

# Birth problems or dystocia



Nothing is more stressful than assisting your animal in its birthing process at home. Fortunately, this is usually a beautiful experience. However if complications arise, which happens in about 5-6% of deliveries, it can become a nightmare.

**A birthing problem must always be considered an emergency!** Usually the entire litter dies within 24h after the first signs of dystocia. Moreover, if nothing is done the female can start showing signs of generalized infection after about 48 to 72hrs. This requires critical care and places her at risk for death.

So when should you consult your veterinarian? Is your pet really showing signs of a problematic delivery? Should we induce delivery, or should we let nature take its course? We will try to answer these questions in the next few paragraphs.

## Stages of a normal delivery:

### 1. The pre-delivery stage:

There is a decrease in normal body temperature of about 1 to 1.5 degrees (that is to say from 38.5 to 37.5-37°C) 12 to 24h before delivery due to a decrease in blood progesterone levels. The female behaves normally, except for some that will have a decreased or absent appetite during this period. *For a few females this stage, that usually lasts about 12 to 24h, can last up to 48hrs.*

### 2. The delivery

#### Stage 1.

The female cannot find a comfortable position, she pants a lot and walks constantly, but does not have any contractions. This is the stage when you can sometimes note the "water breaking" or the presence of black, green, brown or red discharge coming from the vulva.

This stage usually lasts about 6-12hrs, but can sometimes last for a longer period of time.



## Stage 2.

The animal starts having contractions. Usually, strong contractions for 20-30 min will yield a puppy or kitten. The baby will normally present in a small pouch, head or hind end first. Once outside the female's vagina, she will rip the pouch, start licking the baby and cut the umbilical cord. Generally, there should be 1 baby delivered every 30-60min, sometimes more, until the end of the birthing process. *As a rule of thumb, the entire birthing process should be over in 3 to 6 hours if there are strong contractions present.* However, there can sometimes be "pauses" that can last for 4 to 6 hours between babies. During these "pauses", there should not be any contractions. Longer pauses (12 to 24h) are not impossible, but are unlikely.

## Stage 3.

All the babies have been born, with or without their placenta. The placentas can come out at the same time as the babies, 5 to 15 minutes after each baby, or even 4 to 6 hours after. The female may eat the placentas, or not. Normally, the female does not need help during the delivery, but supervising from afar is recommended in order to detect possible problems during the process. It is also recommended to keep the delivering female in a calm environment.

## Abnormal and normal vulvar discharges

### Normal :

- 🐾 Clear watery mucus = birthing process is about to begin. (On average, the delivery starts 3 to 24hrs after the "water breaking").
- 🐾 Greenish= lochias or uteroverdin. Discharges secondary to the separation between the placenta and the uterus. Usually indicates that parturition (birthing) is about to begin.
- 🐾 Bloody= normal in small quantities just before birthing. This discharge comes from bleeding at the level of the placentas.

### Abnormal :

- 🐾 Purulent (pus)= often accompanied by fever, occurs when the uterus is infected.
- 🐾 Yellow= meconium. This is the babies feces. It can be released in the amniotic fluid by the fetuses when they are in severe distress.
- 🐾 Bloody = abnormal if profuse.

## We suspect a dystocia when:

- 🐾 There is a preceding history of dystocia or a breed predisposition (Bull dog, Boston terrier, Pug, etc).

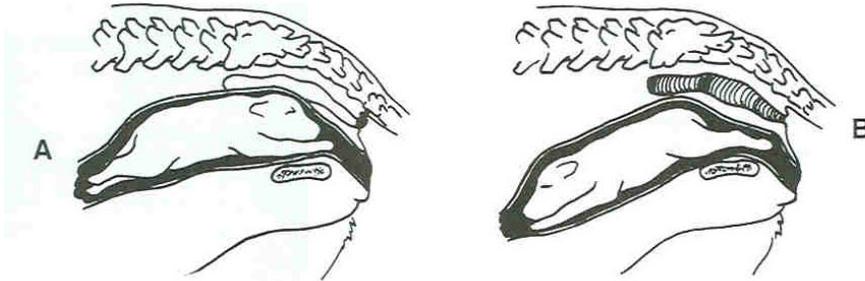
- 🐾 There has been a decrease in body temperature for 24-36hrs and nothing is happening (no labour). *Parturition will usually start 12 to 24hrs after a decrease in temperature, but can sometimes start up to 48hrs later.*
- 🐾 The female seems agitated, pants, and/or cannot find a comfortable position for more than 12hrs. Stage 1 of birthing should not last more than 6 to 12hrs most of the time, although it could last longer in certain cases.
- 🐾 After water breaking, nothing happens for 8 to 12 hours. Even though the delivery can start from 3 to 24hrs after water breaking, we start worrying after 8 to 12hrs if nothing is happening.
- 🐾 There is abnormal vulvar discharge(s):
  - Greenish discharge for more than 2 hours, without the birth of a single baby. The greenish discharge comes from the separation of the placenta with the uterus. Without this link, the baby will die! However, the separation may only affect part of the litter.
  - A large amount of blood = dystocia. Suspect a uterine or vaginal trauma, a torsion (twisting) of the uterus, coagulation problems or too much bleeding at the site of the placentas.
  - Purulent (pus) vaginal discharge. Suspect an infection of the uterus; thus fetal death.
  - Yellowish secretions. Presence of meconium in the amniotic fluid; thus severe fetal distress.
- 🐾 The female has strong contractions for 20-30min without producing a baby.
- 🐾 The female has weak contractions for 2-3hrs without producing a baby. Normally, there should be about 1 baby every 30-60min, sometimes more.
- 🐾 Nothing happens for 4 to 6 hrs after one or more babies have been delivered and there is evidence that more babies are present (abdominal x-rays, abdominal palpation). "Pauses" should not last for more than 4 to 6hrs, although it is possible to see "pauses" of 12 to 24hrs between babies.
- 🐾 The female cries and licks her vulva constantly.
- 🐾 The female is at the end of her term but nothing is happening (more than 63 to 65 days after mating). Consider however that there could be variation in gestation time from 56 to 72 days.
- 🐾 A baby is stuck in the pelvic canal.
- 🐾 The female is very sick or weak (there could be a concomitant disease or condition).

