



**American Association  
of Equine Practitioners**

**Horse Health Education**

# **FOAL GROWTH**

**Special Care and Nutrition**

**[www.aaep.org/horseowner](http://www.aaep.org/horseowner)**



# HORSE HEALTH EDUCATION: FOAL GROWTH

A healthy foal will grow rapidly, gaining weight, strength and height right before your very eyes.





# HORSE HEALTH EDUCATION: FOAL GROWTH

From birth to age 2, a young horse can achieve 90 percent or more of its full adult size, sometimes putting on as many as 3 pounds per day.



# HORSE HEALTH EDUCATION: FOAL GROWTH



Genetics, management and environment play significant roles in determining individual growth patterns.

Through research, we also know we can influence a foal's development, for better or worse, by the nutritional supply.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## STRIVE FOR BALANCE

Feeding young horses is a careful balancing act.

The interplay between genetics, management, environment and nutrition is complex.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## STRIVE FOR BALANCE

While the genetics of each individual horse are out of our control, we can affect the ultimate outcome through proper management.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## STRIVE FOR BALANCE



The nutritional start a foal receives can have a profound affect on its health and soundness for the rest of its life.

Research suggests that a balanced dietary approach, which supports no more than a moderate growth rate, is less likely to cause developmental problems.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## STRIVE FOR BALANCE

Some conditions, which have been associated with rapid growth rates, include:

- Contracted tendons
- Physitis
- Angular limb deformities
- Osteochondrosis



*Angular limb deformities*



*Physitis*



*Contracted tendons*





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

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One of the foal's first missions in life is to stand and nurse. In doing so, the foal receives the antibody-rich colostrum, which helps protect it from disease.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

During the first weeks of life, the mare's milk provides everything a rapidly growing foal needs for sustenance. The burden then gradually shifts to other sources.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

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During lactation, a mare will provide an average of 2 to 3 percent of her body weight in milk a day. However, she must receive ample feed and water in order to do so.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

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Observe the foal's nursing habits.

A foal typically nurses five to 10 minutes at a time.

If the foal suckles for more than 30 minutes at a time, it may not be receiving enough milk.

Supplemental feed or milk replacer may be required.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

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Mares in the last trimester of pregnancy will require additional calories as well as in the first three months of lactation.

Peak lactation generally occurs during the second and third month of a foal's life.

During this time, the mare will need nearly double the energy from feed, hay, vitamins and nutrients that she required during her early pregnancy.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE NURSING FOAL

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In addition to extra energy, the mare's diet must include adequate protein, vitamins and minerals to keep from depleting her own body reserves.

Increases or decreases in food should be made gradually over a seven- to 10-day period.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE FOAL'S CHANGING DIET

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As early as 10 to 14 days after birth, a foal may begin to show an interest in feed. By nibbling and sampling, the youngster learns to eat solid food.

Its digestive system quickly adapts to dietary changes.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE FOAL'S CHANGING DIET

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It is now recognized that coprophagy (eating of feces) is normal in the foal and may lead to “Foal Heat Diarrhea” as the intestinal microflora changes.

The diarrhea was previously thought to result from hormonal changes in the mare's milk, but has been observed to occur with orphaned foals that have no exposure to maternal hormones.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE FOAL'S CHANGING DIET

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At 8 to 10 weeks of age, mare's milk alone may not adequately meet the foal's nutritional needs depending on the desired growth rate the owner wants for the foal.

In order to achieve a more rapid growth rate, high quality grains and forage should be added to the foal's diet.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## THE FOAL'S CHANGING DIET

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It is essential the ration be properly balanced with vitamins and minerals. Deficits, excesses or imbalances of calcium, phosphorous, copper, zinc, selenium and vitamin E are of particular concern in the growing foal.

Improper amounts or ratios can lead to skeletal problems.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## FOAL FEEDING GUIDELINES

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As the foal's dietary requirements shift from milk to feed and forage, the horse owner's role in providing nutrition becomes more important.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## FOAL FEEDING GUIDELINES

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Here are some guidelines to help you meet the young horse's needs:



1. Provide high-quality roughage (hay and pasture) free choice.
2. Supplement with a high-quality, properly balanced grain concentrate at weaning or earlier if more rapid rates of gain are desired. Choose a high-quality grain ration properly formulated for weanlings.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## FOAL FEEDING GUIDELINES

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3. Start by feeding 1 percent of a foal's body weight per day (for example, 1 pound of feed for each 100 pounds of body weight), or 1 pound of feed per month of age.
4. Weigh and adjust the feed ration based on growth and fitness. A weight tape can help you approximate a foal's size.
5. Foals have small stomachs, so divide the daily ration into two or three feedings.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## FOAL FEEDING GUIDELINES

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*Foal Creep Feeder*

6. Make sure feeds contain the proper balance of vitamins, minerals, energy and protein are specially formulated for a foal's dietary needs.
7. Use a creep feeder or feed the foal separate from the mare so it can eat its own ration. Try to avoid group creep feeding situations.
8. Remove uneaten portions between feedings.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## FOAL FEEDING GUIDELINES

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9. Do not overfeed. Overweight foals are more prone to developmental orthopedic disease (DOD).
10. Provide unlimited fresh, clean water.
11. Provide opportunity for abundant exercise.







