



Currently Testable Equine Genetic Disorders – Considerations for Half-Arabian Owners and Breeders (March 2011)

Currently, there are ten testable equine genetic disorders. While Arabian horse owners and breeders need to be especially aware of disorders affecting the Arabian breed, it is important for owners and breeders of Half-Arabians to also be aware of genetic disorders affecting other breeds; particularly the **dominant traits**, such as Hyperkalemic Periodic Paralysis (HYPP). This table is intended to provide a basic overview of the **currently testable** genetic disorders. There are quite a few other disorders, in various stages of research, thought to have a genetic basis but do not yet have DNA tests available; as research advances, the below table will be updated. Owners and breeders are encouraged to contact their veterinarian and the various breed associations for further information.

Breed	Disorder
American Saddlebred	<ul style="list-style-type: none">• Junctional Epidermolysis Bullosa (JEB) - Lethal skin disorder/RECESSIVE http://www.ca.uky.edu/gluck/AGTRL.asp#JEB
Arabian	<ul style="list-style-type: none">• Cerebellar Abiotrophy (CA) - Neurologic disorder/RECESSIVE http://www.arabianhorses.org/education/genetic/docs/11Genetic_CA_Review_UC_Davis.pdf• Lavender Foal Syndrome (LFS) - Lethal neurologic disorder/RECESSIVE http://www.arabianhorses.org/education/genetic/docs/10Genetic_LFS_CCDL.pdf• Severe Combined Immunodeficiency (SCID) - Lethal immune system disorder/RECESSIVE http://www.arabianhorses.org/education/genetic/docs/10Genetic_SCID_2010.pdf
Belgian	<ul style="list-style-type: none">• Junctional Epidermolysis Bullosa (JEB) - Lethal skin disorder/RECESSIVE http://www.belgiancorp.com/jeb.html
Paint	<ul style="list-style-type: none">• Overo Lethal White Syndrome (OLWS) - Lethal GI tract development disorder/RECESSIVE http://www.apha.com/breed/lethalwhites03.html <i>Also be aware of Quarter Horse related disorders (see Quarter Horse section)</i>
Quarter Horse and related breeds, including Appaloosas	<ul style="list-style-type: none">• Hyperkalemic Periodic Paralysis (HYPP) - Muscle disorder/DOMINANT http://www.vgl.ucdavis.edu/services/hypp.php

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Continued Below	<ul style="list-style-type: none">• Malignant Hyperthermia (MH) - Frequently fatal muscle disorder/DOMINANT http://vetneuromuscular.ucsd.edu/cases/2008/Oct08.html• Polysaccharide Storage Myopathy Type 1 (PSSM)*** - Muscle disorder/DOMINANT http://www.cvm.umn.edu/umec/lab/PSSM/http://www.cvm.umn.edu/umec/lab/gbed/home.html <i>*** Though the QH and QH related breeds were the focus of test development for PSSM Type 1, the disorder has also been reported in numerous breeds, including but not limited to, Draft breeds/Draft crosses, Warmbloods, Tennessee Walkers and Morgans.</i>• Glycogen Branching Enzyme Deficiency (GBED) - Fatal muscle disorder/RECESSIVE http://www.cvm.umn.edu/umec/lab/PSSM/• Hereditary Equine Regional Dermal Asthenia (HERDA) - Skin disorder/RECESSIVE http://www.vgl.ucdavis.edu/services/herda.php <p>Good overview article on genetic disorders affecting QHs: http://manc.umd.edu/Abstracts2010/LenzHYPP%20abstract.pdf</p>
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