

Health Matters

Being Prepared for Whelping Problems

by Debra M. Eldredge, DVM

Dystocia is defined most simply as difficulty in giving birth. In dogs, this could be a problem with the dam or the puppies. Sometimes whelping problems are secondary to other difficulties or the problem may be a primary one related directly to whelping. For the best possible outcome for both the bitch and the puppies, intervention should be timely and appropriate. This means you must be able to tell what is normal and what is abnormal.

One of the most important factors in detecting canine dystocia is knowing when a bitch is due to whelp. Ideally you know when the breeding took place, whether natural or by artificial insemination. Still, the actual time of ovulation coupled with the length of time that sperm can remain viable in the bitch's reproductive tract can make the breeding date simply a good estimate of whelping date. The actual date can vary from as much as 57 to 72 days using breeding time alone. Checking LH (luteinizing hormone) peaks can more accurately predict the date to 64 to 66 days after the peak.

Once you are fairly accurate on your bitch's due date you need to watch for impending signs of labor. A temperature drop to 99.7 degrees F (37.6 C) is a traditional sign that birth will take place in 12 to 24 hours. It is a good idea to start checking your bitch's temperature, always at the same time of day, about a week before the expected due date. That way you are familiar with her normal temperature and she is comfortable with the whole experience. Body temperature of the bitch tends to rise about 12 hours after she has started labor.

Some researchers feel that detecting a progesterone decline (the hormone responsible for pregnancy maintenance) may be associated with the temperature drop and is a much more accurate and reliable test for pending whelping. Still, most breeders prefer not to hassle their pregnant bitches with more blood tests.

During the hours prior to whelping the bitch will usually start to pant, possibly nest and may pace a bit. At this time very weak uterine contractions may be starting and the bitch may even vomit or not want to eat. This is Stage 1 Labor.

Stage 2 Labor officially begins when the bitch starts to have serious abdominal contractions. She may pass a clear vaginal fluid. The first pup generally arrives one-half to four hours after contractions start. The arrival of a puppy is a sure sign of Stage 2 Labor! Stage 3 Labor is when the placentas are passed. Some bitches pass a placenta after or with each puppy, while some will suddenly pass several placentas together after the birth of several puppies. The above is the ideal, free-whelping, problem-free version of whelping. Dystocia occurs when any part of the whelping process goes awry.

A dystocia can be due to a problem with the bitch or the puppies. Maternal problems are considered to be responsible for 60 to 75 percent of the cases studied in veterinary literature. When all causes of maternal dystocia are considered, uterine inertia stands out as causing 40 to 72 percent of the problems.

Primary uterine inertia is when the bitch is contracting but no pups are moving out, despite the absence of obstructions; the uterus simply isn't contracting hard enough to pass puppies. This problem may be associated with litter size. With a very small litter there are fewer hormonal stimuli to encourage contractions; conversely, with a very large litter there is plenty of hormonal stimulus but the uterine muscles may be stretched so far that they can't contract strongly. Poor nutrition, age, inhibition of contractions due to stress, and inherited predispositions may all contribute to primary uterine inertia. Anecdotally, hypothyroidism is also mentioned by breeders as a factor.

Secondary uterine inertia may occur when a bitch has been contracting strongly but there is an obstruction of some sort blocking the progress of the puppies, and the uterus becomes exhausted. This might include structural defects such as a narrow pelvis, old pelvic trauma or uterine prolapse or torsion.

Puppy-related causes of dystocia cover 24 to 40 percent of all cases. Oversized puppies or puppies presented in an abnormal position are the most common causes of puppy-related dystocia. The Toy breeds, along with Dachshunds, Boston Terriers and Scottish Terriers, may show a predisposition to dystocias. Some breeds simply assume a C-section will be done (such as most English Bulldogs) so the C-section is scheduled based on whelping date and blood tests and the bitch and puppies never go through a dystocia.

Dr. Joni Freshman, DVM, MS, DACVIM, is a reproductive specialist in Colorado. Looking at her clinical practice, she says,

“Many giant breeds, due to the high incidence of primary uterine inertia, also have elective C-sections. This is not the case for some of these same giant breeds in other countries so it may be a genetic issue. Singleton pups in any breed are at high risk for dystocia.” The singleton risk is generally due to the fact that the single pup is often quite large; there may also be less hormonal stimulus for the bitch to start labor.

Step one in managing a dystocia is figuring out that the bitch is in trouble. Your veterinarian may give you some specific signs to be aware of, but if your bitch is getting past her expected due date, is straining with no puppy appearing after 30 minutes, or has had a temperature drop but no sign of labor or puppies after 24 hours, most veterinarians agree that you need to check in with them.

“When to call or go directly to the veterinary clinic is something a breeder should go over with their veterinarian well before the due date, so that plans can be made and they understand the totality of when help may be needed quickly,” says Dr. Freshman. It is helpful to arrange for a family member or friend to accompany you to drive so you can keep the bitch company and keep an eye on any pups already born.

Unless signs clearly indicate a need for immediate surgery, medical treatment is generally attempted first. A “stuck” puppy may be able to be gently rotated or adjusted so that it can pass out. Remember, cleanliness is important. Your veterinarian will put on sterile gloves or at least wash hands carefully. A sterile lubricant such as KY jelly is used to keep the tissues moist. The puppy needs to be gently pulled outward and down. If there are obstructions, either due to the dam’s anatomy or a blocked puppy, surgery will be needed.

Sometimes the bitch simply needs stimulation to get her uterus contracting again. A brisk walk or gently “feathering” the vaginal area may help. An oxytocin (pit shot) is the best known way to stimulate contractions. A nursing puppy will stimulate the bitch’s own release of oxytocin, but some bitches need an extra boost, even after a pup or two is born and nursing. The exact dose will vary with the bitch and some bitches will also need additional calcium to keep the contractions strong. For most bitches this is best done at the veterinary clinic with an IV line, fluids and careful monitoring. This may also allow for ultrasound monitoring of fetal heart rates so you know if the puppies are in distress. If you are an experienced breeder, your veterinarian may work with you via phone to try to resolve problems at home. Remember, though, that, if this litter is extremely important to you being at the clinic means faster access to a C-section if one is needed.

For dams with dystocias, about 30 percent can be treated successfully with medical management; the other 60 to 70 percent will need surgical intervention. Puppy mortality increases the longer a bitch is unsuccessful in whelping, with reports ranging from 13 to 22 percent after five hours of strong contractions. It is much better to react too soon and dash off to the veterinarian than wait and risk losing puppies.

In some situations, there is no doubt that a C-section is called for. A puppy blocking the pelvis that can’t be repositioned, a puppy that is clearly too big to pass through the pelvis, uterine inertia of any cause, a pelvic obstruction in the bitch from earlier pelvic trauma or other causes of obvious distress or death of the unborn puppies are all definite indicators for a C-section. Puppy mortality rates indicate that it is better to do a C-section early than to wait too long. Puppy mortality by C-section has been reported in at 8 percent at birth and 20 percent by a week later. With a vaginal delivery but after dystocia, mortality for puppies was 14 percent at birth and 25 percent a week later.

Many causes of dystocia have an underlying genetic predisposition. This could include vaginal strictures, uterine inertia and simply poor maternal behavior. I think it is very important to look at whelping ease and maternal behavior when we choose our brood bitches. Look into your bitch’s dam, granddams, the dam’s littermates and any of your bitch’s littermates that may have been bred.

Recommended reading: “Canine Dystocia: Medical and Surgical Management,” by A. Gendler, DVM, et. al., in Compendium of Continuing Education, Vol 29 (9), September 2007.