



We are very fortunate to have as a member of our group Lisa J Emerson, author of "The Dachshund Spine"

Lisa has kindly offered, when time permits, to post educational information to further expand our knowledge and awareness of IVDD.

### **Part 1: IVDD-I**

IVDD: intervertebral disc degeneration. It is commonly referred to as intervertebral disc disease, but to be clear, it is a genetic disorder that causes a disease process in the intervertebral discs of the spinal cord.

These discs are located in-between each of the vertebra in the spine of mammals. They are very watery in consistency. They function as pillows - shock absorbers - for the spine, allowing the mammal's back to flex. When a dog has IVDD type 1 (IVDD-I), over time, the discs dry out and are more or less replaced with cartilage, so their ability to function correctly is therefore decreased.

It has been demonstrated for years that IVDD-I shows up reliably in certain families of dachshunds, and over three years ago, at least one genetic basis was found for the disorder. Interestingly, researchers also discovered that IVDD-I does NOT seem to be directly related to what causes the type of dwarfism seen in dachshunds, bassets, corgis, and a number of other breeds, called hypochondroplasia. This is great news because it does NOT mean all dogs with short legs and long bodies are affected with IVDD-I — in fact, most aren't. Dachshunds, unfortunately, just happen to account for the majority of dogs with the genetic condition.

### **Part 2: IVDC**

In part 1

(<http://www.facebook.com/groups/dachshundivddsupportaustralia/permalink/748393848585409/>)

we learned about IVDD-I (type 1 IVDD), a genetic disorder that dries out dogs' intervertebral discs and replaces them over time with cartilage, thus reducing their function. At present, around 1 in 2 dachshunds have apparent (technically severe) IVDD-I. Severe IVDD-I means the intervertebral discs have degenerated to the extent that they are replaced by calcium, and the discs are no longer watery and mushy but are hardened. This condition is called IVDC, intervertebral disc calcification. While severe IVDD-I results in IVDC, there are also different grades of IVDC, from "mild" to "moderate" to "severe" depending on how many of the dog's intervertebral discs are calcified.

There is not currently any publicly-available DNA test for IVDD-I or IVDC. But, IVDC, and the severity of it, can nonetheless be easily and reliably tested for phenotypically (by looking at the dog, in this case internally). For this test to be accurate, the dog must be examined at a particular age and in a particular way. Testing at the wrong age, or improper testing procedures, gives very unreliable and sometimes unusable results.

<https://www.facebook.com/ivddaustralia>

#### **Disclaimer**

*This information is presented for educational purposes and as a resource for members of the Dachshund IVDD Support Australia (Facebook Support Group). The administrators are not veterinarians or health care professionals. Nothing herein should be interpreted as medical advice and all should contact their pet care professionals for advice. The administrators are not responsible for the substance and content contained herein and do not advocate any particular product, item or position contained herein.*

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As alluded to previously, moderate to severe IVDD-I leading to IVDC is a highly heritable genetic disorder. Although the severity of calcification can be \*slightly\* modified by environmental factors (nutrition, exercise, climate, etc.), the disorder is essentially genetic and for that reason is actively bred against by educated, responsible breeders. It has been demonstrated that testing for and then breeding against IVDC decreases the prevalence of IVDC and also reduces the severity of IVDC in the individual dogs that do still end up with it.

(Further information and multiple references contained in /The Dachshund Spine/ book available from the good people of this group.)

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