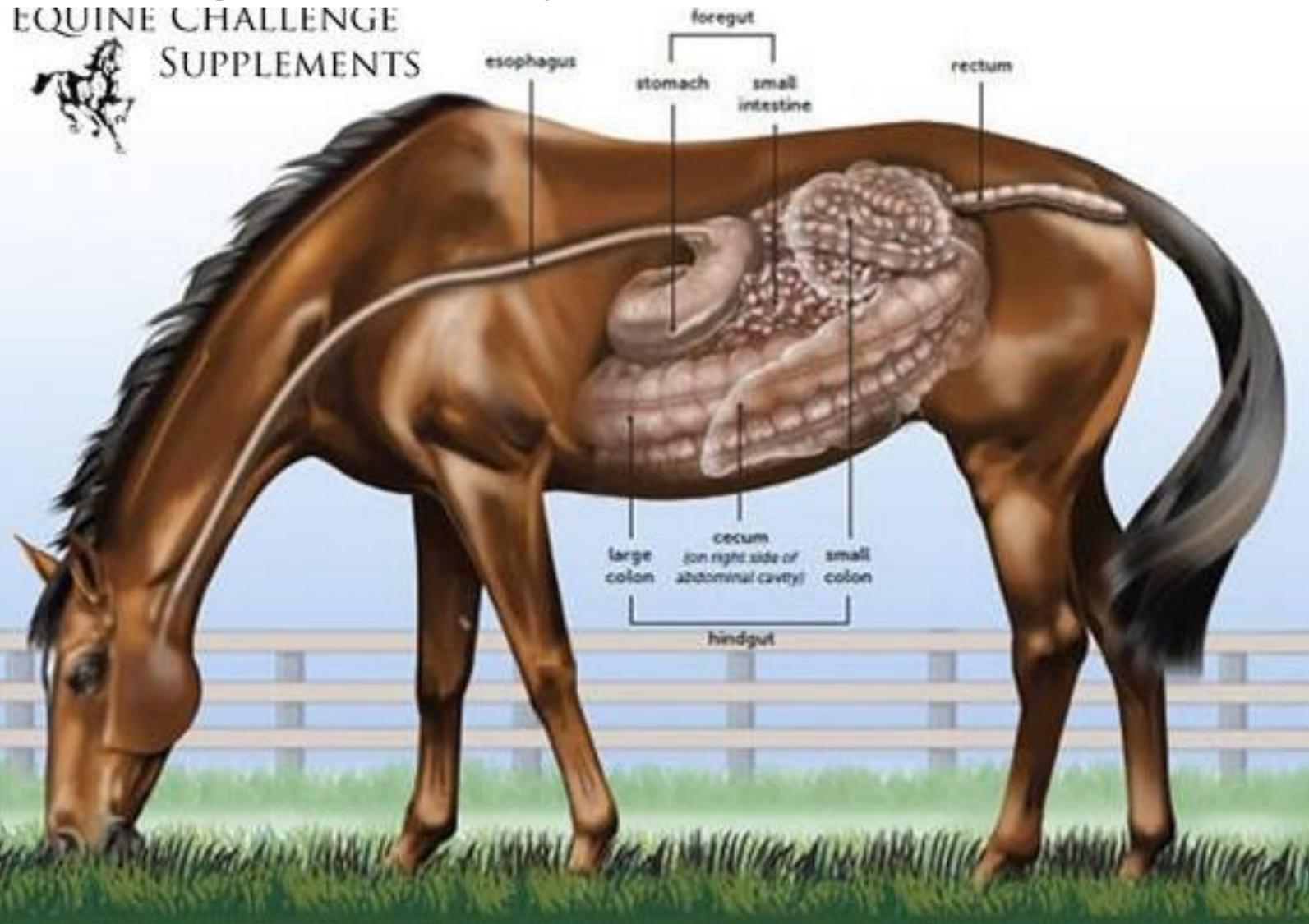


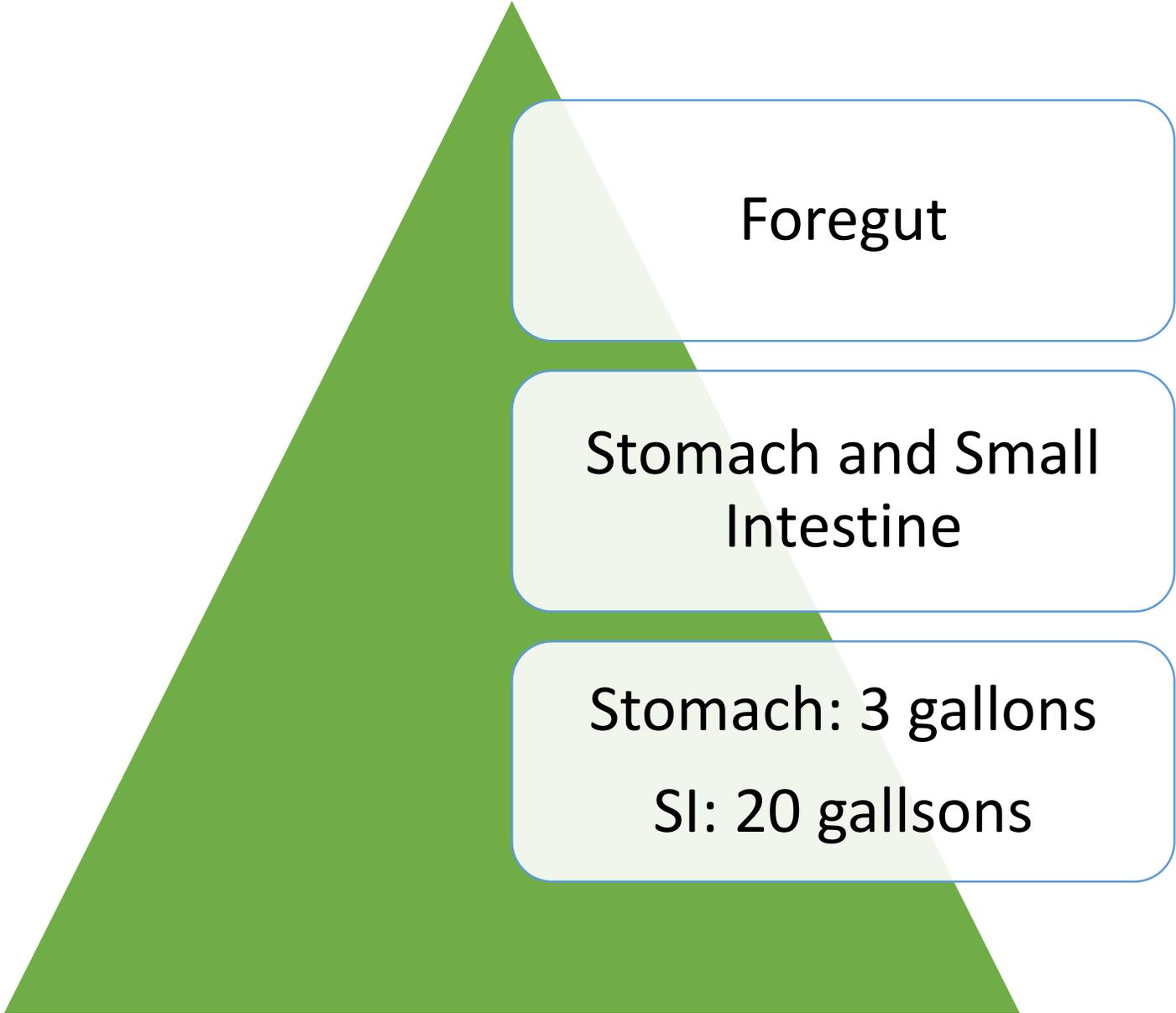
Equine Nutrition Basics

Presented by: Jessica Denniston

Teaching Faculty Member at Emory and Henry College

