

# Plasma Transfusion in Crias

## Why Is Plasma Needed?

Crias are born without a functional immune system so are completely unprotected from disease in their first few weeks. They receive temporary immunity through their mother's colostrum, which protects them until their own immunity is up and running. Success depends on the Quality, Quantity and Quickness of colostrum consumption. It's vital to contact the practice promptly if you have any concerns about a female's milk production or cria's ability to nurse.

Crias must consume 10-15% of their bodyweight in colostrum over the first 24 hours. A newborn cria's gut is like a sieve with small gaps which allow transfer of antibodies from ingested colostrum into the bloodstream. These gaps start closing immediately after birth so antibody transfer is only possible for around 6 hours, meaning this time period is very important to monitor (from a distance!). If the cria receives insufficient colostrum in this time it will be very susceptible to disease - this is known as failure of passive transfer (FPT).

## Several factors increase the risk of FPT:

- Low birth weight (<7kg)
- Premature
- First time mother
- Difficult birth, caesarean or retained membranes
- Dam had problems with previous cria
- Unobserved birth
- Poor weather
- Afternoon or evening birth



If you are unsure sufficient colostrum has been consumed, the cria should be blood sampled as a priority from 24-36 hours old. Sampling can be done on farm or at the practice. Blood is tested in-house to determine if the cria would benefit from a plasma transfusion.

## Plasma Collection

Plasma for transfusion must be taken from adult animals **prior to unpacking season**.

The ideal donor animal is:

- Male or non-breeding female >60kg, ideally >3yo
- Up to date with clostridial vaccination
  - Booster given at least 2 weeks previously, preferably 10-way vaccine
- Healthy with pink membranes
- Has not donated blood in last 2 months
- Co-operative!!

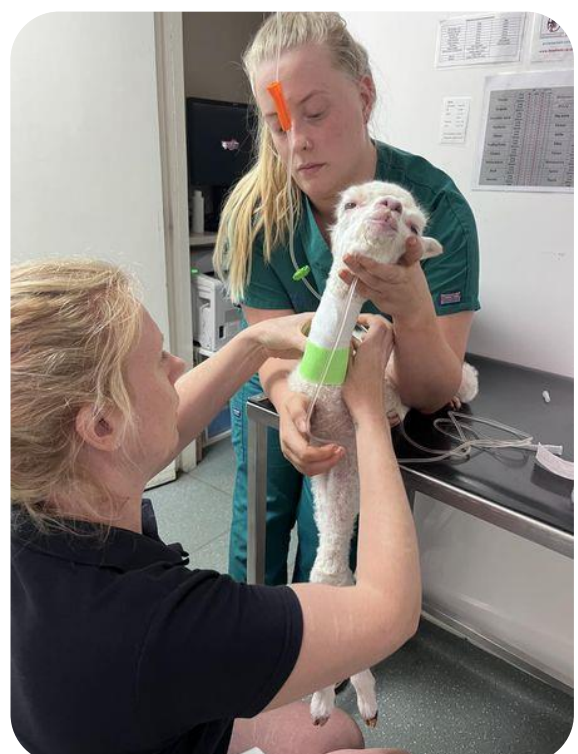
## How To Store

Plasma collection is carried out on farm. Each adult donor provides two cria treatments. It can be kept frozen for up to 5 years in deep freeze, however in standard freezers the valuable lifespan is around 1 year. Disease risk on farm changes year to year so recently harvested plasma is likely to be more effective against the current disease situation.

## Plasma Transfusion

When treating FPT, plasma should be gently defrosted and given intravenously by a vet. Occasionally owners will give plasma by mouth but this is a waste!

- <6 hours after birth, although both contain antibodies, colostrum should be given in preference to oral plasma as it also contains energy (and is cheaper!).
- >6 hours after birth oral plasma is ineffective as the spaces in the gut are too small for the antibodies to pass through.



## Legalities

Legally plasma can only be given from animals in your own herd - it cannot be sold or given away. This is essential for biosecurity and prevention of disease spread through the national herd. However, in exceptional cases plasma may be provided by the origin herd to first generation crias born to alpacas sold within last 3 years if no donor animals are available.

Plasma can only be stored by the owner and cannot be legally stored by your vet practice. It must therefore be collected from the practice the same day as it is harvested from the donor.

If you would like further information on camelid plasma collection and protecting your future crias against FPT please contact the practice on 01579 386132 (Callington) or 01637 889231 (St Columb).