

# Hyperkalemic Periodic Paralysis (HYPP) Testing Procedures

By Shonda Nelson, Registrar  
4.2008

Hyperkalemic Periodic Paralysis (HYPP) is a muscular disease caused by a hereditary genetic defect that leads to uncontrolled muscle twitching or profound muscle weakness, and in severe cases may lead to collapse and/or death. According to research, this condition exists in certain descendants of the stallion Impressive, AQHA registration number 0767246. If your Appaloosa traces back to the stallion Impressive, the ApHC recommends testing to confirm the presence or absence of this gene.

A genetic test for HYPP can be completed through the ApHC using the same hair sample submitted for DNA typing. HYPP testing is not a requirement of ApHC registration. All unregistered Appaloosas that owners choose to have HYPP tested and Parentage Verified through the ApHC, using the same sample for both tests, shall have their HYPP test results designated on their original Certificates of Registration.

All Appaloosas that owners choose to have HYPP tested and Parentage Verified through the ApHC, using the same sample for both tests, that were previously issued a Certificate of Registration will have the option of i) meeting ApHC requirements for a corrected certificate (see Rule 241) upon which the ApHC will designate HYPP test results, or ii) retaining their old certificate and not having the HYPP test results designated.

To assist with the prevention of HYPP symptoms, the ApHC Board of Directors approved the conditional use of acetazolamide for HYPP positive horses. To read the complete motion and accompanying data, please see motion #16-07-07 on pages 21–24 in the September 2007 issue of *Appaloosa Journal*. The motions are also on the ApHC website at: <http://www.appaloosa.com/association/bod.htm>. Once there, click on Summary of Motions (July 8, 2007).

**Important Note: Owners who choose to exhibit HYPP positive horses at ApHC-approved and -sponsored shows and who wish to treat symptomatic horses with acetazolamide must complete an HYPP test and a Parentage Verification test using the same DNA sample and those test results must appear on the horse's Certificate of Registration in order to be in compliance with ApHC drug testing rules. Responsible parties for horses drug tested positive for acetazolamide and in which the horse's Certificate of Registration does not reflect the horse's positive HYPP status (either N/H or H/H) will be charged with a violation of drug testing rules.**

**TEST FEES**

HYPP test.....\$45 (member & non-member)  
 Parentage Verification.....\$50 (member & non-member)  
 Parentage Verification and HYPP test.....\$95 (member & non-member)

To order a DNA testing kit, simply [click here](#). To order a DNA and HYPP combination testing kit, simply [click here](#). Or, contact the ApHC at 208-882-5578 ext. 300. Each kit is horse-specific and great care should be taken to use the proper kit on the proper horse. Also, care should be taken not to accidentally mix hairs from two horses in one kit. Doing so will necessitate re-sampling.

*Please note: The last sentence in Rule 223.A. of the 2008 Official Handbook of the ApHC should be corrected as follows: All fees and procedures for issuance of a ~~duplicate~~ corrected certificate will be required where applicable. It's not necessary to complete and notarize the affidavit for duplicate certificate so that HYPP test results may be printed on your horse's certificate of registration. Forms are available at [www.appaloosa.com](http://www.appaloosa.com) or call 208-882-5578 ext. 300.*

The following chart depicts the probability of inheriting HYPP:

|    | nn               | nH                         | HH               |
|----|------------------|----------------------------|------------------|
| nn | 100% nn          | 50% nH<br>50% nn           | 100% nH          |
| nH | 50% nH<br>50% nn | 25% HH<br>50% nH<br>25% nn | 50% HH<br>50% nH |
| HH | 100% nH          | 50% HH<br>50% nH           | 100% HH          |