Digestive System Overview

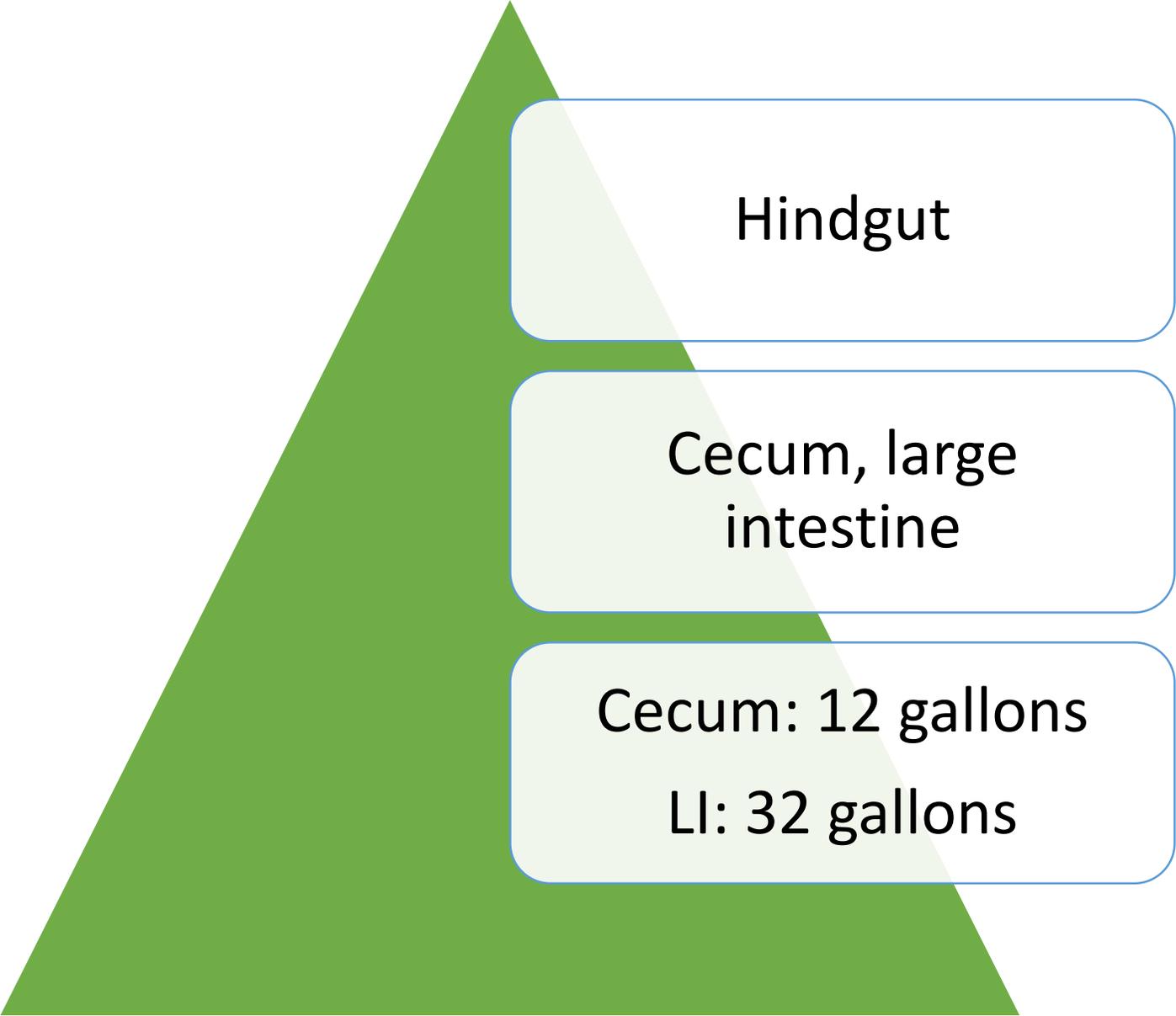




Foregut

Stomach and Small
Intestine

Stomach: 3 gallons
SI: 20 gallons



Hindgut

Cecum, large
intestine

Cecum: 12 gallons
LI: 32 gallons

Foregut Functions

Enzymes in the foregut digest:

- Fat
- Protein
- Sugar/Starch



Hindgut Functions

Fermentation is utilized to break down fiber in the hindgut.



