

PREMATURE CRIA CARE A LABOR OF LOVE

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If you have not yet had a premature cria born on your farm, this is the time to learn and to prepare yourself to properly care for that precious little one. If you have had the experience of caring for a preemie, you are probably now highly motivated to learn all you can in preparation for any future preemies.

Let me tell you the story of a sweet little cria named Anna who was born on our farm. Anna was born almost three weeks early. She was so early that we had not yet started on our normal rigorous watching schedule, and so her birth took us completely by surprise. I found her lying in the pasture one afternoon, weak, hypothermic, and barely alive. She had been deserted by her mother (normally an excellent mother), who I imagine assumed Anna was not going to survive. One of our Great Pyrenees guard dogs was standing watch over Anna when I found her.

It is always best if you can be present at the birth of all of your alpacas. We recommend starting an every-two-hour daylight watching schedule, with another check before bedtime, at least 2 weeks before the expected due date to try to catch any preemies. (From our observation, "normal" gestation for fall births is about 11 months, normal for spring is 11 to 11-1/2 months.) We usually start watching at around 10 1/2 months. Even if there are not complications in the delivery, you need to be there to immediately check the airways of the cria for mucous or obstructions as well as to check for any immediately observable problems with either the dam or cria. Rub the cria with towels to remove the epidermal membrane, but if the membrane sticks around the mouth, toes, anus, or anywhere else do not pull on it to remove it because you will damage the skin. It will fall off naturally once the skin in that area is mature. If you think you may have a preemie, go ahead and call your vet, get his/her advice and make arrangements for an office or farm visit immediately to have the cria examined thoroughly and treated as needed.

We rushed Anna inside, wrapped her in warm towels and took her temperature. Her temperature was only 96 degrees, so we began to gently dry her with a blow dryer, rub her with towels, and do everything possible to raise her temperature. She was at a critical point and every second was crucial. Once her temperature approached normal, we gave her a small amount of Karo syrup and warm milk for energy since she was extremely weak. We continued to warm her and give small amounts of milk as she warmed up.

Always take the temperature of a new cria to determine if it is normal (around 100-102 degrees). Remember that if a cria is hypothermic (has a below-normal temperature), you should not feed her until you raise the temperature. Milk given to a hypothermic cria can curdle in the stomach and cause further complications. For quick energy, give light Karo syrup (not any other type). This is pure glucose and will be quickly absorbed by the cria's system. A little bit on a fingertip sometimes is enough, or a ml. or two mixed with warm milk. Regular cow's milk that you have in your refrigerator or canned milk is fine to give the cria. Dam's milk is the best if you can easily milk mom and feed that to the cria, but in an emergency you may need to grab whatever is handy. Once the cria is stable and you have a few minutes, milk the mom and feed the cria regularly until the cria can stand and nurse well on its own. The cria needs to get the colostrum from mom in the first 12-24 hours. Remember to



Preemies can be extremely weak.

heat the colostrum gently (in a pan of warm water is best) to avoid destroying proteins. Frozen or powdered colostrum can be purchased and kept on hand for these emergencies.

While we were in the process of raising Anna's temperature, we checked her over thoroughly for any immediately observable problems. We checked her heart rate and listened to her lungs. We checked her membranes (on nose and inside ears) for color. Her umbilicus was normal, so we dipped it in iodine to prevent infection.

Dip the umbilicus of a newborn in 3% iodine or a 1% Nolvasan solution for at least 15 seconds. Repeat this again on the first day, and then dip once a day for 3 more days or until the umbilicus is dried up. This helps to prevent infection. A normal heart rate is 90-100 beats per minute. Some open-mouth breathing during delivery and immediately after birth may be normal. If it does not resolve within 10 minutes, look again for obstructions or choanal atresia. Healthy membrane color is bubble gum pink; bright red membranes may be a sign of septicemia (infection in the newborn). We normally begin a 3-5 day antibiotic regimen with Naxcel if membranes are red. (Administered usually at .5cc. per day, but consult your vet.)

Our first concern was to get Anna somewhat stable with a normal temperature so that she could be fed and further evaluated. She was very small (only 10 lbs.) and had almost no muscle tone at all on her body. We checked her for additional signs of prematurity. Despite her very early birth, the only other outward signs she manifested were incisors that were not erupted, and an epidermal membrane that still completely covered her feet.

On our farm we treat any cria who is premature by date of birth, or any cria showing outward signs of prematurity as "premature" and take extra measures and precautions even if the cria seems well on first inspection. Many preemies will do reasonably well for a day or two, then will crash suddenly due to internal problems such as immature organs and/or septicemia. Don't let your guard down if your preemie seems fairly normal at first. You need to observe

your cria very closely for several days. Outward signs of prematurity include: teeth not fully erupted, epidermal sac still connected at toes, mouth or other sites, red membranes on nose and inside ears, weak pasterns, drooping ears, poor suckling reflex, overall lack of muscle tone and general weakness.

Since warming and feeding did not improve Anna's energy, but she was still completely limp and almost lifeless, we took her immediately to a vet's office for an emergency visit. The vet administered IV fluids at the office, started her on the Naxcel routine recommended above, and sent us home with IV bags and instructions to run 100 mls. of the solution every two hours. We also fed her milk by bottle as often as she would take it, holding her head up since she could not lift her head at all.

