

Reproduction

Introduction

The Florida State Fair believes in the value and importance of exhibitor participation in all educational opportunities offered through their animal project. The **Achievement Premium Program** is a supplement to the current animal show ring premiums, and rewards exhibitors based on their participation in a wide variety of educational events. Points will be accumulated by the exhibitor throughout the program for each event in which they participate in order to reward them proportionately for their involvement.

A **Champion Youth Exhibitor** will be selected in each age division for the Florida State Fair Youth Dog Show. These exhibitors will be selected based on the highest number of points accumulated.

SKILL LEVELS

Exhibitors will be required to demonstrate a variety of skills based on their age category. Please note what skills you will be demonstrating.

YOUTH DOG SHOW

Juniors (age 8 – 10 as of Sept. 1, 2023)

Breed standards

Visual evaluation

Identify Parts 1 – 6 of the Female and Male Reproduction Anatomy

Equipment needed for birthing puppies

Intermediates (age 11 – 13 as of Sept. 1, 2023)

All of the above plus....

Female and Male Reproduction Anatomy *and* their functions

Common Reproductive Terminology

Purebred versus mixed breeds

Processing Newborns

Seniors (age 14 and over as of Sept. 1, 2023)

All of the above plus....

Heat Cycle and Mating (Heat Detection, Natural Mating, AI)

All Aspects of Stages of Parturition

Only Senior exhibitors will be eligible to qualify for the top 4 Champion Youth Awards. Intermediate and Junior exhibitors will only complete the segments of the Skillathon and Record Book Test that are designated for their age level.

GOOD LUCK!

Breeds and Breeding

This year the Skillathon covers information about breeding your species. With dogs, like other animal species, there are many different breeds. Each breed has its own set of physical characteristics. Each breed has been developed for a specific purpose. The International Canine Federation (FCI) recognizes 360 dog breeds worldwide. In the US, the American Kennel Club (AKC) and the United Kennel Club (UKC) are the two major kennel clubs. The AKC recognizes 200 dog breeds and the UKC recognizes over 300 dog breeds. When someone starts to think about breeding their dog, many questions should be asked. The following information can help someone decide if his or her dog should or should not be bred.

Many of us want to breed our pet, but should they really have puppies? Should we add to the number of puppies available for homes? Is your dog a healthy representative of the breed? Could your dog pass on to the puppies any characteristics that may be harmful? To help determine if your pet should be bred, there are many questions that should be asked. Below are just a couple of questions; maybe you can think of more to ask.

- Will this breeding be an improvement of the breed standards of my dog?
- Does my dog have any health issues that could be passed on to its offspring?
- Is my dog old enough? And, has my dog had all the tests needed for its breed to help ensure it's not passing on any genetic issues? (hip and elbow x-rays, eyes checked, etc.)
- Does my dog have a good temperament?
- Does my dog have the correct characteristics for the breed?
- Can I find a good mate for my dog?
- Do I have enough money saved for the breeding? If you have a female, this would mean the cost of the breeding to a male as well as all of the costs to take care of the female during pregnancy and the pups before going to their new homes?
- Will all the puppies have a good home?
- If the puppy is returned, is there a plan for its future?

Breed standards

If you go to either UKC or AKC websites, they will have an area devoted to the breeds and their standards. Before each breed standard, the UKC has this statement:

“The goals and purposes of this breed standard include: to furnish guidelines for breeders who wish to maintain the quality of their breed and to improve it; to advance this breed to a state of similarity throughout the world; and to act as a guide for judges.

Breeders and judges have the responsibility to avoid any conditions or exaggerations that are detrimental to the health, welfare, essence, and soundness of this breed, and must take the responsibility to see that these are not perpetuated.

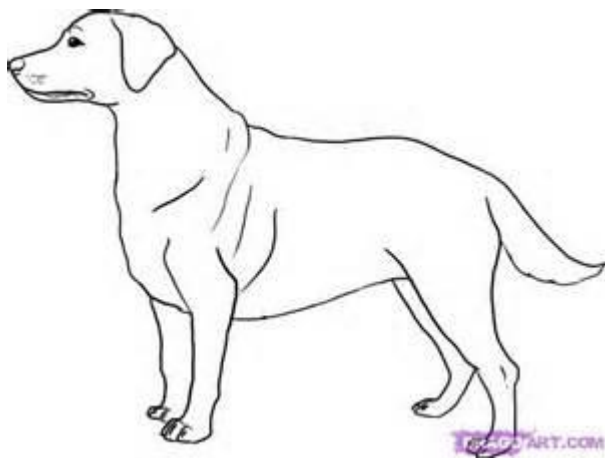
Any departure from the following should be considered a fault, and the seriousness with which the fault should be regarded should be in exact proportion to its degree and its effect upon the health and welfare of the dog and on the dog's ability to perform its traditional work.” <https://www.ukcdogs.com/fresian-water-dog>

Typically, standards are a long list of characteristics that will include a description of the hair, eyes, height, and personality or temperament. These characteristics are key to defining the breed. When deciding if a dog should be bred or not, the individual should be compared to these standards. Both the male and female should be good representatives of their breed. UKC or AKC conformation shows are a good process for having your dog judged by qualified individuals that compare the individual dog to the breed's standards.