Equine Nutrition Basics

Created by: Jessica Denniston M.S. Ed. Equestrian Education

The following are essential nutrients that should be included in your horse's diet:



- Water
- Protein
- Carbohydrates
- Fat
- Minerals
- Vitamins

Fat

Source of Energy!

Protein

All tissues of the body are made up of protein

Vitamins and Minerals

Carbs

Can be used for immediate energy as well as become stored energy

Water is the most important!

Will drink 8 to 12 gallons per day under normal circumstances

Water

The most important nutrient!

Functions:

- Body temp regulator
- Part of all body fluids
- Transports nutrients into cells and takes waste out of cells
- Required for chemical reactions in metabolism



Protein

Functions:

- New tissue development (growth phase)
- Repair and development of muscle tissue (working phase)



Soybean plants: image source agclassroom.org

Carbohydrates

Functions:

- Energy
- Glycogen (stored energy made from unused glucose)



Alfalfa photo source: Standlee

Fat

Source of energy!

Functions:

- Source of essential fatty acids
- Component of cell membranes
- Plays a role in skin health and coat condition
- Aids in absorption and transport of fat soluble vitamins (A,E,D,K)



Vitamins and Minerals

Vitamins

- Vitamins A,D,E,K,C
- Thiamine (B1)
- Riboflavin (B2)
- Panthothenic Acid (B3)
- Folic Acid

Vitamins (Cont.)

