

## HA Nutrition Flashcards

<b>What are the 6 types of essential nutrients for good nutrition?</b>	Water Carbohydrates Vitamins Proteins Minerals Fats
<b>How much water does a stabled horse require in 1 day?</b>	5-10 gallons/day more in hot water, lactating mares, horses in heavy work e.g.: Eventing, racing
<b>Where does water exist in the horse's body?</b>	In the blood vessels (5%) (intravascular space); 15% around cells (extra cellular space); 50% inside the cells (intracellular space); 30% in the gut
<b>What is 15% loss of water from a horse's body called if it is not replaced?</b>	Dehydration
<b>How do you tell if a horse is dehydrated?</b>	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.

## HA Nutrition Flashcards

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

## HA Nutrition Flashcards

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

## HA Nutrition Flashcards

<b>What are proteins made up of?</b>	22 amino acids 10 essential 12 non-essential
<b>What are the 10 essential amino acids?</b>	Arginine, lysine, leucine, isoleucine, Histidine, methionine, phenylalanine, threonine, tryptophan, valine
<b>What are proteins used for?</b>	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.
<b>What is the average % of protein in Grade 1 oats?</b>	12%
<b>What % of horse's body weight is made up of protein?</b>	22%

## HA Nutrition Flashcards

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

## HA Nutrition Flashcards

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

## HA Nutrition Flashcards

<b>What are the 2 classes of vitamins?</b>	Fat Soluble Water Soluble
<b>Name the fat soluble Vitamins</b>	A, D, E, K
<b>Name the water soluble Vitamins</b>	Vitamin B complex vitamins Vitamin C
<b>What are some of the differences between the water and fat soluble vitamins are:</b>	Fat Soluble vitamins can be stored in the body – therefore, can be overfed and cause toxicity problems Water soluble vitamins must be fed everyday
<b>Which vitamins maintain healthy skin, eyes, mucous membranes and bones?</b>	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

## HA Nutrition Flashcards

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