



## GPCA Health Committee



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*The following is the second article addressing health issues affecting the Great Pyrenees. As with the first article (Sept 2010) which covered orthopedic issues, currently no DNA (genetic) tests are available to detect these problems. Control by artificial selection alone, using phenotypic examinations to detect affected animals, is the only option available at this time. Using screening examinations and a Vertical Pedigree to evaluate a dog's suitability for breeding is recommended and supported by the GPCA Health Committee.*

### Health Issues and Examinations (Part II)

**BAER (Brain Stem Auditory Evoked Response)** what is BAER? It is the only accepted method of diagnosing deafness. It is accomplished by making a noise outside the animal's head and watching for a response. BAER is a "yes" or "no" test for congenital deafness, which has been documented in the Great Pyrenees as well as 80 other breeds.

**Examination:** Sedation may be required, as the animal must hold still while wearing a device which looks like a foam ear plug in each ear and small recording electrodes placed under the skin around the head. The electrodes record any response to a noise made outside of the head, the response is recorded on tracing paper.

**Age for Certification:** Puppies as young as 35 days may be tested, and one test suffices for the lifetime of the dog. Again, the test is a "yes" or "no" test, answering the question "is the dog deaf?" OFA recommends testing be performed by a board certified neurologist or an experienced veterinarian audiologist. The printed copy of the BAER test must have the dog's name and I.D. number on it with the application. A printed copy of the test response will be supplied to the dog's owner and OFA.

**OFA Summary Report:** Data available from the OFA registry from 2004 until 2009 shows that a total of 17 Great Pyrenees were screened for deafness; of that number 11.8% were deaf.

Currently, there are insufficient test results available for a vertical pedigree for dogs with a CHIC number, but individual results are posted on the CHIC site.

**Cardiac Clearance Congenital** heart diseases in dogs are malformations of the heart muscle or its primary arteries and veins (great vessels). Many defects are thought to be genetically transmitted, but the exact mode of inheritance is not really fully determined. The purpose of the examination is to identify normal dogs prior to use in a breeding program. Examples of cardiac defects would include malformed heart valves (tricuspid dysplasia), narrowing of the aorta (Sub-Aortic Stenosis), and an enlarged heart muscle (Cardiomyopathy). All of these examples have been reported in the Great Pyrenees.

**Examination:** OFA requires NO sedation for this examination. The examination is conducted in a quiet environment using a stethoscope to listen to heart sounds. Although there are exceptions, most common defects are associated with an abnormal heart sound through the stethoscope (heart murmur).

If a murmur is detected further examinations are recommended, usually an echocardiogram with Doppler studies.

**Age for Certification:** 12 months of age for OFA cardiac clearance. Normal is defined as: one without a cardiac murmur or one with an innocent murmur found to be otherwise normal by virtue of an echocardiogram.

**OFA Summary Report:** Data from the OFA registry shows that from 1996 until mid 2010 a total of 260 Great Pyrenees were examined for cardiac problems. Of that number 1.2 % had equivocal results (uncertain significance) and none were deemed abnormal.

Vertical Pedigree for cardiac examinations for dogs with a CHIC number is available.

**CERF (Canine eye Registry Foundation)** CERF exams should be performed on all dogs in an active breeding program where heritable eye disease is known to be present. Examples of eye problems reported in the Great Pyrenees are eye lid rolling in (entropion), eye lid rolling out or drooping (ectropion), extra lashes growing from the edge of the lid (distichiasis), cataracts, night blindness (PRA), and Persistent Pupillary membrane (PPM). CMR (Canine Multifocal Retinopathy) has also been reported- but a genetic test is available for screening. Some of these problems will not prevent receiving a CERF certification, but the defect will be noted on the back of the certificate.

**Examination:** Virtually identical to human eye exams, this is a painless examination where the dog's pupils are dilated with eye drops and visualized with a pen light, slit-lamp, and ophthalmoscope. This permits visualization of the structures of the eye. *Breeds that are recommended to have a preliminary examination prior to pharmacological dilatation on the initial examination are Dalmatian (iris hypoplasia/sphincter dysplasia), Australian Shepherd (Iris coloboma), Mastiff, Basenji, and Pembroke Welsh Corgi (Persistent Pupillary Membrane). As PPM is reported with increasing frequency in the Great Pyrenees, it would be advisable to mention this to the Veterinarian prior to the examination.*

The examination should be performed by a certified Veterinary Ophthalmologist who records observations on the CERF form. The diagnosis is reported by categories to let owners know there was a diagnosis and where it was located. These are also located on the back of the CERF certificate.

**Age for Certification:** There is NO minimum age for CERF certification. All results are shared with the OFA. NOTE: CERF is an ANNUAL examination in order to maintain certification.

**OFA Summary Report:** Data from CERF is not provided to individual Parent Clubs on an automatic or cost free basis.

Vertical Pedigree for CERF examinations for dogs with a CHIC number is available.

**Autoimmune Thyroiditis** What on earth is Autoimmune Thyroiditis? A simple explanation for this disease process is very difficult; fortunately, the examination is not difficult at all. Suffice it to say, the thyroid gland contributes to the proper function of numerous organ systems. Disease symptoms vary widely and may include weakness, obesity, infertility, hair loss, and skin problems, Autoimmune Thyroiditis is known to be inherited. As this disease is usually observed between the ages of 3 and 8 years, testing prior to breeding is recommended. A dog can test normal at age 2 or 3 and abnormal at a later age; hence, the recommendation that the test be performed prior to every breeding if there is a question about the health of the thyroid gland.

**Examination:** A blood test is all that is required. Three tests are performed on the specimen (an FT4, cTSH, and TgAA). These results must be submitted to an OFA certified/approved laboratory to obtain a breed database number. A few hints: female dogs should not be tested during an estrus cycle; date

of last routine vaccination should be noted on the application; and “equivocal” results should be re-tested in 3 – 6 months.

**Age for Certification:** A breed database number will be issued by OFA at 12 months of age. Re-examination is recommended at ages 2, 3, 4, 6, and 8 years.

**OFA Summary Report:** Data from the OFA registry from 1997 through mid 2010 show that a total of 112 Great Pyrenees were tested for Autoimmune Thyroiditis. Of that, 90.3 % were within normal limits; 3.5 % were abnormal; 1.8 % were definitively diagnosed as affected; 1.8 % were diagnosed with idiopathic (cause unknown) hypothyroidism and 6.2 % had equivocal results (uncertain significance).

Vertical Pedigree for Thyroid testing results is available for dogs with a CHIC number.

## GPCA Health Committee

The GPCA Health Committee encourages all breeders/owners to have your dog’s health tested. Realizing that cost is a consideration, the Health Committee has and will continue to offer inexpensive health examinations at the GPCA National Specialty each year.

When having health examinations performed on your dog please remember:

1. to sign in *two places on the OFA application form for submission*
2. the dog *must have permanent identification* for inclusion in the open database
3. if you forget, there is a form available on the OFA website to consent and place the results in the open database

Sources:

CERF website

OFA website

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GPCA Bulletin: March/April; May/June; Sept/Oct issues

Canine Multifocal Retinopathy (May, 2009 – Health Rep. Article)