There are characteristics that cannot be seen, such as hip and elbow dysplasia, seizures, cancer, and genetic eye problems. The individual should be at least two years of age before being bred and tests should be done to help determine if they will or will not pass on the trait. A dog that might be bred should have x-rays taken to determine if they have hip or elbow dysplasia. Or they might need an eye exam to check for any problems.

So how does this apply to our pets? Here is an example.

You are looking at a medium sized Labrador retriever with a short, double coated, water repellent, chocolate colored coat. The nose is black but should be liver colored. It has an otter-like tail. The mouth shows a light under bite but should have strong evenly spaced teeth with a scissor bite. This dog is a wonderful, active, obedient, fun companion. Tests show that although it does not have symptoms of hip dysplasia, its hips are rated poor. And the front legs are pigeon-toed. Should this dog be bred?



ANSWER: Although the temperament is great and this dog is a wonderful pet, it should not be bred because of the characteristics displayed that can cause health issues. These characteristics include hip dysplasia, pigeon-toed feet, and under bite.

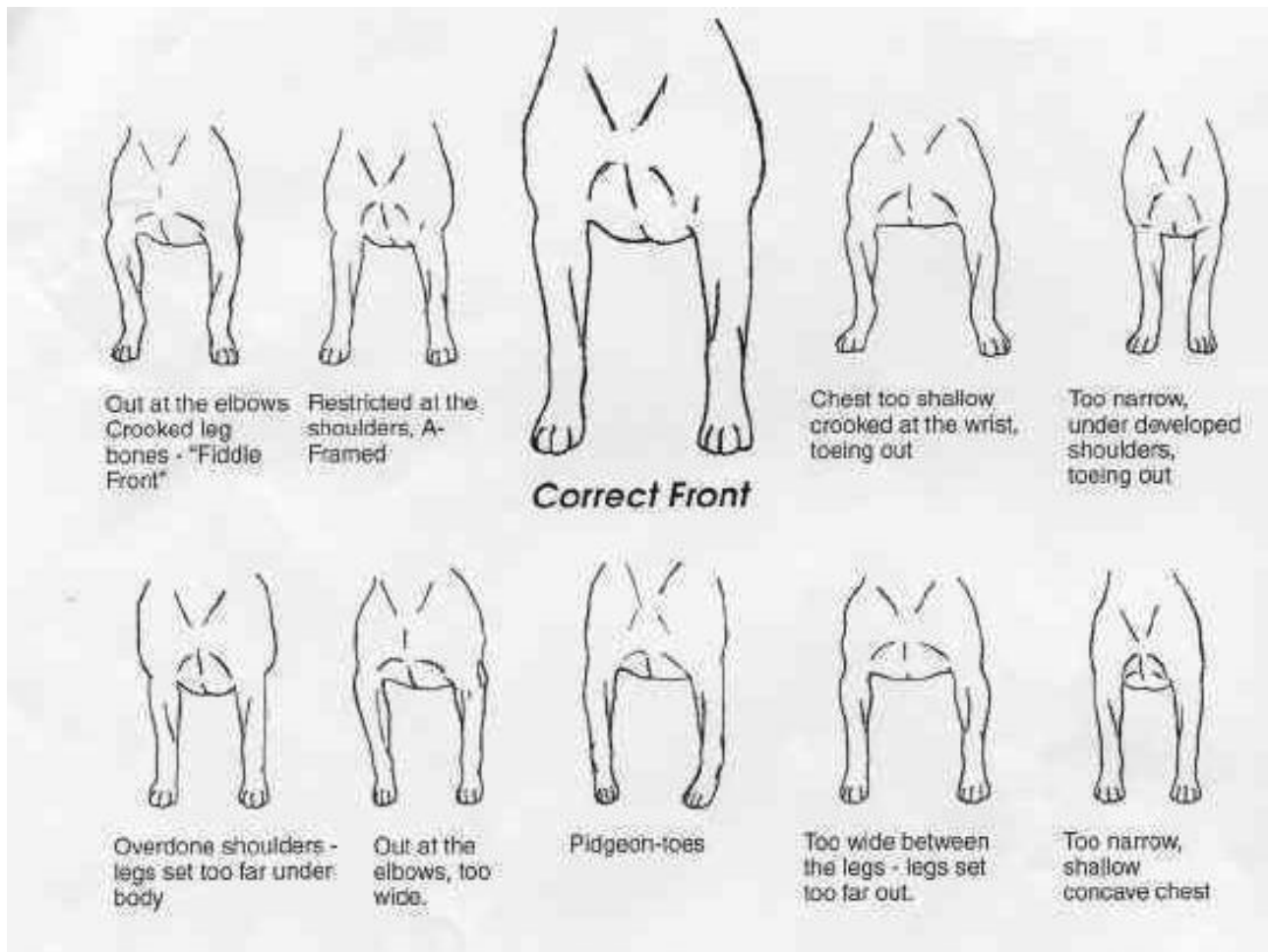
Visual evaluation

Junior, Intermediate and Senior

Just like a judge in the conformation ring, your dog needs to be looked at with an unbiased eye to evaluate its conformation. A comparison needs to be made between the dog's conformation and the breed's standards. And there are some faults that should be checked.

