

Health Committee Report

This past year, the GSMDCA's Health Committee conducted a Greater Swiss Mountain Dog (GSMD) breed health survey. The survey was available for completion on the Orthopedic Foundation for Animals (OFA) website and entries were open for 15 months, from September 3, 2019 until December 31, 2020. In order to compare the results of this survey to the one completed in 2012, a specific time frame was identified for those taking part in the study. As of the closing date, 726 respondents participated as compared to 1,223 participants in our last survey in 2012.

OFA hosts a number of breed surveys and while OFA was likely the best platform for our study, there are limitations with using them. For example, OFA does not require respondents to answer all questions. OFA recorded 726 participants on the survey but for this question, "Are you a member of the Greater Swiss Mountain Dog Club of America" only 430 participants responded (Yes – 222, No – 208). This patchy pattern of responses was seen throughout the survey results.

OFA does not provide us with the raw data; they only provide high level calculations they make on each survey response, using the number of respondents who began the survey (726) as the denominator, and not the number of respondents who answered the question. If you review the survey results at <https://www.ofa.org/about/educational-resources/health-surveys>, you will see that the percentages for individual questions rarely add up to 100%. For the purposes of this article, percentages for relevant questions were recalculated based upon the number of responses to the question. For reference purposes, the 2012 survey can also be viewed on the OFA website at <https://www.ofa.org/about/educational-resources/health-surveys>.

The following table provides a comparison of the overall health and temperament issues seen within the GSMD breed. For comparison, the results of the 2012 survey included in the first column:

	2012	2020
Gastrointestinal	15.3%	13.6%
Orthopedic	15.9%	12.9%
Kidney/Urinary	11.3%	12.8%
Cancers or tumors	10.7%	12.0%
Allergies	12.9%	11.3%
Neurological and/or Muscular	10.1%	10.7%
Female Dog Reproductive	3.7%	5.4%
Eye	6.1%	5.3%
Skin	6.3%	5.1%
Temperament Issues	4.7%	4.6%
Dental	3.0%	4.6%
Male Dog Reproductive	0.7%	3.1%
Ear	2.0%	1.8%
Obsessive Compulsive Disorders	2.4%	1.2%
Endocrine	1.4%	1.0%
Blood/Lymph	1.3%	0.8%
Immune System Disorders	1.2%	0.8%
Respiratory	0.9%	0.8%
Liver	0.8%	0.8%
Cardiovascular	0.4%	0.7%

Although the number of respondents was greater in 2012, the most recent survey shows that the top breed health concerns are virtually the same with a few notable differences. In 2012, the top three health concerns were Orthopedic, Gastrointestinal and Allergies, in that order. With our latest survey, Gastrointestinal and Orthopedic issues have switched the #1 and #2 spots, and now Kidney/Urinary issues have crept into the #3 spot. The following narrative provides a little more detail into the top health issues listed on the survey.

Gastrointestinal Issues

Of the 83 participants responding that their dog has gastrointestinal issues, the majority list “lick fits” as the number one problem. The incidence of gastrointestinal issues across the total of 610 respondents is as follows:

	2012	2020
Lick Fits	7.4%	6.1%
Inflammatory/Irritable Bowel Disease	3.9%	4.3%
Bloat, with or without torsion	4.7%	3.6%
Bile vomiting	8.2%	3.6%
Other	1.6%	2.0%
Splenic Torsion/Enlarged Spleen	1.8%	1.6%
Colitis	2.1%	1.1%
Megaesophagus	0.4%	0%

The results differ somewhat from 2012 when bile vomiting was the #1 response.

An interesting finding in the most recent survey is that 29.3% of respondents reported that their dogs received prophylactic gastropexies which is a substantial increase from the 19.7% reported in 2012.

Orthopedic Issues

As in 2012 the top orthopedic disorders in the breed remain Arthritis, Hip Dysplasia, Shoulder Osteochondritis Dissecans (OCD) and Elbow Dysplasia. The percentage of dogs with arthritis issues remains relatively stable from year-to-year and can be attributed mostly to the size of our dogs and the aging process.

