PENNHIP PROJECT—2008

http://www.pennhip.org/index.html

The WSGP PennHIP Project evolved simply because there was so much controversy about it, few of our breeders used it, fewer understood it, and yet it appeared to be a tool that could benefit our breed. This is a fairly expensive process compared to the inexpensive OFA or OVC (OVC no longer does evaluations) methods and it was felt more people would be involved if the project contributed toward the costs. A time frame was established for getting the process completed. There was already a family of dogs that had the procedure so we were asking for people with related dogs to participate. The net effect was that we had 100 dogs on the PennHIP chart because breeders who had not reported scores previously did so after we started the project. We now have at least some base lines to see whether this knowledge can reduce the incidence of HD in the breed.

"**To summarize, PennHIP method—from the PennHIP website:**

"The obvious contrast in joint laxity between the distraction and hip-extended views demonstrates the fundamental difference between the two radiographs. ***The looser the joint on the distraction view, the greater is the chance that the hip will develop OA***. The hip-extended view tends to mask true hip joint laxity because the joint capsule is ***wound up*** into a tightened orientation when the hips are extended. This explains why measurable joint laxity on the distraction view is always greater than the measurable laxity from the hip-extended view. In fact, distraction laxity is up to 11 times greater depending on the breed of dog under study.

The compression view is used to determine the "goodness of fit" of the femoral heads into the acetabula. In a hip with OA, the remodeling that occurs in the acetabulum and/or the femoral head, will often result in an ill-fitting "ball" and "socket".

To summarize, PennHIP method:

- Obtains OA readings from the standard hip-extended view
- Obtains hip joint congruity readings from the compression view
- Obtains quantitative measurements of hip joint laxity from the distraction view

Selection Pressure in Breeding

http://research.vet.upenn.edu/OwnerBreederInformation/SelectiveBreeding/tabid/3350/Default.aspx

Current laxity profile:

	February 2008	October 2012
No. of **White** Shepherds:	29	76
Minimum DI	0.24	0.24
Maximum DI	0.65	0.65
Mean (average) DI	0.39	0.41
50th percentile (median)	0.39	0.41

No. of **German** Shepherds:	7,810	10,363
Minimum DI	0.11	0.11
Maximum DI	1.27	1.27
Mean (average) DI	0.43	0.43
50th percentile (median)	0.40	0.41