

Congenital Diseases Concerning Airedales

By Dr. David Post, DVM, MS

Congenital diseases and conditions are problems that occur due either directly to the genetics of the dog or because the genetic make-up predisposes a problem. All dogs can have congenital problems and Airedales are no exception. Airedales are generally quite healthy dogs. Responsible breeders try to avoid dogs with serious congenital problems and they pay close attention to existing problems in the breed. There are a number of conditions that have been reported in Airedales and they are discussed below. Some data from the 2001 Breed Health Survey is included. See the related article on the survey.

Allergies are common to all wire-haired breeds including Airedales. This is a climate specific problem that varies in significance in different parts of the country. With allergies, dogs exhibit itchy skin, flaky and dry skin, and a predisposition for "hot spots" which are raw sores that break out on the skin. It is also frequently associated with ear and eye infections. Most vets are very comfortable treating allergic dogs and the condition is generally quite controllable. Breeders generally de-emphasize dogs with allergic tendencies in their breeding programs. In East Texas and much of the Texas Gulf Coast region, I estimate that 30 to 40% of all dogs (all breeds) exhibit some signs of allergies. For Wire-haired breeds, probably closer to 70% are affected in these regions. Other parts of the country are much less affected. With selective breeding, affected rates for wire-haired breeds can be reduced to around 20% in these areas. The 2001 Breed Health Survey reported allergies affecting 23% of the breed nationwide. The survey also reported 19% with "hot spots" and 11% with problems with ear infections. These conditions are often associated with allergies, but it is not clear from the survey results that these were dogs already considered allergic.

Autoimmune Hemolytic Anemia is a condition where an animal will start to destroy their own red blood cells, without explanation. It is sometimes treatable, but death often results. It is believed to have some genetic predisposition, but this is not proven. The evidence is strong enough that affected dogs should not be used in breeding programs. The 2001 Breed Health Survey reports a 2.3% affliction rate.

In the mid 1980s, we lost a very lovely bitch (CH. Briggsdale Baby Jane, a

True Grit X Baby Gay daughter) to this disease and consequently remain very aware of the disease. Only since the late 1990s have we finally been able to return to the level of quality of Jane in our breeding stock. This illustrates how congenital disease can set a breeding program back, not to mention the personal loss.

Cancers are more frequently reported in Airedales than most other breeds. However prominent dogs dying prematurely is exceptional. Recently, a nationally-prominent show dog did just that by dying of lymphoma at age 4 or so, shortly after several big wins. This unexpected event has made most Airedalers more aware than usual of this class of disorders. Cancers as a rule are more reported now in veterinary medicine than they were a few decades ago. Many incorrectly believe that this is due to greater toxin exposures or other causes. A simpler, and more likely explanation is that dogs are simply living longer than they used to. Improvements in nutrition and dog care as dogs become more a part of the family rather than “just dogs” has greatly lengthened lifespans. Cancer tends to affect older individuals more than younger animals, so we now have more older pets and consequently see more cancers. With exceptions of dogs like the example above, most dogs afflicted by cancer are older and are often great-grandparents in breeding programs. Selecting against the tendency to get cancers under that circumstance is realistically impossible. By the time a dog is a great grandparent, it is often an ancestor of many dogs in many breeding programs. Selection against many of these cancers (if they have genetic origins) will likely wait until there are identified genetic markers for these diseases. Such genetic markers will likely begin to be available in veterinary medicine within the next 20 years. The 2001 Breed Health Survey found cancers to be the most common causes of death in Airedales, but the vast majority of deaths due to cancer are in senior dogs. No particular form of cancer stood out as particularly prevalent in the survey. Melanoma was reported most frequently, followed by adenocarcinoma, hemangiosarcoma, then lymphoma.

Cataracts were reported by the 2001 Breed Health Survey as affecting 8% of Airedales. The survey reports may be a misinterpretation of what is actually nuclear sclerosis of the lens, a fairly common change associated with aging, rather than actually being cataracts. The vast majority of cases were senior dogs, but roughly 1% were affected as younger dogs when juvenile cataracts would be suspected. The survey reported a very low

incidence of other inherited eye conditions in the breed.

Cerebellar hypoplasia is where the dog has difficulty walking and seems unaware of where its feet are, but otherwise, appears normal. This condition is a brain abnormality that is inherited (generally) as a simple autosomal recessive gene. Affected puppies typically exhibit signs at 6 to 12 weeks of age. The problem is not commonly reported in the breed. Affected kennels can test breed their breeding stock to identify and eliminate carriers from their breeding program. The problem is under study at the vet school of the university of Missouri (Dr. Dennis O'Brien) and a genetic marker for the problem in Pointers has been identified. The marker is not useful in Airedales at this point but further research is planned.

