

TYING-UP

SIGNS, CAUSES, MANAGEMENT & PREVENTION

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The scientific name:
rhabdomyolysis

skeleton muscle breakdown

A disorder causing extreme **muscle contractions**.

SIGNS OF TYING-UP

In extreme cases:

- ▶ Urine turns dark (reddish-brown)
- ▶ Muscles may bulge

Appears to be in significant **pain**

Increase in **heart & respiratory** rate

Contraction of muscle groups

Muscles on either side of the spine feel **rock hard**

Temperature may rise up to 40°C°

Sweats profusely

Gait gradually stiffens

Reluctance to move

CAUSES

Diet

- Electrolyte imbalances (Ca:P)
- Altered or abnormal carbohydrate metabolism
- Mineral deficiency (Ca, Mg, P or K)
- Vitamin E \ Selenium deficiencies

Exercise

- Over exertion in training
- Dramatic changes in training

Other

- Dehydration
- Lactate build up
- Hypotension / Nervousness
- Hormone imbalances
- Genetic Inheritance

YOUR CHECKLIST

Initial Attack

- **Stop** exercising the horse and don't force the horse to walk.
- **Call** your veterinarian.
- Rug the horse if weather is cool.
- **Check** for dehydration (use pinch test)
- **Provide** small frequent sips of **water**.
- **Relieve** anxiety and pain. (Drugs may be prescribed by your veterinarian.)
- **Remove grain** and feed; provide only hay until signs subside.

Recovery

- **Hand walking** or small paddock turnout is good once the horse walks freely, usually in 12-24 hours
- When blood creatine kinase (blood enzyme) is normal, **slowly recondition** the horse to the previous work level.
- Recovery time may be up to **6-8 weeks** and ability to return to work will vary with severity.
- If the problem reoccurs, have the horse **evaluated** for a specific cause of recurrent exertional rhabdomyolysis.

Exercise Management

Carefully adjust to your horse's fitness level and metabolic rate.

A consistent, structured program with **no rest days**



Hard work should be followed with a slow trot or canter to **stimulate the delivery of oxygen** to the muscles and the removal of lactic acid

Slow increase in intensity as fitness develops



Adequate **warming up** and **cooling down** of horse.

Nutritional Management

Avoid High Grain Diets

Avoid feeds high in cereal grains (e.g. maize, barley, oats) and focus on fat and fibre sources.



High Fat Diet

Oils provide slow release energy and maintain steady blood glucose and lactate levels.



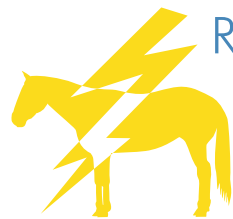
Balanced Ratios & Levels

Feed the correct ratios of different electrolytes and elevated levels of vitamin E, C and selenium.



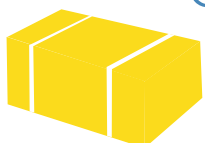
Reduce Stress

Introduce supplements to reduce nervousness/stress such as Thiamine, Magnesium and Chromium.



Good Quality Hay

Provide hay of excellent hygienic quality, suitable to the horse's nutrient requirements.



Frequent Small Meals

Avoid long periods without food to prolong chewing time and reduce boredom.