- Vitamin B12
- Niacin
- Pyridoxine (B6)
- Choline
- Biotin

Minerals

- Calcium
- Phosphorus
- Sodium
- Chloride
- Potassium
- Magnesium
- Sulfur

Trace Minerals

- Cobalt
- Copper
- Fluoride
- Iodine
- Iron
- Manganese
- Selenium
- Zinc

Deciding on a diet for your equine

Age

**Life Stage/
Exercise**

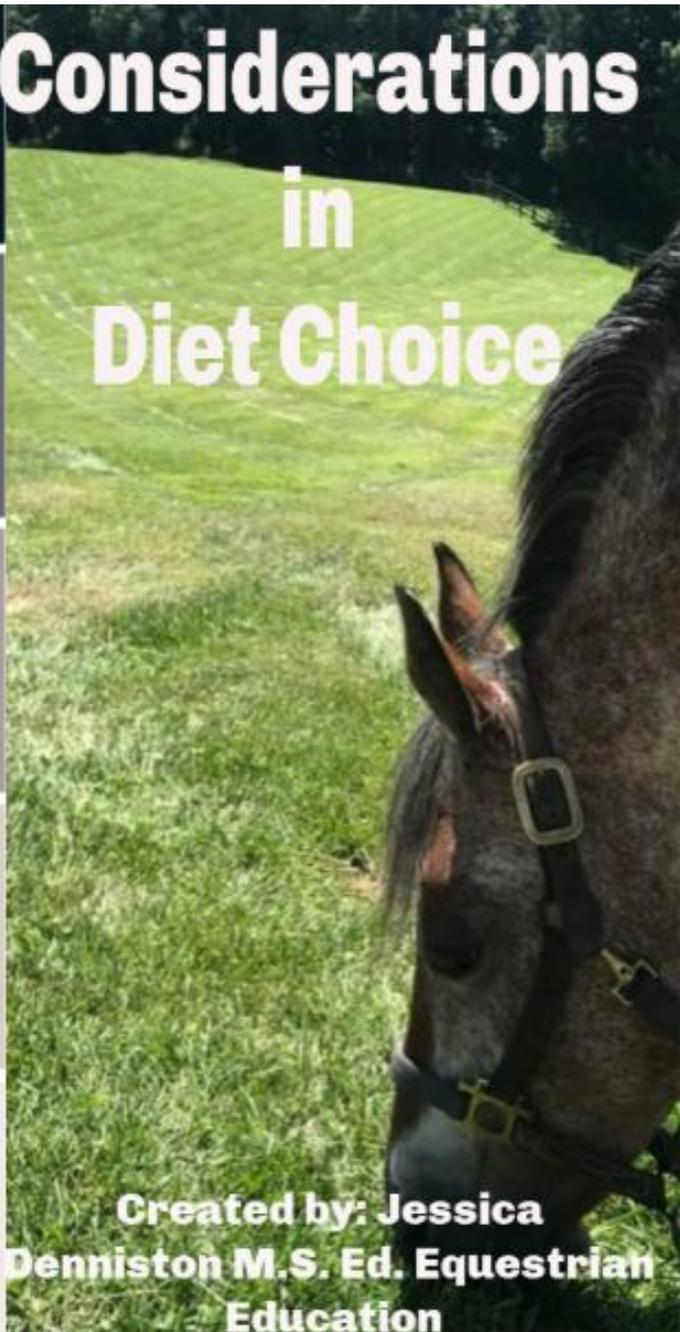
Medical Needs

**Body Condition
Score/ Weight**

**Quality and
access to
roughage**

**Considerations
in
Diet Choice**

**Created by: Jessica
Denniston M.S. Ed. Equestrian
Education**



Age Considerations

- Horses between birth and age 2 are considered to be in the growth stage
- Senior horses will have different dietary needs. It is especially important to consider the horse's ability to properly chew grain and roughage.



Life Stage Considerations

Exercise Levels:

- Maintenance
- Moderate
- Heavy and Very Heavy

Life Stages:

- Breeding
- Growth
- Lactation
- Competition (see exercise)

Medical Needs

It is important to consider all medical needs of your horse or pony when deciding on a diet. Some major diagnosis to consider are:

- Allergies
- HYPP
- Cushings disease
- Obesity



Be sure to work with your vet to develop a safe diet for your horse or pony!

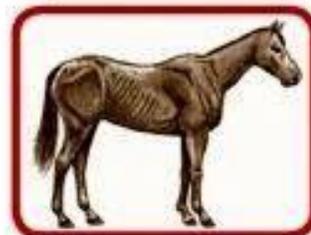
Body Condition Score/Weight

Utilizing the Henneke Body Condition Score (1-9 scale) determine what score your horse or pony is on the scale to determine if the condition is ideal or if the equine needs to gain or lose weight. Body weight itself is not a great way to determine whether weight should be gained or lost.



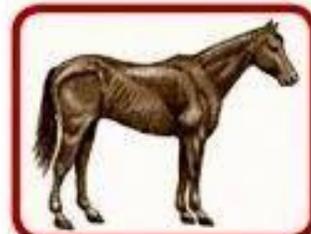
BODY CONDITION SCORE CHART

Areas of emphasis for body condition scoring: thickening of the neck, fat covering the withers, fat deposits along backbone, fat deposits on flanks, fat deposits on inner thighs, fat deposits around tailhead, fat deposits behind shoulders, fat covering ribs, shoulder blends into neck.



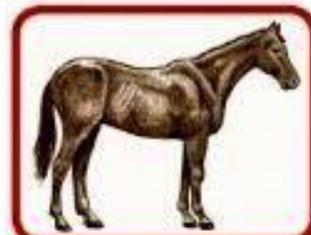
Poor

Animal extremely emaciated; spine, ribs, tailhead, points of hip and buttock projecting prominently; bone structure of withers, shoulders, and neck easily noticeable; no fatty tissue can be felt.



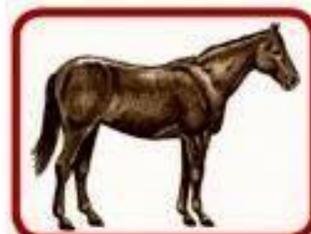
Very Thin

Animal emaciated; slight fat covering over base of spine; ribs, tailhead, points of hip and buttock prominent; withers, shoulders, and neck structure faintly discernable.