Colonic Disease is a catchall phrase of large bowel problems (blood or mucous in stool, diarrhea, constipation) and Airedales may be more predisposed to these various problems than other breeds. Sometimes the term "sensitive stomach" is associated with this syndrome and some dogs may have the tendency to puke more than most. The origin of these problems can be multi-factorial. Allergies, nutrition, environment, and many other issues are often investigated to identify causes. Often, simple solutions, like dietary modification, resolve the problems without actually identifying the real cause. The 2001 Breed Health Survey reports about 10% of Airedales have some form of problems consistent with the description "sensitive stomach". This is probably a little above average for breeds in general. Note that the Breed Survey found 4% of Airedales had problems due to eating "foreign bodies". I have done surgeries to remove tennis balls and rocks from Airedale stomachs!

Heart Disease- The 2001 Breed Health Survey reported heart disease as the third most common cause of death of senior Airedales. It reported that 13% of the participants in the survey were affected by heart murmurs. Murmurs, unlike other forms of heart disease, are generally a benign condition, but affected dogs should be monitored closely by veterinarians.

Hip Dysplasia is the degeneration of the hip joint causing discomfort and lameness. All breeds of dogs can be affected. Smaller breeds compensate sufficiently for the problem in that the condition causes only minimally (generally unnoticed) effects. Larger breeds can be crippled by the defect. It is generally recommended that breeders of larger breeds of dogs test

their breeding stock by X-rays to assure that there is no problem. Airedales are included in this recommendation.

There are two common ways to "certify" breeding stock as tested for hip dysplasia. The main system is OFA certification . Under this system, a vet takes X-rays (generally under sedation) of the dog when it is over two years of age. The X-ray films are submitted to a board of three veterinary radiology specialists that score the hips as excellent, good, fair, borderline, mildly dysplastic, moderately dysplastic, or severely dysplastic. Any of the first three scores are acceptable without significant bias.

The second method of certifying hips is the Penn-hip system. This is a patented technique, run by a corporation and is not as commonly used. Few vets offer the service, since special (expensive) training is required and insufficient demand exists for the service. Those involved with the service consider the system superior since it can be done on dogs as pups and they feel that since it tests laxity in the hip joint, it is a better indicator of hip dysplasia development, when normal X-rays would not detect a problem. Scoring for the system is numerical with scores below 0.3 considered very good. The average score of Airedales tested in the system is currently about 0.5 and scores above this number are considered inferior. The 2001 Breed Health Survey reports that 11% of Airedales in the survey are dysplastic. This is probably below the actual breed affliction rate due to the high percentage of intense Airedalers in the survey and the likely high average quality of their dogs. They survey also reported that approximately 14% of Airedales in the survey were arthritic.

Texter kennels uses OFA certification and still regards this system as the gold standard of excellence in hip certification. See more information in "Breeders Corner".

Hypothyroidism is a defect in the production of thyroid hormone that typically manifests itself as primarily skin problems in dogs. Breeding stock can be tested with a simple blood test. All breeding stock at Texter kennels is tested. The disease tends to be over-diagnosed in veterinary medicine. Many dogs with normal thyroid levels may appear to have improved coats, be more reproductively efficient, or just seem to "do better" with thyroid supplementation. But it is a misuse of the drug to use it under such circumstances. Selective breeding for more vigorous dogs is a more

appropriate approach. The 2001 Breed Health Survey reports that 7.5% of Airedales in the survey were hypothyroid.

Juvenile renal dysplasia syndrome is kidney failure in young dogs. The problem has been reported in Airedales. A genetic marker has been identified for this disease in Shih tzus, Lhasa Apsos, and Soft-coated Wheaten Terriers. A genetic marker allows a laboratory test to identify carriers of the disease. The disease is more common in the breeds mentioned than in Airedales. The requirements to develop a marker for Airedales is samples from 20 families of Airedales where two or more individuals have been diagnosed by wedge biopsy and finding the gene would cost from \$150,000 to \$200,000. This study is not currently underway.

Renal failure was identified by the 2001 Breed Health Survey as the second most common identified cause of death in senior dogs. However, the survey identified zero dogs dying of juvenile renal disease of any form.

Malocclusion (teeth that don't meet correctly) occurs in the breed and can develop in pups up to one year of age. Generally, this problem has no medical implications. Unfortunately, some carriers of this trait have been widely used in the Airedale and the problem is unfortunately common. It has been stated that it takes at least 5 generations to get rid of this problem, and this statement does not seem to be an underestimate! Some Airedale breeders have reacted to the difficulty in ridding their lines of this fault, by putting (unethical) veterinary dentists on their speed dials, that are profieient at braces and other devices to "fix" bad bites. Of course, nothing is fixed, the genes are the same, the offspring continue with the problem..... for at least 5 generations.

Sacralisation and Lumbalisation (spondylosis) are where bony abnormalities develop along the spinal column and may lead to some discomfort, lameness, or stiffness. It often manifests itself as the dog ages. The 2001 Breed Health Survey identified 3% of the participants being affected by spondylosis.