As an example, here are some drawings of various faults in an American Bulldog.
<http://www.sprenkelsamericanbulldogs.com/structure>

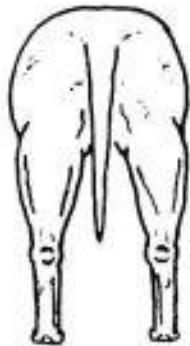
Fronts



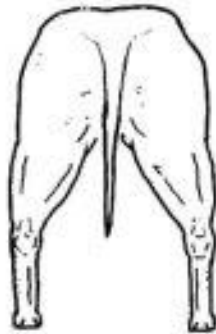
These examples address the breed standards for Staffordshire Bull Terriers.

http://www.alfatauri.pl/wzorzec2_a.htm

Hindquarters



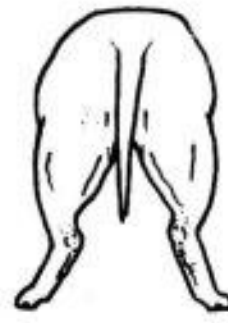
Correct.



*Incorrect:
Too wide.*



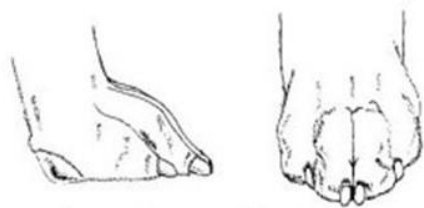
*Incorrect:
Toeing in.*



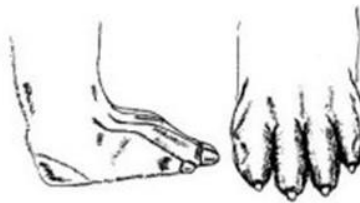
*Incorrect:
Cow-hocked.*

http://www.alfatauri.pl/wzorzec2_a.htm

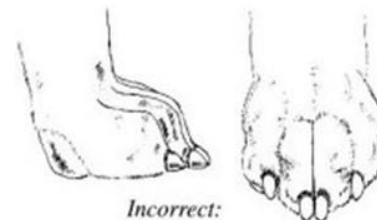
Feet



*Correct: Strong, well-padded,
of medium size*



*Incorrect: Flat foot, which usually
goes with weak pasterns. The toes
are always splayed.*



*Incorrect:
Cat foot.
Too high
on knuckle.*

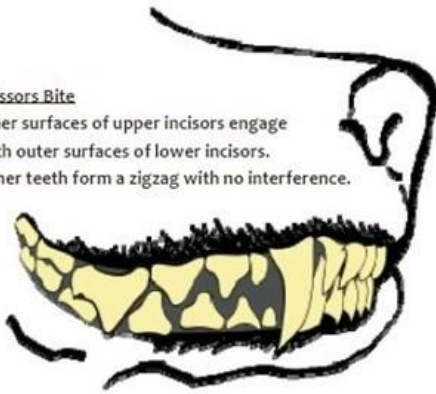
Does your dog have the correct bite? Not all dog standards state a scissor bite, check your standards. These drawings address the standards for the Bernese Mountain Dog.

<http://www.bmdinfo.org/bsr/IllustratedBerneseMountainDogBreedStandard/bernesemountaindogteethbites.html>

Bites – Scissors, Level (pincer), Reverse Scissors, undershot, overshot

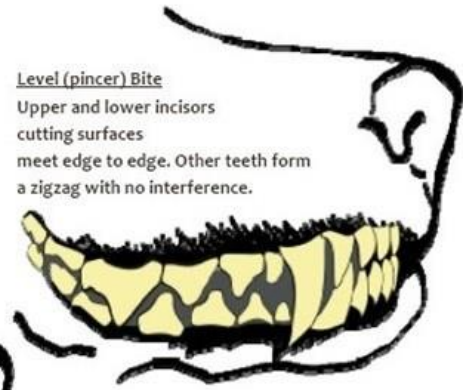
Scissors Bite

Inner surfaces of upper incisors engage with outer surfaces of lower incisors. Other teeth form a zigzag with no interference.



Level (pincer) Bite

Upper and lower incisors cutting surfaces meet edge to edge. Other teeth form a zigzag with no interference.



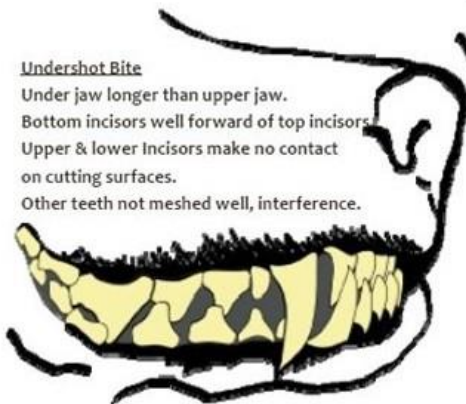
Reverse Scissors

Outer surfaces of upper incisors engage with inner surfaces of lower incisors. Other teeth form a zigzag with no interference.



