

# Donkey: Hyperlipaemia



Donkeys (and small pony breeds) are at particularly high risk of developing hyperlipaemia - abnormally high levels of triglycerides (fat) circulating within the blood. This occurs when the body's energy supplies are limited (e.g. off feed) or nutritional demands are increased (e.g. pregnancy, disease) coupled with a metabolic abnormality called insulin resistance (donkeys are inherently insulin resistant). Hyperlipaemia can be a primary condition or secondary to anything which causes a donkey to go off its food.

Hyperlipaemia is associated with a high mortality (death) rate due to organ failure and therefore recognition of 'at risk' animals is essential. Prompt and aggressive intensive care treatment of affected animals is essential to optimise their chances of survival.

## Clinical signs of Hyperlipaemia:

- refusal of feed, depression and lethargy;
- mucus-covered, dry dropping balls and halitosis (bad breath);
- congestion and reddening of the mucous membranes (gums) and increased heart and respiratory rates as the condition progresses;
- unsteadiness on the feet followed by collapse and death (due to organ failure);

The clinical presentation may be complicated by signs associated with other diseases such as liver or kidney failure.

## DIAGNOSIS

A proportion of hyperlipaemia cases have characteristically cloudy blood samples due to high triglyceride (fat) levels in the circulation.

Blood analysis should be performed in all cases to assess the severity of the disease and should also be used to assess organ (liver and kidney) function, hydration status, metabolic disease and white blood cell counts

**CLOUDY SERUM IN A BLOOD SAMPLE (DUE TO HIGH FAT LEVELS) IS A CHARACTERISTIC SIGN.**



## KEY POINTS

- Hyperlipaemia is associated with a high mortality rate and therefore early recognition is essential.
- Occurs when the body's energy supplies are limited or nutritional demands are increased, coupled with insulin resistance (donkeys and ponies are inherently insulin-resistant).
- Any donkey that goes off their feed and is dull and lethargic should be assessed for hyperlipaemia.
- Risk factors include obesity, stress, increasing age, gender (mares more susceptible), pregnancy & lactation, concurrent disease.
- Treatment should be rapidly instigated. Mildly affected cases may be managed with feed and oral drenches. More severe cases may require intensive care, including feeding via a stomach tube and intravenous fluids.

### Treatment

1. Any underlying illness or disease should also be treated.
2. Reduce energy demands and stress: Keep companions close by, wean foals from lactating mares.
3. Nutritional support: All donkeys should be offered highly palatable, high energy feeds including freshly cut grass. Feeding together with drenching with glucose solution (100g glucose powder) 3-4 times daily may be sufficient to correct mildly affected cases. More severely affected cases and those refusing feed need to be fed via a stomach tube passed up the nose and into the stomach, using a combination of warm water, electrolytes, glucose powder, and Ready Brek®.
4. Fluid therapy either by stomach tube or, in the more severely affected cases, by intravenous drip is important to maintain hydration.
5. Anti-inflammatory medication, anti-ulcer medication, multivitamins and anabolic steroids may also be given dependent upon the individual case.



**STRESS E.G. SEPARATION ANXIETY, CAN BE A TRIGGER FACTOR**

### PREVENTION

Prevention is certainly better than cure. Be aware of the risk factors and take steps to ensure that these are minimised or avoided where possible e.g. keep up to date with preventative dentistry treatments, manage gradual weight loss for obese donkeys and ensure that the correct type and quantity of feed is being provided.

### Risk factors for Hyperlipaemia:

- another underlying disease e.g. Cushing's disease
- rapid weight loss
- dental disease
- increasing age (hyperlipaemia is uncommon in donkeys < 18 months)
- stress e.g. transport, management changes, separation anxiety
- feeding concentrates
- pregnancy and lactation
- obesity
- cardboard bedding.



**REGULAR DENTAL EXAMINATIONS WILL HELP PREVENT DENTAL DISEASE WHICH CAN BE A RISK FACTOR**

Many XLEquine practices regularly liaise with The Donkey Sanctuary with regard to treatment and management of donkeys. XLEquine would like to acknowledge the work they do to transform the quality of life of donkeys in the UK and abroad. The Donkey Sanctuary is a charity that will never turn away from a donkey in need. They rely on donations to continue providing for donkeys and mules worldwide.

[www.thedonkeysanctuary.org.uk](http://www.thedonkeysanctuary.org.uk)



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