Of the participants answering the orthopedic questions concerning Orthopedic Foundation for Animals (OFA) evaluations, 45.9% had submitted at least one x-ray for evaluation by OFA in our 2020 survey which is fairly consistent with the 43.2% submission rate in 2012. Following are the trends in our most common orthopedic disorders as evaluated and reported by OFA:

Affected GSMDs per OFA During the GSMDCA Survey Periods

	2008 - 2012	2013-2020
Hip Dyplasia ¹	17.6%	14.0%
Elbow Dysplasia ²	9.6%	11.5%
Shoulder OCD	3.9%	2.3%

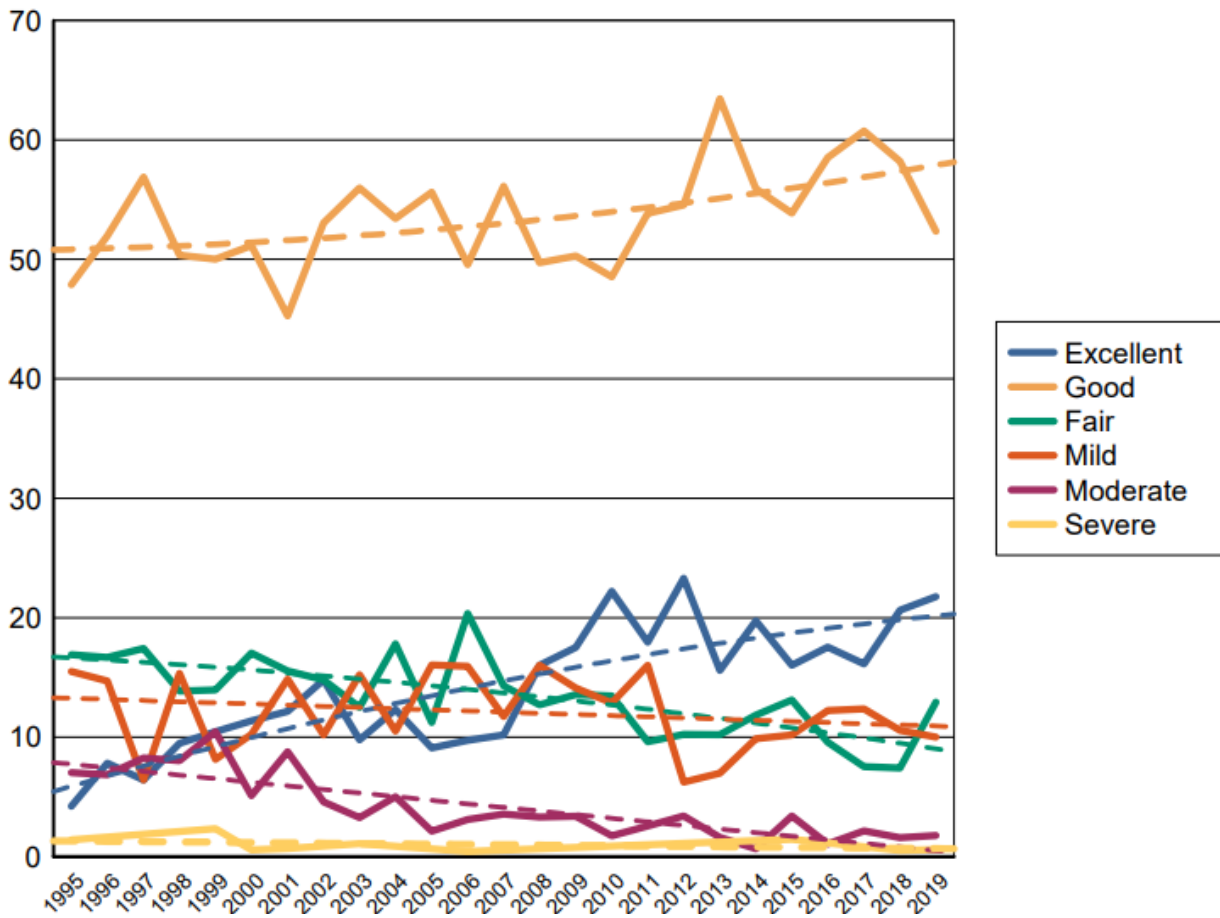
¹Hip Dysplasia defined as OFA: Borderline Mild, Moderate and Severe

