

Gastric Rumen Transfer, aka Transfaunation, is used for ruminants that quit chewing regurgitated food, better known as "cud." Ruminants, have multiple stomachs. Most ruminants have four compartments: the rumen, reticulum, omasum and abomasum. Alpacas are frequently referred to as pseudo ruminants because they have three compartments: rumen, reticulum, and the abomasum. Ruminants digest their food in two steps. First they eat the feed, then they regurgitate the partially digested food and chew it again in the form of cud.

Ruminants are unable to produce the enzymes required to break down the cellulose of plant matter. Fortunately, they have developed a symbiotic relationship with a wide range of microbes, which largely reside in the rumen, and which are able to synthesize enzymes. The microbes are critical for fermentation to take place in the rumen, which the ruminant is able to digest and absorb. This allows the animals to extract nutritional value from cellulose which is usually undigested. The function of rumination is that food is physically refined to expose more surface area for bacteria working in the rumen, as well as stimulation of saliva secretion to buffer the rumen pH.



C1-Rumen

When food has been degraded efficiently it passes into the abomasum to continue digestion. No enzymes are secreted in the rumen. Enzymes and hydrochloric acid are only secreted from the abomasum through the rest of the gastrointestinal tract.

Gastric Rumen Transfer or Transfaunation is the method whereby the microbes from one healthy ruminant are transferred to an ill ruminant that is not chewing cud. There are several methods for obtaining the rumen. Veterinary Universities and large cattle farms will sometimes have a bovine (cow) donor. Typically, the donor will have a fistula created into the rumen and a cannula inserted so that the stomach contents can be aspirated through the cannula.

Other methods may be used for obtaining rumen If a fistulated donor cow is not available. One technique used by camelid owners is a "spit transfer" whereby

camelids are encouraged to spit into a collection container, such as a cloth muzzle or cup. Another technique uses a culled ruminant donor whereby the animal's rumen is opened and the rumen immediately transferred to the recipient.

Regardless of the chosen method, it's imperative that the donor be healthy and full grown and that the rumen be transferred quickly and with minimal exposure to light and air and no disturbance to pH or temperature. Generally it should be transferred within 30 minutes. Mix warm water with the retrieved rumen and then strain the mixture through either a strainer or gauze. The strained mixture can then be transferred to the recipient by either a drench gun or a tube inserted orally into the esophagus.

It's worth mentioning that the reason for being "off feed" should be addressed prior to the transfaunation. It's doubtful that the transfaunation will be of value if the recipient is suffering from e.g. parasite overload or gastric ulcers. I also give Vitamin B complex injections at the time of the transfer. The transfaunation can be repeated daily for several days. Most transfaunation failures occur with inadequate donor fluid levels, not maintaining an anaerobic environment, concomitant use of antibiotics and inadequate length of transfaunation fluid treatment.



Rumen Content for Transfer

Haskell, Scott R.R., Rumen fistula surgery for the private practitioner, <http://www.milkproduction.com/Library/Scientific-articles/Animal-health/Rumen-Fistula-Surgery/>, July 2002

