

HA Nutrition Flashcards

What are the 6 types of essential nutrients for good nutrition?	Water Carbohydrates Vitamins Proteins Minerals Fats
How much water does a stabled horse require in 1 day?	5-10 gallons/day more in hot water, lactating mares, horses in heavy work e.g.: Eventing, racing
Where does water exist in the horse's body?	In the blood vessels (5%) (intravascular space); 15% around cells (extra cellular space); 50% inside the cells (intracellular space); 30% in the gut
What is 15% loss of water from a horse's body called if it is not replaced?	Dehydration
How do you tell if a horse is dehydrated?	The skin on his neck when pinched takes longer than 5 seconds to return to normal. The horse has thumps (diaphragm and heart contract in same rhythm). Eyes sunken.

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Name possible causes for dehydration.	Hot weather and no water Diarrhea Overwork in hot weather with excessive sweating Fever and sweating Ice on water trough and no water
What are carbohydrates and what foods contain them?	Nutrients that are made up of sugars, starches and cellulose Hays and grains
Which has more concentrated carbohydrates –hence more energy per pound of food – hay or grain	grain
How would a horse act if he were deficient in carbohydrates?	Tired, lethargic, no energy, thin
Rank the following from highest to lowest in carbohydrates: oats/barley/corn/,alfalfa/grass hay/flax seed/beet pulp	Flax seed → corn→ barley→ oats→ beet pulp→ alfalfa hay→ grass hay

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<p>In General: What % of horse's body weight is required in feed daily? Horse in light to heavy work Pregnant mares in last 3 months and young horses</p>	<p>Horses in light to heavy work 1.5 -3% of body weight Pregnant mares and young horses 2.5-3% of body weight</p>
<p>Nervous System Diseases: Botulism</p>	<p>Cause: Toxin produced by Clostridium Botulinum Found: when animal carcasses baled in hay – Symptoms: 3-7 days after ingestion, paralysis of tongue and jaw, drooling, inability to swallow, weakness, shuffling gait, paralysis, death due to paralysis of the respiratory muscles, causes shaker foal syndrome Prevention: Vaccination Treatment: supportive (keep animal warm, tube feed)</p>
<p>Nervous System Diseases: Equine Encephalomyelitis Sleeping Sickness EEE, WEE, VEE</p>	<p>Cause: Virus carried in blood transmitted by infected birds to humans or horses thru mosquito bite Found: All over Symptoms: Fever, drowsiness, circling, pressing head against wall, paralysis, death, survivors often have permanent brain damage. Prevention: Vaccination (once a year) Treatment: Supportive</p>
<p>Nervous System Diseases: Rabies</p>	<p>Cause: Rabies Virus (transmitted by bite of rabid animal) Found: everywhere Symptoms: Facial paralysis, lameness, colic, faulty vision, personality change, head pressing, Always fatal Prevention: Vaccination (once a year) Treatment: none (supportive)</p>

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What are proteins made up of?	22 amino acids 10 essential 12 non-essential
What are the 10 essential amino acids?	Arginine, lysine, leucine, isoleucine, Histidine, methionine, phenylalanine, threonine, tryptophan, valine
What are proteins used for?	To make: blood proteins (albumin, antibodies etc), hair, hooves, muscle, organs (such as heart/lungs, kidney liver etc), skin, milk, enzymes, cell walls –almost everything in the horse's body.
What is the average % of protein in Grade 1 oats?	12%
What % of horse's body weight is made up of protein?	22%

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What % protein is recommended for: Weanlings Lactating mares 2 year olds Pregnant mares Mature horses in light work Mature horses in no work	<ul style="list-style-type: none">-Weanlings = 14-16%-Lactating mares = 14%-2 year olds = 10-12%-Pregnant mares = 8-13%-Adult horses light work = 7-8%-Adult horses no work = 7-8%
What is the general % of protein in mid-bloom alfalfa?	17%
What is general % of protein in grass/oat hays? What is the general % in pasture grass?	Hays (grass/oat) 8-8.5% Pasture grass 2.8-3%
What might you expect a horse to look like if he were deficient in protein?	Hair loss with thinning mane and tail No Energy

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What problems can excessive protein lead to?	<u>Kidney</u> or liver damage
Fats should compose what % of a horse's daily ration?	2-3%
List in order highest fat content to lowest alfalfa, rice bran, corn oil, oats, flax seed, corn	Highest to Lowest: corn oils (100%)– rice bran (20%)– flax seed (18%)– oats (4.5%) – corn (3.5%)– alfalfa (2.5%)
Fats are essential for:	<ul style="list-style-type: none">-Aid in absorption of fat soluble vitamins-Provide energy (9 cal/gm of fat)-Store energy-Spare protein being metabolized for energy-Important source of energy in mare's milk-Increases tastiness of food supplements-Increases stamina in performance horses

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What are the 2 classes of vitamins?	Fat Soluble Water Soluble
Name the fat soluble Vitamins	A, D, E, K
Name the water soluble Vitamins	Vitamin B complex vitamins Vitamin C
What are some of the differences between the water and fat soluble vitamins are:	Fat Soluble vitamins can be stored in the body – therefore, can be overfed and cause toxicity problems Water soluble vitamins must be fed everyday
Which vitamins maintain healthy skin, eyes, mucous membranes and bones?	Vitamin D (promotes absorption of Calcium – sunshine vitamin) Vitamin A – maintains healthiness of skin, mucous membranes, promotes good vision (especially night vision) – present in large amounts in carrots –also found in hays and grains and complete feeds –as well as vitamin supplements

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Name the 6 macro minerals (needed in large amounts).	Calcium, Potassium, Sodium, Chloride, Phosphorous, Magnesium
Name 6 micro minerals (Trace Elements).	Iron, Zinc, Copper, Fluoride, Iodine, Selenium, Cobalt, Sulfur, Manganese
Name the 2 most common minerals found in the body.	Calcium and Phosphorous (Bone)
Calcium:Phosphorous ratio Ideal: Must be less than:	Ideal 2:1 Keep less than 3:1
Main electrolytes found in extra cellular fluid and plasma	Sodium and Chloride (Salt)
What trace mineral is necessary for normal thyroid function?	Iodine