

# DR. ERIC CLOUGH, VMD

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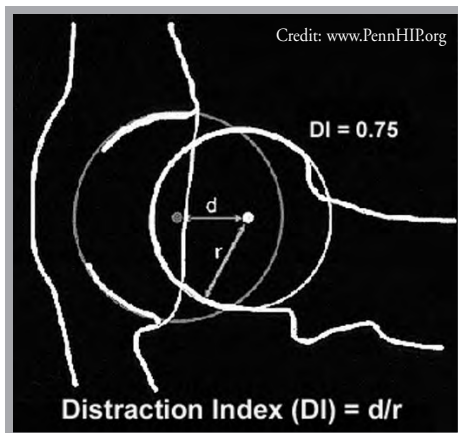
*A graduate of the University of Pennsylvania School of Veterinary Medicine, Dr. Clough founded Merrimack Veterinary Hospital (now a division of National Veterinary Associates) in New Hampshire in 1972. He is a co-founder of The New Hampshire Foundation for Companion Animal Care, Inc., a public non-profit for indigent pet owners, and is well known for his work in promoting the concept of hospice care for animals. Dr. Clough has owned Ridgebacks and treated them in his practice since 1969.*

## PennHIP: Why have it performed on your dog?

PennHIP (the University of Pennsylvania Hip Improvement Program) is a well-established method of evaluating the orthopedic soundness of dogs for breeding. Developed by Dr. Gail Smith at the University of Pennsylvania in 1983, it offers a solid scientific and engineering approach to joint soundness that can be performed on dogs as young as 4 months of age, though six months is recommended. Though that many seem very early, studies show that the difference between PennHIP results obtained on a dog at these young ages and those repeated at an older age is statistically inconsequential.

All methods of evaluating hip-joint soundness attempt to determine joint laxity (looseness). Without question, laxity makes a dog more prone to the destructive forces of degenerative joint disease (DJD). The PennHIP method is the only way to quantify joint laxity. The hoped-for result is as little laxity as possible. In other words, "Tight is good."

Results are expressed as a number known as the "Distraction Index." An index is determined for each hip.



The formula is simple, as shown in this diagram. The task is to obtain the X-ray pictures necessary to make measurements of the diameter of the hip socket and the diameter of the ball. Having determined those numbers, we then pull the hip away from the socket and measure the distance. Dogs need to be heavily sedated or

anesthetized to accomplish the proper positioning on the X-ray table. Three pictures are taken:

1. The typical "Hip Extended" view, which is used only to determine if there is any DJD present.
2. The "Compressed" view, which is used to measure the diameter of the ball and the socket. This measuring is done by the experts at PennHIP using calipers and circle gauges with the film placed on a light table.
3. The "Distorted" view, which demonstrates the distance the ball is moved away from the bottom of the socket.

No part of this procedure causes any harm to the animal. The hips are not moved beyond any point that occurs in natural movement.

Results are mailed to the owner and veterinarian.

### Conclusions:

From Dr. Smith's research, we know that dogs with D.I.s of less than 0.30 will not become dysplastic. That is not to say that arthritis (DJD) might not occur as a result of injury or infection. However, because one knows the D.I. for a dog, one is now in a position to choose breeding stock with tighter hips. The results can be dramatic. It has been shown that by breeding the tightest hips from a dysplastic litter and choosing the tightest from the next generation, one can have normal hips and show-winning dogs in five generations. It really works.

Penn Hip Distraction Index Laxity Profile May 2003		
Breed	Distraction Index Mean	Count
Bichon Frise	0.67	32
Borzoi	0.20	61
Chow Chow	0.72	44
Doberman	0.38	259
GSD	0.43	5775
Labrador	0.51	11565
Newfoundland	1.13	806
Rhodesian Ridgeback	0.35	288

Rhodesian Ridgebacks are a fortunate breed. Their average (mean) D.I. is 0.35. Half of the RR X-rayed are less than this D.I., and many are well below 0.30. The range is 0.17 to 0.88, and the only breeds with tighter D.I.s are Borzoi, Greyhounds, Belgian Sheepdogs and Tervuren. The table below indicates some breed averages and the number of dogs X-rayed. PennHIP does not assign a mean D.I. until at least 30 animals for a given breed have been tested.

To maximize the genetic potential of dogs, it is now conclusively known that overfeeding is detrimental to just about every aspect of health. It is best to keep dogs, and especially puppies, thin. The "ideal body condition" is best for healthy, long-lived dogs. Choice of foods should be limited to the basic dog food of a major manufacturer. Keep it simple!

### References:

*www.pennhip.org*  
"Life Span Study," *Journal of the American Veterinary Medical Association*,  
May 2002