Many preemies will perk up with the initial administration of milk and Karo syrup and will be able to stand on their own and begin nursing. (Some may be able to stand from shortly after birth.) If they are trying to nurse, make sure you see that they are latching on to the teat and are actually taking in milk, not just sucking in the area of the udder. Watch them very carefully for at least the first 24 hours for any changes in energy or behavior. Always have a preemie evaluated by a vet.

If a preemie has an underdeveloped suckle reflex, tubing of the cria may be necessary, but should only be attempted by someone who is trained to do it.

We prefer feeding by bottle whenever possible since the cria can let you know when it is full. It is very easy when feeding by tube or oral syringe to overfill the stomach, which can cause acidosis and other complications. A Pritchard Teat is best for feeding an alpaca by bottle. Most will take to this well.

Whether the cria stays with you or goes to a hospital, always keep mom on a regular milking schedule. A week of milking mom is much easier than 4-6 months of bottle feeding!

Tips for an indoor preemie: provide her with baby diapers with a little slit cut for the tail and if she attempting to walk and the floors are slick, wrap her feet with a small amount of vet wrap to give her better traction.

We began the around-the-clock care that is often necessary to save these little ones. I slept in the barn, holding Anna on my chest to keep her warm, with both of us covered by a blanket. I would offer her milk every 30 minutes to an hour and run the IV line every 2 hours. My husband and I started taking shifts caring for her, and after 2 days in the barn, and no attempt from mom to bond with her cria, Anna moved in with us for the long haul.

We stimulated her by massaging her and talking to her. We turned her over frequently to avoid the collection of fluid in her lungs since she was still completely limp and unable to move.

We had a full panel of bloodwork drawn on Anna at a little over 24 hrs of age to check white blood cell count, red blood cell count, and function of all of her organs. Everything was within a normal range, which was very encouraging. We knew then that we were dealing with weakness primarily, rather than complications from immature organs.

Have your vet run bloodwork between 24 and 48 hours even if your preemie seems to be doing well. You will want to check the IgG for possible transfusion later (since many preemies do not absorb colostrum well), plus run a CBC and chemistry panel. This will help to determine if the organs are functioning normally and if the cria has an infection or a virus present. Knowing this information and treating early can save your cria from a fatal crash in a day or two.

We have given care to preemies whose blood work showed abnormal liver and kidney functions. They were effectively treated and managed, but would not have survived without the information from the blood testing that informed us as to the proper treatment. If your preemie is extremely ill, your intensive commitment to their care may make all the difference. If you are not able to be there during the day with a critically ill cria, take them to a hospital where they can get around-the-clock care.

Be aware also that preemies cannot thermoregulate easily plus may become very easily chilled due to low body fat. It is best to keep them in a comfortable cria jacket plus keep them under towels or blankets if they are still cold. If they are extremely cold, keep them next to your body for warmth.

Anna continued to be extremely weak despite treatments. She saw her vet almost every day. Due to any extremely low IgG she required a plasma transfer at about 4 days of age.

Plasma transfers should be administered only once the cria is stable (and preferably at least 4
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Epidermal membrane over foot and toes



Red membranes can be a sign of septicemia.



Exhaustion sets in for everyone after a few weeks round-the-clock care.



Orphaned preemies may need a little extra human attention.



Preemies may need assistance to learn to stand.

days old) and only if medically indicated. There is risk involved in this procedure and a plasma transfer should not be given just as a "cure-all". The transfer should be given in a vet's office and must be dripped in by IV very slowly (over a period of several hours) so as to avoid flooding the bloodstream with too much volume. Very careful observation must take place throughout the procedure, but especially in the first 20 minutes or so of the transfer. Vital signs need to be monitored for any sign of anaphylactic shock.

Anna continued with the round-the-clock home care. She was on the IV's every 2 hours plus regular bottle feeding for 5 days. After that, she was on bottle feeding, every hour to two hours, and eventually we were able to go to a 5-6 hour break at night. She was not able to lift her head at all for a week. We held her much of the time, massaged her, and worked constantly to stimulate her and exercise her muscles to help her toward her recovery. As she gained a little muscle mass and strength in her legs, we would practice "pushing" exercises with her lying down;

she would push her legs against our hands and we would work with her over and over to try to increase her strength. We would also hold the weight of her body and "stand" her so that her legs could begin to learn to bear a little weight. Until her neck gained enough strength for her to hold her head upright, we would have to hold her head up with one hand, while holding her body weight with the other. She was limp and helpless for a very long time.

Finally... finally... she took her first wobbly steps, unaided, on day 10. We were ecstatic! We were running around snapping pictures and practically jumping up and down. We were beside ourselves with exhaustion and excitement.

This was an unusually long commitment to save this cria. Most preemies will not take this much care, but you must be committed to doing whatever is necessary if you are going to care for them at home (with vet oversight). Many will require several days of intense care and observation to get on their feet and will need you to make them your first priority for quite a while. Many will need your intense involvement with them, just to give them the will to live (although you must be more careful about interaction with males than females).

Anna spent most of the month indoors and with us constantly, recovering fully, gaining weight, and preparing to live outdoors. We spent the next month recovering... learning to sleep through the night again... and preparing for the next cria who would need our help.

Is it tough? Yes. But is it worth it to save one of these precious little lives? Absolutely, yes.

Anna is now a very happy, normal alpaca who enjoys the outdoors and loves running and pronking with the other crias. Every time we see her face out the window it warms our hearts. And yes, she still comes inside every now and then, cuddles up with us on her favorite rug, and watches a little TV. She will always be very special to us.

Yes... it is always worth it to save one of these little ones.

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