# HORSE HEALTH EDUCATION: FOAL GROWTH

## WEANING

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Foals are commonly weaned when they are 4 to 6 months old.

Beginning about the third month, the mare's milk supply gradually declines and a natural weaning process begins.







# HORSE HEALTH EDUCATION: FOAL GROWTH

## WEANING

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The mare's grain should be reduced and/or gradually eliminated to further limit milk production, unless the mare is underweight, in which decreasing concentrates could lead to further weight loss.

To prepare the foal for complete weaning, its ration should be increased over a two- to three-week period to make up for nutrients being lost in the diminishing milk supply.

Once the foal is no longer nursing, a 500- to 600-pound weanling should be eating between 2 and 3 percent of its body weight in feed and forage a day.



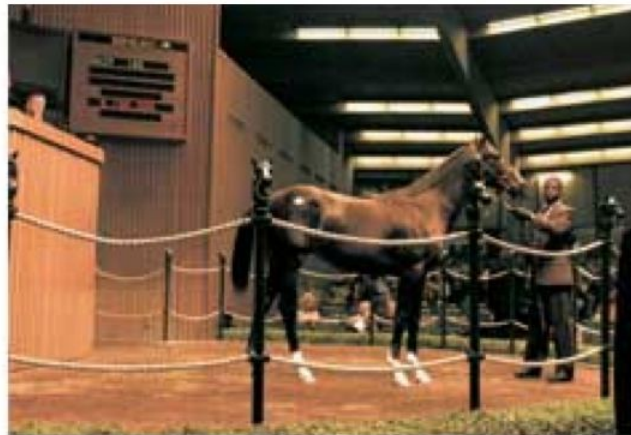
# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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Weanlings and yearlings continue to build bone and muscle mass at a remarkable rate.

From weaning to 2 years of age, the horse may nearly double its weight again.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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Weanlings and yearlings benefit from a diet containing 14 to 16 percent protein. They also require readily available sources of energy to meet the demands of growth and activity.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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The percent of concentrates and roughage a diet may contain depends on the desired growth rate. The diet should never contain less than 30 percent roughage. The amount is measured by weight.







# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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A good rule-of-thumb is to provide 60 to 70 percent of the ration as concentrates and 30 to 40 percent of the ration as roughage – measured by weight.

The diet must also provide ample fiber to keep the digestive tract functioning properly.

Some of the new “complete feeds” have the ration already balanced. Speak with your equine veterinarian for advice on balancing rations.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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Weight gain and development taper off as the horse matures. As growth slows, adjust the ration to approximately 1.5 to 2 percent of the yearling's body weight.

The grain-to-roughage ration should also be adjusted so by the time the horse is 2 years old, half of its daily diet (by weight) is coming from grain sources and the other half from hay and pasture.

*Note: The ratio would also depend on a diet analysis for nutrients and would change depending on the quality of forage.*



# HORSE HEALTH EDUCATION: FOAL GROWTH

## SUSTAINING GROWTH

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Breed type, maturity, desired growth rate and condition and level of activity will affect the horse's exact nutritional requirements.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## TOTAL CARE & MANAGEMENT

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Work with your equine veterinarian to develop a total health care plan for your foals, weanlings and yearlings.

A regular deworming, vaccination and examination schedule is essential to ensure your foal is getting the care it needs.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## TOTAL CARE & MANAGEMENT

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Vaccination and deworming regimens may vary depending on regional factors and disease risks.

Consult your veterinarian for exact recommendations.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## TOTAL CARE & MANAGEMENT

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Here are some additional management tips:

- Unless there is a medical concern, provide youngsters with adequate or free pasture turnout. The less time foals are confined to stalls, the better.
- Use longeing, round-pen or treadmill work judiciously. Excessive work can place abnormal strains or loads on joints and limbs.
- Never exercise a foal to the point of fatigue.



# HORSE HEALTH EDUCATION: FOAL GROWTH

## TOTAL CARE & MANAGEMENT

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- Keep youngsters' feet properly trimmed to foster proper bone development.
- Provide a clean, safe environment with adequate shelter from the elements.
- Check the horse's surroundings and eliminate any potential hazards such as loose boards, nails, wire fencing or equipment.





# HORSE HEALTH EDUCATION: FOAL GROWTH

## TOTAL CARE & MANAGEMENT

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The reward for providing excellent nutrition, conscientious care and a safe environment will be a healthy foal that grows into a sound and useful horse.







# HORSE HEALTH EDUCATION: FOAL GROWTH

*Photos courtesy of*

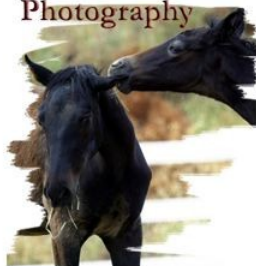
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*the* **HORSE**  
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# HORSE HEALTH EDUCATION: FOAL GROWTH

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