HEALTH PROBLEMS: to assist completion of Health Nutrition Analysis Report

Big Head or Nutritional secondary hyperparathyroidism:
A condition which develops as a result of dietary calcium being bound up by phytic acid from grains, bran and pollard or high levels of oxalate compounds present in tropical pastures. Both Phytic Acid and oxalate compounds prevent calcium uptake from the small intestine. Low blood calcium results in the resorption of calcium from non weight-bearing bones of the face and pelvic structure. Chronic resorption from the facial bone results in the development of big head with distortion of the nasal bones. Additional calcium in the diet is essential in the prevention and treatment of this condition.

Laminitis
Refers to the inflammation and swelling of the soft, sensitive highly vascular pedal bone laminae that supports the pedal bone within the hoof capsule. The most common cause of laminitis is due to alteration to the blood flow within the hoof. This occurs as a result of starch and soluble sugar overload from high grain or lush pasture intake causing hindgut acidosis. It is also related to toxic shock arising from infection, stress or gut surgery. Laminitis is a very painful condition and can make the affected horse extremely lame. A low GI diet is essential for the management of laminitis.

Colic
Includes any degree of pain in the abdomen of the horse. Colic is most commonly caused by digestive upsets, such as sudden changes in the feed, but the abdominal pain can originate from the liver, urinary tract, uterus or other internal organs. Colic will range in severity from mild discomfort to an extreme, intense localised form which can be life threatening. Horses will colic may lay down, roll and/or kick its legs inn attempt to relieve pain.

Grain Intolerance
Includes any condition in which the horse cannot tolerate grain in the diet. This may include horses who get overexcited when fed grains, laminitic horses, horses suffering from diarrhoea or gastric ulcers and those that develop skin 'bumps' or other allergy type reactions following grain consumption.

Developmental Orthopaedic Disease (DOD)
DOD is a group of limb and growth abnormalities that affect growing horses. DOD includes problems related to the abnormal calcification of bones, poorly formed cartilage, limb deviations or angular limb deformities, 'wobblers syndrome', joint growth plates or subchondral cysts as well as osteochondrosis dissecans (OCD) most commonly found in the shoulder and stifle joints. These abnormalities can be caused by hereditary or genetic influences, calorie intake, inadequate or imbalanced vitamin and mineral intakes, exercise and growth rate. It has been suggested that hormonal influences may also contribute to DOD in horses.

Equine Gastric Ulcer Syndrome (EGUS)
EGUS includes lining erosion or ulceration in the oesophagus, upper stomach and small intestine. It is caused when the sensitive lining is subjected to acidic gastric secretions. EGUS can be caused by exercising the horse on an empty stomach, limited fibre in the diet, high dose or long term use of NSAID's such as bute, or horses exposed to regular stress. Symptoms may include loss of appetite, picky eating, the horse standing with front legs close together, 'slobber' or chew the bit during exercise, agitated when tightening the girth, eating dirt, chewing or biting rails. The horse many also paw the ground, crib bite, windsuck, or displaying restless, anxious or agitated behaviour particularly during transport or when tied up.

Equine Cushings Disease (ECD)
There are two forms of ECD referred to as 'Classical Cushings' and 'Metabolic Cushings'. Classical Cushings is caused by pituitary pars intermedia dysfunction (PPID), resulting in the degradation of hypothalamic dopaminergic nerve trunks that use dopamine to transport nervous impulses. Metabolic Cushings results in the development if insulin resistance (IR) where the body cells don't respond readily to insulin released after eating sugars and starches. Instead, as glucose increases in the blood it is converted to and stored as

fat. Signs of ECD include patches of long hair along the chin, neck and legs, long shaggy and often curly coat that fails to shed, slow movement due to a lack of energy and a pot belly shape. Affected horses and ponies many also lack topline, sweat profusely, drink excessively and urinate regularly. Horses and ponies with Classical Cushings will often have a ribby appearance and develop a soft, prominent swelling in the normally sunken area above the eye. A low GI diet is recommended for the management of ECD.

Hyperkalemic Periodic Paralysis (HYPP):
Is an inherited defect, occurring in the skeletal sodium channels of cells which disrupts the regulation of sodium and potassium and therefore the normal contraction and relaxation of muscles. It is caused by an autosomal dominant, point mutation gene which affects descendants of the Quarter Horse stallion Impressive. Today Impressive's bloodlines carry through the Quarter Horse, Appaloosa, American Paint Horse and Palomino Breeds throughout the world. At early stages of an attack sign include muscle fasciculations where the muscle cannot relax and yawning. If the attack worsens, signs include muscle spasms and weakness, sweating and display signs of colic. In very severe cases the horse will have prolapsed the third eyelid and have weakness in the hindlimbs resulting in the horse sitting like a dog or recumbency.

Insulin Resistance (IR):
Is a disease caused by a reduced tissue response to circulating insulin making the insulin ineffective, which causes blood glucose concentrations to rise higher than the set metabolic range. IR horses and ponies are often overweight, have a cresty neck and obvious tail butt fat deposits. Affected horses and ponies are at a higher risk of suffering from laminitis, Equine Metabolic Syndrome (EMS) and Equine Cushings Disease (ECD). A low GI diet is essential for the management of IR.

Equine Metabolic Syndrome (EMS)
A disease related to abnormal glucose metabolism and insulin resistance (IR) where the body cells don't respond readily to insulin released after eating sugars and starches. Affected horses and ponies are usually in a heavy or obese condition with abnormal fat accumulation behind the shoulder, above the tail butt, around the sheath or udder and have a hard 'cresty' neck. EMS horses and ponies may develop a slight curl on the tips of the hair along the barrel and neck and have muscle wastage over the topline and rump. They will often have little energy for exercise, appear lethargic and have a high risk of repeated laminitic episodes. A low GI diet is essential for the management of EMS.

Tying Up (RER)
Tying up is the common term for a type of muscle cramping which occurs in horses during or within 2 hours following exercise. Tying Up is technically named Recurrent Exertional Rhabdomyolysis or RER which describes the damaging effects resulting in dissolution of muscle cells during exercise. Clinical signs include a shortened stride, most commonly in the hindlimbs, exercise intolerance, back pain, reduced weight bearing and gait discomfort, and in severe cases knotting and development of cramp-like consistency in the affected muscles. The underlying cause is not fully understood, however it is thought to be related to feeding management, electrolyte depletion or imbalance and intracellular calcium regulation.

Tying Up (PSSM)
Polysaccharide Storage Myopathy (PSSM or EPSM) is a form of Tying up where excess concentrations of glycogen and glucose-6-phosphate are present in muscle cells resulting in a type of muscle cramping. PSSM commonly affects Quarter Horses, however it has also been described in, Standardbred fillys, Paints, Warmbloods, Appaloosas, Morgan horses and Draft breeds. Clinical signs include a shortened stride, most commonly in the hindlimbs, exercise intolerance, back pain, reduced weight bearing and gait discomfort, and in severe cases knotting and development of cramp-like consistency in the affected muscles. PSSM appears to be caused by high levels of starch and sugar in the horse's diet, therefore to manage the condition a low GI diet is recommended