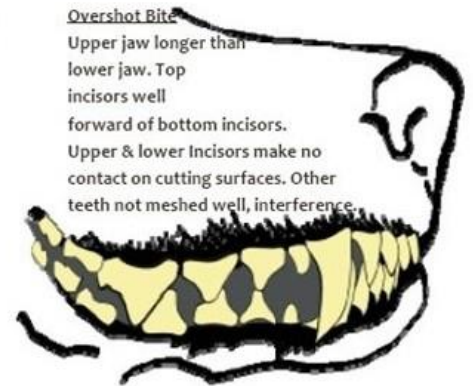
Undershot Bite

Under jaw longer than upper jaw. Bottom incisors well forward of top incisors. Upper & lower Incisors make no contact on cutting surfaces. Other teeth not meshed well, interference.



Overshot Bite

Upper jaw longer than lower jaw. Top incisors well forward of bottom incisors. Upper & lower Incisors make no contact on cutting surfaces. Other teeth not meshed well, interference.



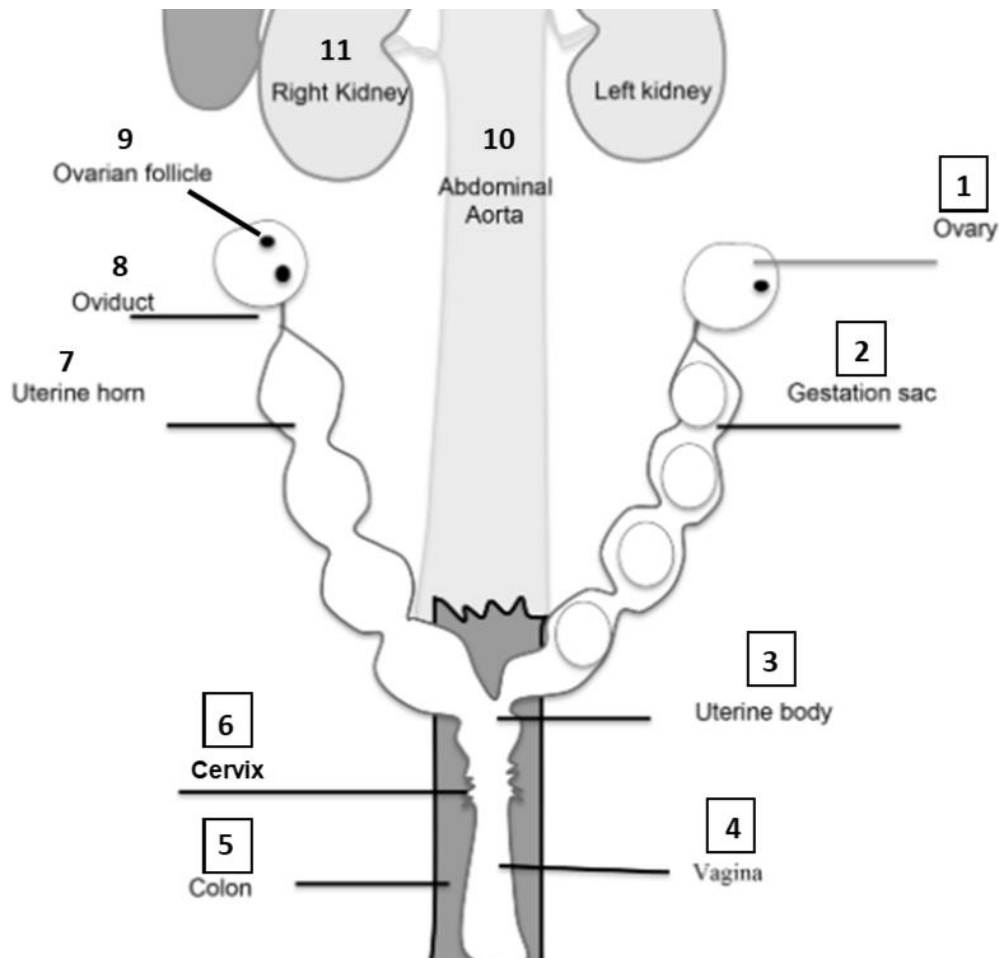
The Reproduction Anatomy and Functions of the Female Dog

**Junior Level 1 – 6 *ONLY*
Intermediate and Senior

The uterus of the female dog is not like the human uterus, which is pear shaped. The dog uterus is Y shaped. The base of the Y is the cervix, which is usually tightly closed to prevent infection from getting into the uterus. It opens for the birthing of the puppies. The two arms of the Y called the uterine horn are where the puppies develop, each in its own individual compartment. The two oviducts sort of dangle over from the top of each arm of the Y and are each attached to the 2 ovaries where the eggs are made and then released to the oviducts when the egg is mature. The eggs are not released all at once by the ovary to the oviduct. Females undergo multiple ovulations, which means that they make several eggs, and release them for up to a twenty-four-hour period. It is the female who determines the number of puppies to be born. The male determines the sex of the puppies. The ovaries not only make eggs, but they also produce estrogen and progesterone hormones. The vagina extends from the uterus to and is located within the pelvic canal, the area where the sperm is deposited during breeding. The vulva is the external opening of the female reproduction tract.