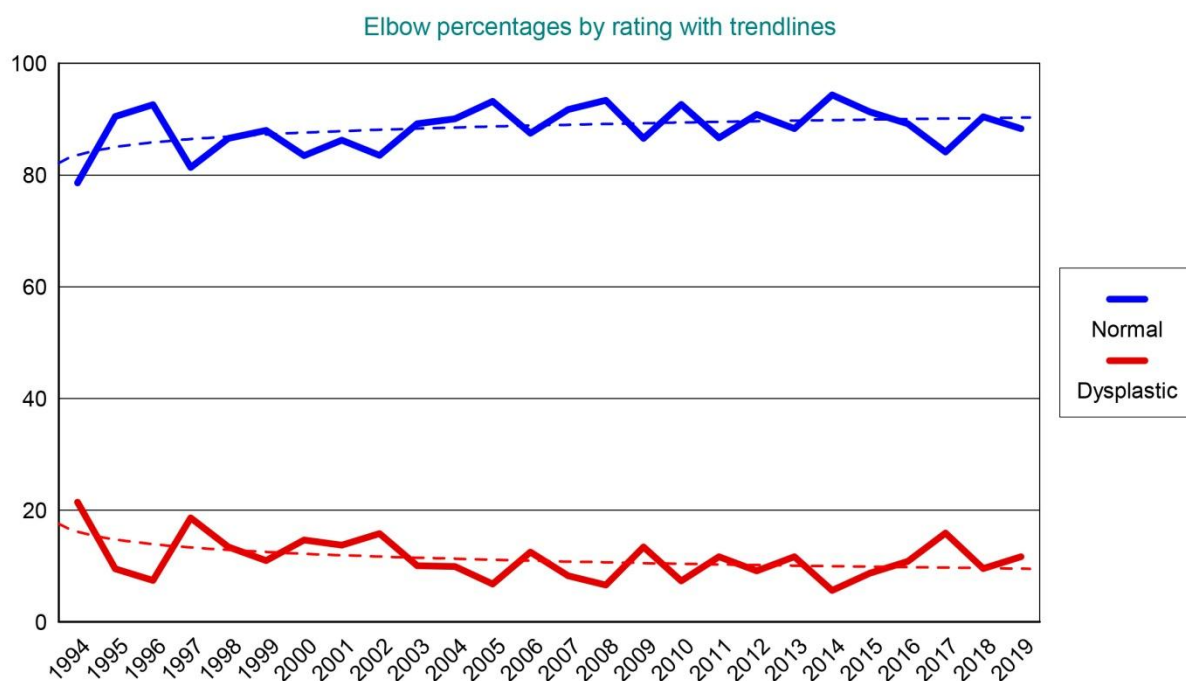
²Elbow Dysplasia defined as OFA: Grade 1, Grade 2, Grade 3

It should be kept in mind that affected percentages noted through OFA evaluation are almost certainly somewhat less than actual; as it is common for owners not to submit dogs for evaluation who have presented with symptoms of disease in their first two years of life or when advanced disease can be easily noted on the x-ray prior to submission. The most impacted by this would be shoulder OCD as GSMDs are generally symptomatic by 18 months if they have a significant OCD lesion, whereas signs of hip and elbow dysplasia can take longer to manifest. Therefore with hip and elbow dysplasia rates it can be especially helpful to look at trends for the breed over time.

With permission from OFA, the following graphs show the GSMD trends for OFA hip and elbow ratings from 1995 through 2019:

Hip percentages by rating with trendlines





As can be seen in these two tables, through careful breeding GSMD overall hips and elbows have been gradually improving over time.

