

Dogs can be born with a variety of heart defects, although they occur infrequently in the pet population.

The most common heart defect in dogs is patent ductus arteriosus or PDA. When puppies are carried in their mother's uterus (womb) they have a blood vessel which carries blood away from the puppy's lungs. This vessel allows blood to bypass the lungs since the lungs do not fill with air at this time and puppies receive oxygen from their mother's blood so that their lungs require minimal blood flow.

At birth, this blood vessel should "close off" or disappear, allowing blood to now flow in large amounts to the functional, air-filling lungs.

In some puppies, this vessel does not close and if it remains open eventually heart failure usually ensues. Fortunately, this vessel can be closed either by surgery or by placing a "stent" in the open vessel thru a catheter.

Veterinary surgeons or cardiologists can perform these procedures and regardless of which one is used, the success rate is high. Once corrected, most dogs will lead a normal life with minimal to no heart problems.

So how will you know if your puppy has this problem?

Certain breeds are more at risk than others. Breeds such as miniature and toy poodles, Chihuahuas, Maltese, Welsh corgis, Shetland sheepdogs, Bichon Frise, Yorkshire terriers, Collies, English Springer spaniels, Keeshonds, and Cocker spaniels top the list.

A puppy with a PDA may tire easily or cough. Some affected puppies are smaller than their littermates. Some owners may actually feel a buzzing or vibration in their puppy's chest when held.

Most puppies with a PDA though will behave normally and show no clinical symptoms. A heart murmur (an abnormal heart sound) is then heard when a veterinarian examines the puppy at the time of initial vaccinations. This murmur usually has a very distinctive sound and it is audible by 6-8 weeks of age. Additionally, all puppies which have abnormal heart sounds should be further evaluated to document what heart problem exists and if treatment is necessary. This is another reason why all puppies should be examined by a veterinarian soon after they are acquired.

Once any heart murmur is heard in a puppy, additional tests might include chest x-rays, an ultrasound of the heart (echocardiogram) and an electrocardiogram (ECG). Your veterinarian can help explain these tests to you. Other congenital heart defects are not as easily treated as PDA but fortunately PDA is one of the more common defects and as mentioned, most of these puppies will do quite well after surgery.

This column is provided by the faculty of the OSU Boren Veterinary Medical Teaching Hospital.

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