### Most frequent causes of birthing problems:

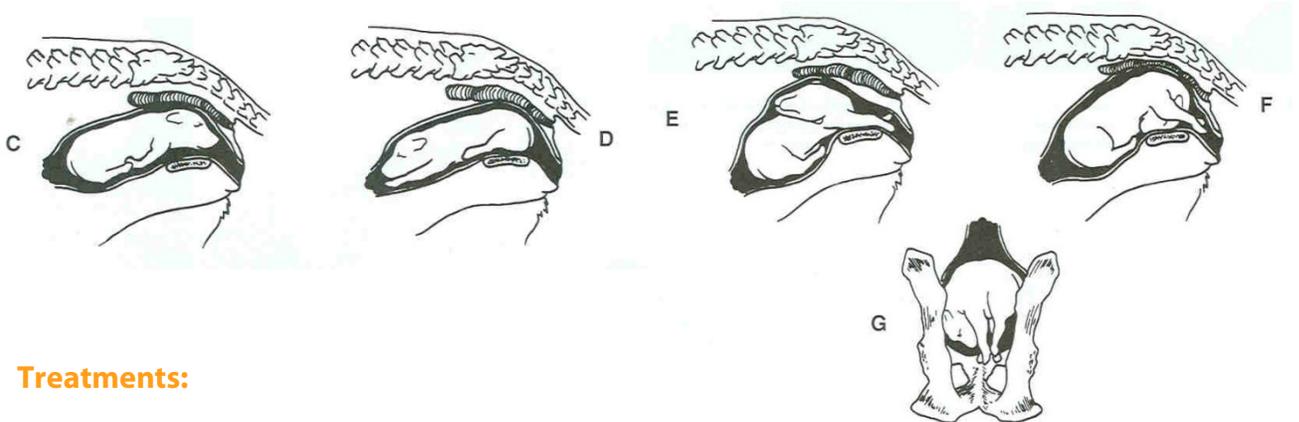
1. **Uterine problems** (most frequent causes of dystocia). Uterine inertia is noted when uterine contractions are either too sporadic or too weak to expel the babies.
2. **Problems with the mother's hips.** The hip (or birth canal) is too small. Often congenital, particularly in certain breeds: Bull dogs, Boston Terriers, Pugs. Can also be secondary to a hip fracture, a vaginal stricture (decrease in the diameter of the vaginal opening), a mass, or a non-dilated neck of the womb. Then, the baby simply cannot pass.

- Ftal (baby) problems.** Fetal malformations, too big, already dead(and inflated), or malpositionned.

### Normal presentations



### Abnormal presentations



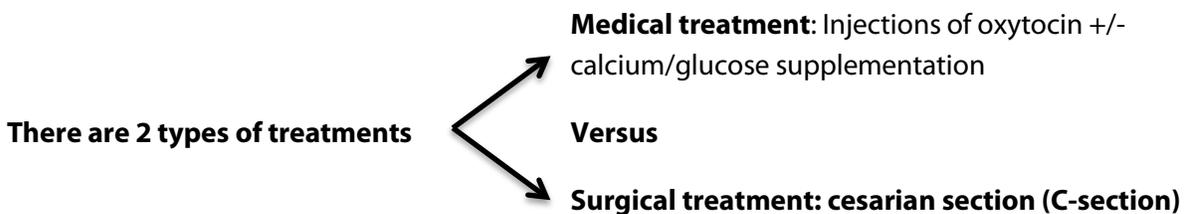
### Treatments:

#### 1. If the baby is stuck in the vaginal canal

If you are at home, you can try to delicately pull on the baby, ideally at the same time as the mother's contractions, to try to dislodge the baby. However, you need to consult a veterinarian immediately if the baby does not come with this DELICATE pull.

Your veterinarian can also try to pull the baby with adequate lubrication. However, by my experience, 95% of the babies stuck in the canal are dead. A fetus can survive many hours after the fetal membranes rupture, but only 20 minutes if it is engaged in the pelvic canal. If the veterinarian cannot succeed in dislodging the babies in 5 to 10 minutes, she/he will recommend a cesarian (C-section).