After our previous health survey in 2012, based upon the substantial rate of shoulder OCD noted, the Health Committee recommended to the GSMDCA Board that OFA Canine Health Information Center (CHIC) requirements be modified to require an OFA radiographic Shoulder OCD evaluation. This change was made by OFA to the GSMD CHIC requirement effective 7/15/2015. This change in requirement seems to have yielded a positive impact as the number of shoulder evaluations performed by OFA in the 5 years after the requirement change increased to 619 evaluations, a 49.5% increase when compared to the 5 years prior to the CHIC change. (Hip and elbow evaluations only increased about 9-10% in that same time period.) Additionally and more importantly, the rate of OCD affected shoulders from among those reporting orthopedic issues dropped from 11.0% in 2012 to 6.2% in 2020.

Kidney/Urinary Tract Issues

One concerning trend emerging from the most recent survey is a rise in the percentage of GSMDs diagnosed with renal failure and disease. The following table shows the difference in kidney and urinary tract issues from the 2012 survey to the 2020 survey.

	2012	2020
Urinary Incontinence	8.7%	8.2%
Renal Failure	0.8%	3.0%
Chronic Lower Urinary Tract Infection (cystitis)	1.3%	2.5%
Other	1.0%	0.8%
Familial Kidney Disease	0.2%	0.3%
Renal Dysplasia	0.2%	0%

This negative upwards trend in renal failure and disease warrants future investigation by the Health Committee and consideration by Breeders when making future breeding decisions.

Urinary Incontinence continues to be the most frequent kidney/urinary tract issue noted by owners as occurring in 15.5% of the female GSMDs surveyed, with 90% of these females becoming incontinent post spay.

Cancers/Tumors

Of the 72 cancers reported, the vast majority, 38 (52.8%), are mast cell tumors. Overall, the cancer rates in GSMDs increased slightly, from 10.7% in 2012 to 12% in 2020. Again, based upon the limitations with the OFA survey, we are unable to determine age of onset or outcome for individual categories of cancers.

Neurological and/or Muscular Issues

The most significant condition within this category is epilepsy/seizures from known or unknown causes. Of the 610 respondents who answered in the 2020 survey if their GSMD did not or did have a neurological and/or muscular disorder, 40 dogs or 6.6% indicated that their dog is affected by this condition. The epilepsy/seizure rate reported in the breed has not changed substantially from that which was noted in 2012 of 6.5%.

Phenobarbital, Levetiracetam (Keppra), Potassium Bromide, Gabapentin and Zonisamide continue to be the most frequently used medications to control seizures in GSMDs. This survey does not have the capability to track the effectiveness of particular medications, however regardless of survey design that information probably could not be determined. The most effective treatment for epilepsy in Greater Swiss Mountain Dogs seems to vary significantly between individual dogs. Owners are advised to work closely with their dog's veterinarian in consultation with a neurologist as needed, to develop the most effective personalized medication plan.

The GSMDCA has funded numerous research studies into the cause and treatment of idiopathic epilepsy over the past two decades. The most recent being, through the AKC Health Foundation, an ongoing study being conducted by Karen R. Muñana, DVM, MS; North Carolina State University titled "Is Gut Dysbiosis Associated with Canine Idiopathic Epilepsy?".

Reproductive Disorders

It is noteworthy that this survey showed an increase in both male and female reproductive issues. Lack of interest in a female was the #1 reproductive issue for males in the previous survey. That issue dropped to #4, replaced by Prostatitis, Sterility and Cryptorchid/Monorchid, in that order.

For females, the #1 reproductive issue in 2012 was difficulty whelping. Difficulty whelping dropped to the #8 position in this survey, replaced by pyometra, cystic ovaries, uterine inertia (dystocia), litter reabsorption, false (pseudo) pregnancy, failure to maintain serum progesterone level to adequately maintain pregnancy, and failure to conceive, in that order.

We do not know the reason for this change, but can speculate that the increase in Prostatitis in males and Pyometra in females could possibly be related to the more recent trend in delaying or forgoing spays/neuters of large and giant breed dog companion dogs, to obtain other long term health benefits.

Conclusion

The Health Committee thanks those of you who participated in the most recent health survey. These surveys help the GSMDCA to target financial resources toward research and provide an informational resource for GSMD breeders and owners.