Anatomy of the Female Dog

<https://www.animalultrasoundassociation.org/chapter-3-female-canine-reproductive-anatomy-hormones/>



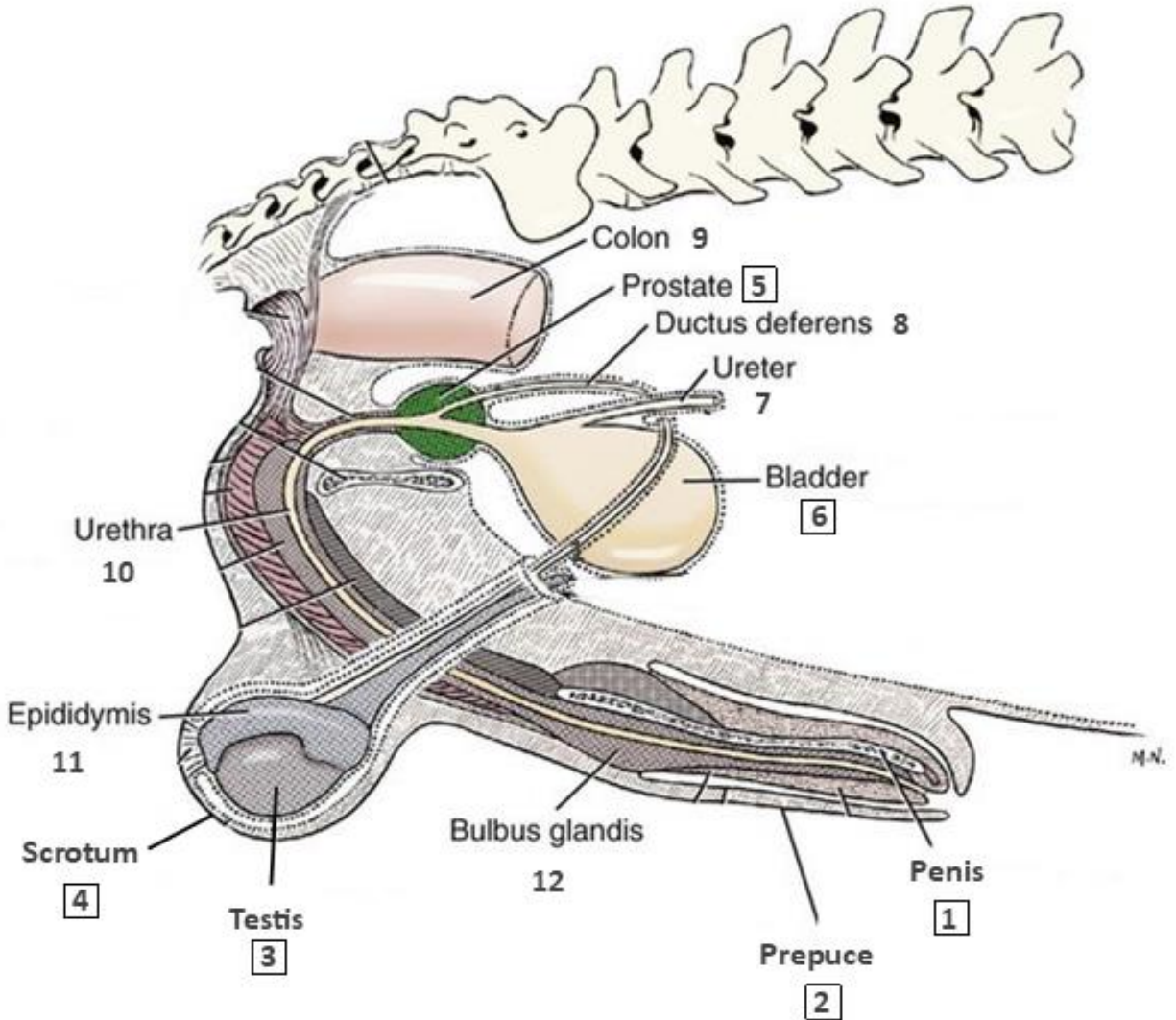
Reproductive Anatomy and Functions of the Male Dog

**Junior Level 1 – 6 ONLY
Intermediate and Senior

Much of the male dog's reproduction anatomy is visible on the outside, whereas the females' reproductive organs are hidden. He should have two testes, or testicles, that should be completely descended into the scrotum by 6 months of age. The testes have bulges on either side called epididymis. This is where the sperm undergoes development and is stored. The bulk of the sperm (semen) is produced by the Prostate gland. The prostate encircles the urethra/urinary bladder junction area. The sperm look like tadpoles and are very temperature sensitive. Temperatures that are too cold or those that are too high, even body heat have been known to kill sperm. They are stored in the testes and are held in the scrotum away from the body. The penis is used for passing urine and for transmission of semen. It is enclosed within the sheath or prepuce for protection.

Anatomy of the Male Dog

<https://veteriankey.com/the-urogenital-system/>



Equipment needed for birthing puppies

The time has come for the puppies to arrive, and this is called whelping. Here is a list of suggested items that may be needed for the delivery.