#### 2. If there are still babies present in the uterus and nothing is happening



To help you pick the right treatment, your veterinarian will need to do a good physical examination of your pet (is the neck of the womb open? Are there efficient contractions? Etc.). She will also need to do abdominal x-rays to evaluate the hips; the number, size and position of the babies; as well as take blood to check the glucose and calcium levels.

**Medical treatment:** OXYTOCIN INJECTIONS: the goal of this is to increase the frequency of contractions; and, if need be, INJECTIONS OF CALCIUM/GLUCOSE to increase the strength of the contractions (when contractions are present but weak).

### Need for surgical treatment (c-section)

- 🐾 A history of a past c-section; since contractions can cause a uterine rupture.
- 🐾 If the female has a big litter, or if the priority is to save the babies. (Note that the mother will be able to nurse her babies even if she has undergone a c-section.)

### Neonatal care, during and after the delivery

If the mother is not taking care of her babies (because of nervousness, inexperience, etc), you will have to do it for her.

- 🐾 You will have to rip the fetal membrane (the pouch surrounding the babies) with your fingers if the mother is not doing it.
- 🐾 Vigorously rub the babies with a towel to dry them off
- 🐾 Maintain a warm ambient temperature with towels warmed up in the dryer.
- 🐾 Belly-button ligature: use sewing thread or dental floss and do 2 to 3 knots at about 0.5 to 1cm from the baby's body. Then cut the umbilical cord on the side of the placenta (**not** between the baby and the ligature you have just made).
- 🐾 It is possible the female will not take care of her young until she is done with birthing. Soon after, however, she should start nursing and cleaning her babies. If she continues to ignore them, you will have to step up and nurse them yourself.

### Nutrition

The best nutrition for the babies will always be the mother's milk because it is perfectly balanced and contains antibodies necessary for the young. If it is not available:

- 🐾 There is a well balanced commercial formula available in either concentrated liquid or powder form called Mammalac.



- 🐾 If you can not get Mammalac, there is a homemade formula named Formule Lacroix :

- ½ cup of evaporated milk
- ½ cup of water
- 1 egg yolk
- 1 table spoon of either corn syrup or honey
- a few drops of children's liquid multivitamins

Never give regular (cow's) milk to a puppy or a kitten. It could cause severe diarrhea that would quickly cause dehydration.

- 🐾 Warm the milk for a few seconds in the microwave oven (no more than 10seconds) so the temperature of the milk will be similar to the temperature of the inside of your wrist.
- 🐾 The nipple (teat) hole should be big enough to let a few drops of milk run when the bottle is put upside down, but should not let the drops run too fast (about 4 drops/minute for kittens and small breed puppies and about 8 drops/minute for large breed puppies).



If you do not have a feeding bottle, you can use a dropper or a syringe, but the syringe should be used as a last resort and with extreme caution. You will then have to put a very small quantity of milk in the baby's mouth and make sure that it swallows it well. Too much milk given at one time can make the baby choke on it.

- 🐾 To bottle feed the baby: The baby should always be flat on it's belly. To put it on it's back will direct the milk into the baby's lungs and can result in pneumonia. You may have to force the nipple into the baby's mouth. Often, pressing the bottle enough that a drop will come out before offering it to the baby will stimulate it to drink. Never squeeze the bottle while it is in the baby's mouth.
- 🐾 Monitor the baby closely. Watch it's mouth to make sure it is nursing, observe it's throat to make sure it is swallowing. Also, monitor the nose and stop bottle feeding immediately if you see milk coming out of the nose.
- 🐾 Babies need to drink every 2 hours, including during the night, and can drink as much as they want. At 2 weeks of age, they can start being fed every 4 hours, and kitten/puppy food can be introduced at 4 weeks of age.

### Urine and stools

The babies will not have the reflex to urinate and defecate by themselves. The mother needs to stimulate them. If she cannot, you need to do it for her.

- 🐾 With a wet cloth or a paper towel, gently rub the genital area before and after each feeding. There will generally be some urine, but not always stools (once every 2 or 3 times).
- 🐾 Baby stools are usually pasty in texture. Liquid stools and/or white lumps could be indicative of a health problem. You should then consult a veterinarian as soon as possible as their health can degrade very rapidly.

## Other

Newborn babies cannot maintain their temperature well. Therefore, you should provide them with a closed and warm environment. For example, in a closed box in which the temperature is between 21 and 24 degrees Celcius. If the mother is with them, she will act as the heat source. Otherwise put a warm water bottle in the box with them, with enough room for them to move away if it is too hot. Make sure the water bottle is covered by a blanket since babies have very fragile skin that can burn easily.

## Vaginal discharge after parturition

The mother will normally have red discharge coming from the vulva many days after the delivery. You should consult a veterinarian if these discharges become profuse or purulent (pus). The discharge should decrease and stop gradually in a few weeks (2 to 6 weeks). The discharge can become brownish over time.



Translated by Dr. Josianne Arbour, DMV, IPSAV