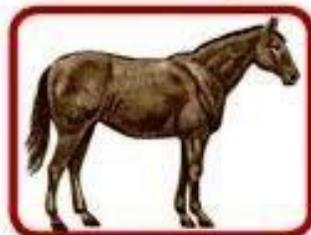
Thin

Fat buildup about halfway on spine; slight fat cover over ribs; spine and ribs easily discernable; tailhead prominent, but individual vertebrae cannot be identified visually; points of hip appear rounded but easily discernable; points of buttock not distinguishable; withers, shoulders, and neck accentuated.



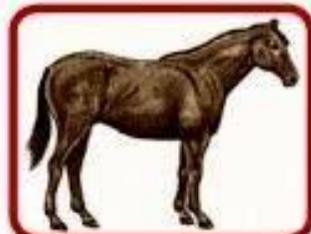
Moderately Thin

Slight ridge along back; faint outline of ribs discernable; tailhead prominence depends on conformation, fat can be felt around it; points of hip not discernable; withers, shoulders, and neck not obviously thin.



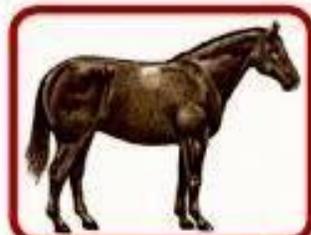
Moderate

Back is flat (no crease or ridge); ribs not visually distinguishable but easily felt; fat around tailhead beginning to feel spongy; withers appear rounded over spine; shoulders and neck blend smoothly into body.



Moderately Fleshy

May have slight crease down back; fat over ribs fleshy/spongy; fat around tailhead soft; fat beginning to be deposited along sides of withers, behind shoulders, and along sides of neck.



Fleshy

May have crease down back; individual ribs can be felt, but noticeable filling between ribs with fat; fat around tailhead soft; fat deposited along withers, behind shoulders, and along neck.



Fat

Crease down back; difficult to feel ribs; fat around tailhead very soft; area along withers filled with fat; area behind shoulders filled with fat; noticeable thickening of neck; fat deposited along inner thighs.

Extremely Fat

Obvious crease down back; patchy fat appearing.

The Equus philosophy is all about feeding horses as naturally as possible with digestive health as the foundation throughout our range. We combine the proven principals of natural feeding techniques with the latest technology and research to ensure that your horse performs at his best, naturally and effortlessly.

You will never look back... except at your competitors!

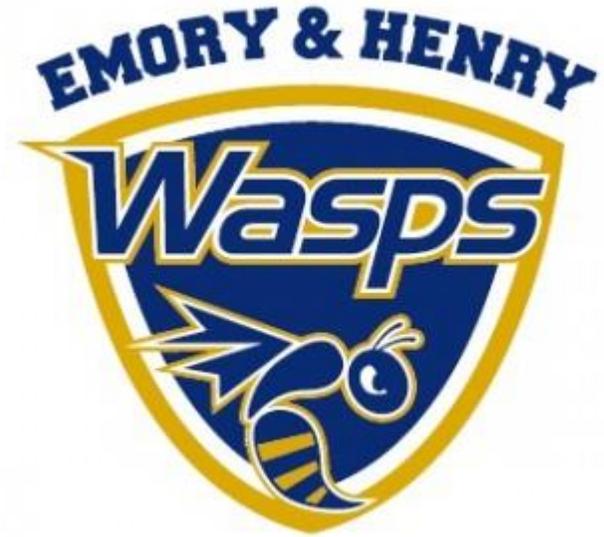
Access and Quality of Roughage

- Consider the number of hours of turnout
- The growth stage of the grass
- The season
- The quality and type of hay
- The amount available (hay or pasture)
- The specific needs of your horse or pony



Be sure to check out Emory and Henry College's Equine Studies program!

- Why Equine Studies at E&H?
- Riding! Learning! Research!
- Students at Emory & Henry participate in hands-on learning through unique research and work opportunities, from performing equine health-related research studies to assisting in running collegiate horse shows.
- The equestrian center boasts an environment of professionalism, but is a comfortable atmosphere that cultivates learning, dedication, success both in and out of the arena and inclusion of everyone that is centered around our love of the horses and the equestrian sports



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