1. SCISSORS:

It is recommended to use blunt scissors that are round at the end. These are used to cut and trim the umbilical cord.



2. BULB SYRINGE:

The bulb syringe is used to remove amniotic fluid from the puppy's nose and throat.



3. TINCTURE OF IODINE:

The tincture of iodine is used to help dry out umbilical cords. It should be applied to the umbilical cord twice daily until it detaches. It should then be applied to the umbilical cord site for one additional day to ensure proper healing.

4. HAND TOWELS:

Lots of hand towels are needed to dry off the puppies. Puppies should be rubbed firmly to stimulate them to take their first breaths.

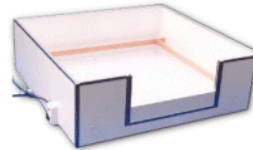


5. LATEX GLOVES:

In case you have to reach in and help a puppy that is stuck.

6. WHELPING BOX:

This is the box you place newborns in.



7. HEATING PAD:

Keep one in the puppy box to keep puppies warm. Never raise the temperature above low. Wrap the heating pad in a towel or flannel receiving blanket.



8. STETHOSCOPE:

To listen for heartbeats and to make sure all puppies are whelped.

9. SCALE:

Used to weigh pups at birth. Monitor pups' weight until you see them double their birth weight.



10. PEN & PAPER:

To record the time each pup is born and how much time lapses between pups. Record each placenta. Identify each pup.



Purebred versus mixed breed versus designer breeds

The purpose of breeding a pair of dogs is to continue and improve a breed. This may range from physical conformation to temperament and performance. Breeding a mixed breed only results in a mixed breed, not in a new breed of dog. All breeds are a mix of two or more breeds that were bred to “improve” one of the dogs bred. Often there are many dog breeds that have contributed to the mixed breed, which have traits that should be “improved” on.

According to Xenia at breedingbusiness.com, “To **create a new dog breed**, a dog breeder must establish a set of clearly measurable and visible traits known as the breed standard. It is a list of characteristics that formally describe the breed to an audience. The breeder needs to **build up the new dog breed over several generations**, generally taking decades. Such an endeavor will take years, and most likely decades, without assurance of finding any success at the end. Creating a new dog breed is most certainly not an easy task, so the initiator must have absolute **patience and determination**.” <https://breedingbusiness.com/create-new-dog-breed/>

“Designer breeds” also known as crossbreeds are dogs of two different breeds that are purposefully bred for characteristics from both breeds. Currently, some crossbreeds have become popular, such as labradoodles, yorkipoos, puggles, cockapoos, maltipoos, schnoodles, peekapoo, or goladors. Some have been bred for a specific purpose; for example, a labradoodle was originally bred to be a service dog. It was hoped that the offspring would have hair that did not bother people with allergies and be a dog that is easily trainable. Poodles have “hypoallergenic” coats and Labrador retrievers are more easily trained than poodles. With such breeding, not all puppies in the litter will have the qualities of coat and trainability that are desired. Goldendoodles were also bred for this purpose. When a labradoodle is bred to another labradoodle the litter produced will have a greater range of characteristics than with a purebred line. To make sure these puppies have hypoallergenic hair, the coat must be tested. The history of this labradoodle crossbreed can be found in an article in the Science section of News, <https://www.abc.net.au/news/science/2019-09-23/labradoodle-guide-dogs-designer-regret/10717186>.

Many believe that mixed breeds or crossbreeds are free of genetic disease. If the mother or father carries the genetic disease, it is possible to pass the disease to the babies. This is true whether the mother and father are carefully screened purebreds, crossbreeds, or mixed breed dogs. Genetic disorders are commonly found in purebreds, crossbreeds, and mixed breeds. Examples include hip and elbow dysplasia, thyroid disease, epilepsy, cancer, and some eye diseases. Other diseases, not genetically based, are found in mixed breed dogs as well.

Common Reproductive Terminology

When dealing with canine reproduction, the following terms may be used by veterinarians or breeders to describe the breeding and labor process:

STUD - Intact male dog, usually intended for breeding.

BITCH - Intact female dog, usually intended for breeding.

WHELP - Young dog or pup.

LITTER - Multiple offspring born during the same labor.

PARTURITION - The act of giving birth, also referred to as labor.

WHELPING - Term used to describe parturition specifically in canines.

GESTATION - The time between fertilization and parturition during which the fetus develops in the uterus.

PLACENTA - organ of female mammals that develops during pregnancy to allow an exchange of nutrients, oxygen, and waste products between mother and offspring, also called the afterbirth.

DYSTOCIA - Difficult birth; there are many different reasons that can cause a mother to have difficulty passing the fetus.

PSEUDOPREGNANCY - false pregnancy, in which a female may display signs of pregnancy 2-3 months after the heat cycle but is not truly pregnant.

PYOMETRA - Pus or infection in the uterus causing illness; usually requires an ovariohysterectomy.

CESAREAN SECTION - Surgical removal of the offspring through an incision in the abdomen; may be required in cases of dystocia; also referred to as a c-section.

OVARIOHYSTERECTOMY - Surgical removal of the female ovaries, oviducts, and uterus, also called a spay. Commonly performed on dogs that are not intended for breeding and to prevent heat cycles.

