feeding tubes may be inserted into the back of the cat's throat (pharyngostomy tube), into the cat's esophagus further down the neck (esophagostomy tube), or into the stomach (percutaneous endoscopic gastrotomy or PEG tube). These procedures are usually performed under general anesthesia.

Most cats must take in more food than what they are willing to eat for a period of several weeks, so providing adequate food intake via feeding tubes is easier to accomplish for both the cat and the owner. Forced feeding with a syringe is difficult to do in cats, usually makes them less willing to eat on their own, and is often avoided.

The most important component of the diet that helps return liver function to normal is an amino acid called *arginine*. Arginine is usually added as a supplement to the diet of cats with hepatic lipidosis. Other vitamins and antioxidant supplements are also commonly given during the recovery process.

For very severely affected cats, hospitalization may be recommended for fluid therapy, possible blood transfusions, and other supportive care. Antivomiting agents and antacids may be given as food is gradually introduced. Specific therapy for underlying diseases is also begun.

### Follow-up Care

Regular follow-up visits and monitoring are needed after discharge from the hospital. Tube feeding is continued until the cat is eating on its own. PEG feeding tubes are left in place for at least 10 days to allow proper healing around the entry site into the abdomen. Recovery from hepatic lipidosis can take longer than 4-6 weeks in some cats.

### Prognosis

Prognosis for cats with hepatic lipidosis is guarded (uncertain) and varies with the underlying cause of the loss of appetite. Many cats recover adequately with assisted feeding. Some cats die from their lipidosis, as a result of severe liver failure, difficulty in re-establishing normal blood electrolytes during tube feeding, or progression of the underlying disease.