



## Diet & Nutrition for Equine

Equines (horses, ponies, and donkeys) are herbivores, and their diet is primarily based on forage such as grasses, hay, and pasture. However, their nutritional needs vary depending on age, activity level, and whether they are in training, pregnant, or lactating. A well-balanced diet is essential for maintaining health, optimal performance, and overall well-being.

### Basic Nutritional Requirements for Equines

#### 1. Forage (Grass and Hay)

- **Primary Diet Component:** The majority of an equine's diet should come from high-fiber forage such as pasture grass and hay.
- **Function:** Forage provides the essential fiber needed for proper digestion and gut health.
- **Daily Forage Intake:** Typically, an equine should consume 1.5-2.5% of its body weight in forage daily. For example, a 1,000-pound horse should eat 15-25 pounds of forage per day.

#### 2. Water

- **Importance:** Water is vital to an equine's digestive process, temperature regulation, and overall health.
- **Daily Intake:** A healthy horse typically drinks 5-10 gallons of water per day, but this amount can vary based on temperature, activity level, and diet.
- **Access:** Fresh, clean water should always be available.

#### 3. Concentrates (Grains and Pellets)

- **Purpose:** Concentrates (grains or specially formulated pellets) provide additional energy, protein, and vitamins when the forage alone is insufficient.
- **When to Feed:** High-performance horses, pregnant or lactating mares, young growing horses, and those who need to gain weight may benefit from concentrates.
- **Types of Concentrates:** Common feeds include oats, barley, corn, and specially formulated equine pellets, which are designed to meet the needs of horses based on their life stage and activity level.

### Essential Nutrients for Equines

#### 1. Fiber

- **Role:** Fiber is critical for maintaining a healthy digestive system in equines. It helps to regulate gut motility and absorption of nutrients.
- **Sources:** Grass, hay (Timothy, meadow, orchard, alfalfa, etc.), and hay cubes or haylage.

- **Daily Requirement:** Ensure that an equine consumes at least 1.5-2% of its body weight in fiber daily.
2. **Proteins**
- **Role:** Protein is essential for muscle development, growth, and repair.
  - **Sources:** Alfalfa hay, soybeans, oats, and commercially available feeds designed for young, growing, or working horses.
  - **Daily Requirement:** Horses typically require about 10-12% protein in their diet. Growing horses, lactating mares, and working horses may need up to 14-16% protein.
3. **Fats**
- **Role:** Fats provide concentrated energy and help in the absorption of fat-soluble vitamins (A, D, E, and K).
  - **Sources:** Vegetable oils (like flaxseed or canola oil), soybeans, alfalfa hay, and grains like oats.
  - **Daily Requirement:** While not necessary in large amounts, horses in intense training or those requiring extra energy may benefit from added fats (about 8-10% of the diet).
4. **Vitamins**
- **Vitamin A:** Important for eye health, immune function, and skin health. Green pasture or hay is a good source.
  - **Vitamin D:** Vital for calcium absorption and bone health. Exposure to sunlight typically provides enough Vitamin D, but in indoor or low-sunlight conditions, supplementation may be necessary.
  - **Vitamin E:** Works with selenium to maintain muscle function. Found in fresh forage, hay, or can be supplemented.
  - **Vitamin B-complex:** Essential for energy metabolism and nervous system function. Horses generally produce enough B-vitamins from their gut, but in certain cases (e.g., stressed horses), supplementation might be needed.
5. **Minerals**
- **Calcium and Phosphorus:** These minerals are crucial for bone health, muscle function, and overall skeletal integrity. The calcium-to-phosphorus ratio should generally be 2:1.
  - **Sodium and Chloride (Salt):** Equines need salt for proper fluid balance, nerve function, and muscle contraction. A salt block or loose salt should always be available.
  - **Magnesium:** Supports muscle function and nerve health. Magnesium deficiencies can lead to muscle cramps and spasms.
  - **Copper, Zinc, and Manganese:** These minerals are important for immune function, coat quality, and joint health.