CASTRATION - Surgical removal of the testes of a male, also called a neuter. Commonly performed on males that are not intended for breeding.

Processing Newborns

As the puppies arrive, it is important to make sure they are in good condition and are given some attention to ensure their health. The basic things that should be performed are:

- Wrap the puppy in a towel and rub gently to remove excess fluid.
- Use a bulb syringe to remove any fluid that may be in the mouth causing choking.
- Cut the umbilical cord with blunt scissors.
- Apply iodine tincture to the umbilical cord.
- Weigh the puppies to monitor growth.
- Record the gender and weight of all puppies.
- Put puppies in a whelping box with a heating pad.



Example of a form used for keeping records of newborn puppies

Whelping Chart (Puppy Birth Record)

Sire's Name: _____ Date Whelped: _____
 Dam's Name: _____ Labor Started: _____
 Dates Bred: _____ Hard Labor Started: _____
 Water Bag Appeared: _____

Puppy No.	Time Whelped	ID Mark	Sex	Color / Markings	Position	Weight	Notes
1							
2							
3							
4							
5							
6							
7							

Notes

<https://www.templateroller.com/template/180933/whelping-chart-puppy-birth-record.html>

Heat Cycle and Mating

Senior

Detecting the Heat in a Female

Females can start to reproduce between the ages of 5 – 12 months of age. This is commonly when most will have their first heat cycle. The heat cycle lasts about 3 weeks, and the female will come into heat approximately every 6 - 7 months after the initial heat. The stages of the heat cycle are typically as follows:

Proestrus stage: The female vulva swells and secretes blood and an aroma that will attract the male dogs from miles around.

Estrus: During this stage the female's vulva will still be swollen but her vaginal discharge will usually stop. The female's estrus stage, when the eggs are released, lasts about 3 – 7 days. Visible blood is an indication that she is most likely to get pregnant if a male dog is bred to her.

Metestrus stage: The discharge has become less and then the discharge stops. The swelling of the vulva lessens and slowly returns to normal size. The female is no longer interested in males, she is no longer fertile and cannot get pregnant.

Natural Mating

During the estrous stage is when the female is ready for impregnating and the mating process should begin. The male will enter the vagina with the penis. The penis has a small bone in it, as well as a bulb near the base on either side, which swells with blood to five times its size. Once the dog has his penis inside the female, he begins 'thrusting' in preparation for ejaculation. Upon ejaculation, sperm is transported to the prostate gland by way of the ductus (or vas) deferens. Within the prostate, additional fluids are added to the sperm to nourish it and aid in its transport from the penis and through the uterus. The glans penis, along with the female's vaginal muscle, ensures that the 'tie' cannot be broken until all the semen is pumped from both testes, which occur as alternative spurts from each testis. This "tightening action" creates what is commonly known as a "tie". Once the tie has occurred, you must wait until the female relaxes her vaginal 'locking' muscle and breaks the 'tie'. If you attempt to pull them apart, you will cause serious pain and damage to both the male and female dog; pulling them apart WILL NOT prevent pregnancy. The tie only assures that the seminal fluid will not leak back out and gives the slower sperm a chance to swim up the oviducts. This tie can last from 3-20 minutes. A healthy male will have 250 million to more than a billion sperm in on ejaculate of spermatic fluid. The extra sperm, if not required by an egg, will die in about 4 days.

Artificial Insemination (AI)

Artificial insemination may be a useful tool for breeding a pair of dogs in certain circumstances. The dogs may live thousands of miles apart. The dogs may not be compatible and may fight. Sometimes a dog may have passed away, but his sperm was collected prior to death. For whatever reason the breeder has chosen to use AI, all of the same evaluations of the male and female should be considered before the AI takes place.

First the male's semen needs to be collected. There are several methods to collect the male's sperm; this is dependent on who is making the collection and the dog from which the collection is taken. Next the semen should be evaluated. Usually, the evaluation includes the number of live sperm and the quality of the sperm. This evaluation can be a

visual evaluation with a microscope and or a microscopic DNA evaluation. When it is determined that the semen and sperm are viable, then they can be stored in preparation for the female to come into heat or can be used immediately.

Senior

Stages of Parturition

The female's gestation (pregnancy) is nine weeks.

Nine weeks have passed, and it is nearing time for delivery of the puppies. There are several signs to look for that indicate the birthing process is about to begin. These symptoms include: the presence of milk, usually seen about 2-7 days prior to delivery; the presence of a clear, jelly-like vaginal secretion, usually seen 1-3 days prior to delivery; a drop in the female's temperature from the normal 101.4 F to about 99 F within 24 hours of delivery.

