

GBED

Glycogen Branching Enzyme Deficiency is an inherited autosomal recessive disorder where a foal is born lacking the enzyme to store sugars (glycogen) and is genetically linked to KING through his sire Zantanon. This build up of sugar molecules causes muscles, the heart and brain to slowly die off. GBED foals may be aborted late term or stillborn. Those that are born alive will often be weak. GBED foals can appear fairly normal for awhile and become progressively weaker, develop seizures and inevitably die. *Horses with a single recessive gene do not express the disorder but have a 50% chance of passing it to their offspring. Horses must have two recessive genes to suffer from this disorder. Breeding two carriers allows for a 25% chance of producing an afflicted offspring with two recessive genes.*

Lethal:

– YES. 100% of the time. GBED foals do not live longer than 18 weeks of age.

Inheritance:

– Simple recessive.

Affected breeds:

– Quarter Horses, Appaloosas, and Paints and cross breeds descending from the Quarter Horse, KING (1932) and his sire, ZANTANON (1917).

Statistics:

– Present in approximately 10% of Quarter Horses. Approximately 8% of King's modern day descendants carry GBED

Available Tests:

–YES Direct test.

Treatment:

– There is no treatment for GBED. Affected foal are often euthanized to prevent further suffering after GBED diagnosis. Consult a vet.

Prevention:

– Possible carrier horses should be tested. Carriers should not be bred together. If two carriers are mated, there is a 25% chance of producing a GBED afflicted foal.

Links:

<http://www.aqha.com/en/News/News-Articles/02032012-Genetic-Testing.aspx>

http://en.wikipedia.org/wiki/American_Quarter_Horse

<http://www.cvm.umn.edu/umec/lab/gbed/>

<http://www.horsetesting.com/GBED.htm>

<http://www.thehorse.com/ViewArticle.aspx?ID=10022&src=topic>

<http://www.vgl.ucdavis.edu/services/gbed.php>

summary and format from:

<http://www.horsegroomingsupplies.com/horse-forums/breeders-guide-to-equine-genetic-disorders-367267.html>