## Types of Forage and Feed

### Forage (Hay and Grass)

- **Grass Hay:** The preferred forage for most equines. Grass hay varieties include Timothy, Meadow, and Orchard grass. Grass hay is lower in protein than alfalfa, which is more suitable for adult, non-working horses.
- **Legume Hay (Alfalfa):** Alfalfa hay is richer in protein and calcium. It's appropriate for growing foals, pregnant or lactating mares, or horses that need to gain weight. However,

it should be fed in moderation to adult, non-working horses, as excess calcium and protein can cause imbalances.

- **Haylage:** A fermented form of hay, often used when hay is not available. Be cautious with haylage as it may contain higher moisture content, which can increase the risk of colic if not stored properly.

### Concentrates (Grains and Pellets)

- **Oats:** The most common grain fed to horses. Oats are high in fiber and energy but are not very dense in nutrients.
- **Corn:** A higher-energy grain, but should be fed in moderation as it is less fibrous and can contribute to obesity or digestive issues.
- **Pelleted Feed:** These are specially formulated to meet the nutritional needs of equines in different life stages and activity levels. They usually contain a blend of grains, vitamins, and minerals.
- **Specialty Feeds:** These are designed for specific conditions such as weight gain, joint health, or metabolic issues.

### Supplements

- **Probiotics:** Beneficial bacteria that support gut health, especially for horses that are transitioning to new feeds or have digestive issues.
- **Electrolytes:** Especially important for horses that are in training or competition, electrolytes replace salts and minerals lost in sweat.
- **Joint Supplements:** These often contain glucosamine, chondroitin, and MSM to support joint health in older or performance horses.

### Special Nutritional Considerations

#### Growing Horses

- **Protein and Energy:** Young, growing horses require more protein, energy, and essential fatty acids than adults. Feed should be higher in protein (14-16%) to support muscle development and growth.
- **Mineral Balance:** Pay attention to the calcium-to-phosphorus ratio. Too much calcium can interfere with bone development.

#### Lactating Mares

- **Increased Energy:** Lactating mares have increased energy requirements. High-quality hay, supplemented with grains or specially formulated feed, may be necessary to meet these energy demands.
- **Calcium and Protein:** Increased calcium and protein are also important to support milk production.

#### Senior Horses

- **Teeth Issues:** As horses age, they may experience dental issues that affect their ability to chew hay. Senior horses may benefit from chopped hay, hay cubes, or soaked hay to

make it easier to eat.

- **Weight and Digestive Health:** Senior horses may need more concentrated feed and should receive regular veterinary checkups to ensure they're maintaining a healthy weight.

### Performance Horses

- **Increased Energy Requirements:** Horses in heavy training or competition may require increased grain and energy-dense feed.
- **Electrolyte Balance:** During intense exercise, horses can lose electrolytes through sweat. Supplementing with electrolytes helps to maintain hydration and muscle function.

### Horses with Special Needs (e.g., Metabolic Issues)

- **Metabolic Syndrome or Cushings:** Horses with metabolic disorders may need a low-starch, low-sugar diet. Specially formulated feeds and forage with controlled sugar content may be necessary.
- **Colic-Prone Horses:** Horses prone to colic should receive a high-fiber, consistent diet with limited grain and high-quality forage.

### Common Feeding Mistakes to Avoid

1. **Overfeeding Grain:** Too much grain can lead to obesity, colic, or metabolic problems. Grains should only be fed to horses that need extra energy or weight.
2. **Sudden Diet Changes:** Horses have sensitive digestive systems. Any changes to their diet should be gradual to avoid colic and digestive upset.
3. **Feeding Low-Quality Forage:** Ensure that hay or pasture is free of mold, dust, or contaminants that can cause respiratory or digestive problems.

A balanced, forage-based diet with appropriate supplements is essential for the health and well-being of all equines. Regular access to fresh water, quality forage, and concentrates tailored to the horse's specific needs will ensure they thrive. Be sure to monitor body condition, weight, and overall health, and consult with a veterinarian or equine nutritionist for any specific concerns.