As the time approaches, the female should be closely monitored for signs of parturition. The stages occur as follows:

Stage of Labor	Average Time	Signs of Stage
Stage 1 – Dilation and beginning of contractions	6-12 hours, but can last as long as 36 hours	Drop of temperature, cervix dilates, bitch is restless and anxious
Stage 2 - Labor	3-6 hours, but can last as long as 24 hours total	Female begins to strain and the fetus is passed through the birth canal
Stage 3 - Afterbirth	Immediately following labor; vulval discharge may occur for 8-10 weeks following.	Placenta is passed as the uterus returns to normal size

The puppy can be delivered either headfirst or butt first; either is considered a normal delivery. The time between delivery of one pup and the next is usually a few minutes, but it is not uncommon for there to be a wait of 4-24 hours. However, it is not normal for a pup to be in the actual birth canal for more than 10 minutes. If you cannot get it out with a reasonable twist and tug, call a vet. Do not wait too long because the mother and pup could be in danger. If after labor the afterbirth is not passed, veterinary attention may be needed. A retained placenta can cause severe infection. The puppies should be processed as discussed earlier and be closely monitored with the mother. Observe each puppy for nursing and normal activity. Record changes in behavior and weight. The mother and puppies should be brought to the veterinarian for a checkup and evaluation once they are strong enough.

This information is provided to help you with Junior Showmanship; it is not part of the Skillathon.

SHOWMANSHIP

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Handlers are judged on preparation and presentation of their dog - grooming - stacking - gaiting. Appropriate showmanship attire and show lead required. Please Note: Showmanship placement will go toward "Achievement Points Only," no Premiums will be paid.

Participation in Junior Showmanship is intended to encourage Juniors to learn how to care for and present different dog breeds. Junior showmanship classes are judged on the ability of the Junior to handle his or her dog. The quality of the dog is not judged. Juniors will be asked to demonstrate:

1. Moving the dog with the rest of the class
2. Presenting the dog in the standing position proper to its breed (including the use of the examining table for those breeds normally judged on a table).
3. Moving the dog individually in a regular pattern

Juniors are expected to know basic ring routines. See the Junior Showmanship Manual provided by Michigan State University Extension at:

https://www.canr.msu.edu/uploads/234/43182/project_guides/Dog_Junior_Showmanship.pdf.

Juniors should be able to follow directions, use space wisely, and be familiar with gaiting patterns. Juniors should appear "ring wise", alert to what is going on in the ring, and should be prepared for changes in the routine of judging. Juniors **must** be able to **control their dogs at all times**.

Juniors should appear confident, prepared, business-like, and attentive. They should be courteous to both the judge and other handlers. Juniors are expected to handle their dogs without disturbing the dogs of the other juniors. Handlers should not crowd, and they should not distract others by continued use of toys and bait. Handlers should be alert to the needs of their dogs. They should use firm but thoughtful hands in controlling and handling their dogs. Juniors should not be impatient or heavy-handed.

Dogs should be groomed and trimmed, as they would be for the breed ring. Judges will not evaluate the quality of the grooming and trimming, but Juniors should make an effort to prepare their dogs properly.

Juniors will be judged on their ability to make their individual dog look its best in both pose and motion.

Junior handlers should:

1. Keep their dog's attention without using dramatic or unnecessary movements.
2. Gait their dogs in a controlled trot without distracting or interfering with the judge's view of the dog.
3. Be aware of what is going on in the ring.
4. Concentrate on their dog rather than the judge but be aware of where the judge is at all times.

5. Junior handlers who use exaggerated posture, motions, or gestures in any part of the competition will be faulted.

SHOWMANSHIP ATTIRE

In dressing for showmanship, you should take extra care to present yourself to the best of your ability. Your appearance is important to the impression you make in the ring. Be neat, attractive, comfortable, and pleasant to watch. Caps or hats are not allowed. Rubber soled boots or shoes with **closed toe and heel** are best, **high heels** and **open toed/heel shoes are not allowed**. Make sure you can run quietly and easily in the shoes you choose. Tennis shoes or canvas/leather shoes are acceptable **if neat and clean** and not out of place with the rest of your attire. Since you are dressing for the “show ring”, being trendy is not necessary.

Emphasis should be placed on being clean and neat, (no dog hair on your clothing!) *Remember, judges have individual opinions that may vary, but staying close to the standards is recommended.*

FOR GIRLS: Dresses, skirts, culottes/skorts of modest length and jackets with sleeves are recommended, attractive pant suits are acceptable. Business type suits are a good example to follow. Short skirts are discouraged as well as long “flowing” skirts that may detract from your dog’s movement. Care should be taken to secure hair away from face, and excessive jewelry or accessories are not recommended.

FOR BOYS: Collared dress shirts and dress pants are appropriate. A tie and/or jacket are encouraged. Preferred dress is “business like.”

SHOWMANSHIP LEADS

Selecting the proper lead for your breed of dog often requires research. If you are able to attend an AKC Conformation Show, watch your dog's breed being shown in the ring. Note the style of collar generally used on your breed. Talking to a handler about your breed's collar and lead may be helpful. Often you can purchase a collar and lead appropriate for your dog from a vendor at the show site.

If going to a show is not possible, try looking at the Cherrybrook company website at <https://www.cherrybrook.com/supplies/show-leads-and-collars>. This will bring up several styles of collars and leads. Some collars like the snake chain require you to measure your dog’s neck and head and you may need to buy a separate lead. Other leads such as the Resco lead with the side clip combine the collar and lead into one product. It is still important to get **good advice** on the best type of collar and lead for **your dog**.