

Formerly known as
Laminitis Rescue



HoofXtra mix

A premium bioavailable vitamin and mineral mix with the nutrients that may benefit laminitic horses
Copper Zinc Iodine Magnesium Selenium Biotin (B7) Pyridoxine (B6) Folic acid (B9)

HoofXtra is a premium mineral and vitamin mix that is ideal for horses that need the additional B vitamins like biotin, or for horses that are prone to laminitis to support a low sugar + starch intake. Biotin is known to move nutrients into cells without insulin involved in other species in high doses (insulin signalling) and both pyridoxine and folic acid may assist with nitric oxide production for blood perfusion, particularly in the hooves, at levels recommended by Dr Eleanor Kellon VMD.

The following ingredients have been selected for quality and bioavailability based on research:

Per standard feeding rate (18 grams):

Mineral	Mineral Source
300 mg copper	Poly copper
900 mg zinc	Zinc sulfate monohydrate
1 mg selenium	Organic selenium yeast
1 mg iodine	Seaweed meal
6 g magnesium	Magnesium oxide

Plus 20 mg biotin (vitamin B7)
200 mg pyridoxine (vitamin B6)
20 mg folic acid (vitamin B9)

The best ratio for copper to zinc is 1:3 for the whole intake

Instructions: Trial a feeding rate per day of **18 grams**, best to weigh. Volume is around 1.2 metric tablespoon (slightly heaped 20 ml volume measure), depending on the density.

Amount can be increased to **1.5 to 2x** for larger horses (>400 kg) or horses that need the higher amount due to excessive levels of **iron** (or manganese) in their intake. Iron can compete with zinc and copper.

For small ponies like miniatures and Shetlands, trial half the amount, around ½ tablespoon.

It was back in 2007 that Emeritus Professor Chris Pollitt at The University of Queensland and his team (Asplin KE, Sillence MN and McGowan CM) showed that elevated blood levels of insulin (hyperinsulinaemia) is a major risk factor for laminitis and the most common dietary form. Insulin controls glucose metabolism.

Insulin resistance (IR) is a state where the tissues show a reduced sensitivity to insulin resulting in an overproduction of insulin.

To prevent laminitis caused by elevated insulin regardless of mechanism, the key is a diet **low in sugar and starch** as it's these carbohydrates that trigger the release of insulin from the pancreas. Excellent information and help at www.ecirhorse.org, their IO group and Facebook page.

HoofXtra mix is not a therapy or cure for laminitis. Nothing can substitute for a low sugar + starch, low fat diet.

HoofXtra Mineral & Vitamin Mix

Selenium is an important antioxidant for protecting cell structures and cell membranes from the effects of oxygen free radicals produced during energy generation and therefore most important for tissues with high aerobic metabolism activity like the brain/nervous system, heart, skeletal muscles and rapidly growing tissues. Acidic soils inhibit selenium uptake by plants. Alkaline soils are more likely to have adequate selenium levels though horses in work may need supplementation. A soil test will test pH, the lower the pH number the higher the acidity, 7 is neutral and the higher the number the more alkaline the soil.

More information about supplementing selenium:

<https://drkhorsesense.wordpress.com/2022/05/10/dont-fear-selenium/>

<https://drkhorsesense.wordpress.com/2021/03/11/lose-your-fear-of-selenium/>

Excessive tissue levels of selenium are toxic. Care should be taken to avoid over-supplementation from this product and/or concurrent use of other products containing selenium (such as pasture top dressing, pellets, drenches or vaccine containing selenium). If blood selenium levels are high this product should not be used. Users can determine an animal's selenium status by consulting their veterinarian with a whole blood test.

There is NO added iron and manganese which are harmful in excess, and can compete with the uptake of zinc and copper. Pasture and hay tests around Australia have shown that iron and manganese is often excessive, particularly iron.

Don't be alarmed if your horse refuses to eat his or her feed with the mineral mix. Many horses don't object to minerals when mixed thoroughly in a feed but some do refuse initially till their palate has adjusted to the taste. This is not surprising as minerals are not palatable. Start with a smidge, preferably in a wet feed (less chance of choke/respiratory issues from the feed) and build up slowly. It can work well to mix the minerals in with the soak water if feeding one of the high soluble, fermentable fibre feeds like beet pulp, lupin hulls or soybean hulls. **If you have no improvement or have any trouble working out the amount to feed, please contact me for help. Email: carol.layton@gmail.com**

FIRST AID: If poisoning occurs, contact a doctor or Poisons Information Centre.
Phone Australia 131 126 New Zealand 03 4747 000

Manufactured in Australia

There is no excretory pathway for excessive iron and excessive manganese is an issue because it takes up storage space that normally is for iron, resulting in more free iron circulating in the system.

More information on my website in the article called "Link between Minerals and Coat Bleaching"

If needing to supplement amino acids, **Balanced Equine Equine Amino** provides the key essential amino acids at levels recommended by Dr Eleanor Kellon VMD.

HoofXtra is a nutritional supplement product for inclusion in horse's feed. Product has no therapeutic effect and is designed to be administered in a feed for voluntary ingestion for horses.

Dr Eleanor Kellon VMD recommends:

- 20 g/100 kg freshly ground linseeds/flaxseed or equivalent.
More info: Linseed, is it safe? Article on the website.
- 4 IU/kg natural vitamin E, ideally supplemented with human capsules. Vitamin E added to feeds or multi ingredient supplements is oxidised very quickly so should be added separately. If in powder form, should be coated in oil for optimal uptake.

Vitamin E: <https://balancedequine.com.au/vitamin-e/>

See the emergency diet on the ECIRhorse.org website.

From time to time, depending on where the magnesium is mined in the Causmag NSW quarry, there can be variations of colour. The MgO is premium grade and of high reactivity (bioavailability).

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Independent Equine Nutritionist

Balanced Equine
www.balancedequine.com.au

Animal consumption only