

## Appendix Quarter Horse

### Breed Organization

American Appendix Horse Association AAHA  
Salmon, ID 83467  
Website: [www.americanappendix.com](http://www.americanappendix.com)

American Quarter Horse Association AQHA  
Amarillo, TX 79168  
Website: [www.aqha.com](http://www.aqha.com)



### Native Country

United States Of America

### Breed Description

Appendix Horse: - A horse registered with AQHA which is the result of breeding a Thoroughbred and an American Quarter Horse that has a permanent number, or a combination of an Appendix numbered American Quarter Horse and an American Quarter Horse with a permanent number. Appendix horses are distinguished by an "X" in front of their registration number and their certificates are gold.

There are three different mixes of horses that are eligible to be registered in AQHA's registry:

1. Registered Appendix (X) + Registered American Quarter Horse (QH) ' Registered Appendix foal(X)
2. Registered American Quarter Horse (QH) + Registered American Quarter Horse (QH) ' Registered American Quarter Horse foal (QH)
3. Recognized Thoroughbred (TB) + Registered American Quarter Horse (QH) ' Registered Appendix foal (X)

### Colors of Horses

There are 13 recognized colors for American Quarter Horses. Bay, Black, Brown, Sorrel, Chestnut, Dun, Buckskin, Red Dun, Grullo, Palomino, Gray, Red Roan, Blue Roan.

**Bay:** Body color ranging from tan, through red, to reddish brown; mane and tail black; usually black on lower legs.

**Black:** Body color true black without light areas; mane and tail black.

**Brown:** Body color brown or black with light areas at muzzle, eyes, flank, and inside upper legs; mane and tail black.

**Sorrel:** Body color reddish or copper-red; mane and tail usually same color as body, but may be flaxen. The most common color of American Quarter Horses.

**Chestnut:** Body color dark red or brownish-red; mane and tail usually dark red or brownish-red but may be flaxen.

**Dun:** Body color yellowish or gold; mane and tail may be black, brown, red, yellow, white or mixed; often has dorsal stripe, zebra stripes on legs, transverse over withers.

**Buckskin:** Body color yellowish or gold; mane and tail black; usually black on lower legs.

**Red Dun:** A form of dun with body color yellowish or flesh colored; mane, tail and dorsal stripe are red.

**Grullo:** Body color smoky or mouse-colored (not a mixture of black and white hairs, but each hair mouse-colored.) ; mane and tail black; usually black on the lower legs; often has dorsal stripe.

**Palomino:** Body color golden yellow, mane and tail white. Palominos typically do not have dorsal stripes.

**Gray:** Body color a mixture of white with any other colored hairs; often born solid-colored or almost solid-colored and gets lighter with age as more white hairs appear.

**Red Roan:** More or less uniform mixture of white with red hairs on the body, but usually darker on head and lower legs; can have red, black, or flaxen mane and/or tail.

**Blue Roan:** More or less a uniform mixture of white with black hairs on the body, but usually darker on head and lower legs; can have a few red hairs in mixture.

AAHA allows the horse breeder to take the Thoroughbred horse, the Quarter Horse or Paint and make the Appendix breed. Breeding Stock Paints are welcome to dual register without any prejudice to lack of color, or the Paint with Thoroughbred in their bloodline may dual register without prejudice to having color. The coded appendix horse in the American Quarter Horse Association is welcome to register in as the Appendix breed of horse. Allowing the owner to breed this horse to other horses and keep the pedigree ongoing.

AAHA has an Enrollment program for horse owners of Quarter Horse, Paints and Thoroughbred to enroll their horse's pedigree in AAHA, so that the offspring of these horses are eligible for Registration into AAHA as an Appendix breed. If you have a stallion this will give you more revenue because you can offer mare owners breeding certificate to register in AAHA. You may breed your Quarter Horse to a Paint, Thoroughbred or another Appendix or coded appendix with AQHA and offer the owner a way to register the foal. A Paint or Thoroughbred stallion owner may also do the same thing.

## **Physical Characteristics - General Equine Information**

Horses are prey animals with a well-developed fight-or-flight instinct. Their first response to threat is to startle and usually flee, although they are known to stand their ground and defend themselves or their offspring in cases where flight is not possible, or when their young are threatened. They also tend to be curious; when startled, they will often hesitate an instant to ascertain the cause of their fright, and may not always flee from something that they perceive as non-threatening. Through selective breeding, some breeds of horses are quite docile, particularly certain large draft horses. However, most light horse riding breeds were developed for speed, agility, alertness and endurance; natural qualities that extend from their wild ancestors.

Horses are herd animals, with a clear hierarchy of rank, led by a dominant animal (usually a mare). Horses are also social creatures who are able to form companionship attachments to their own species and to other animals, including humans. They communicate in various ways, including vocalizations such as nickering or whinnying, mutual grooming, and body language. Many horses will become difficult to manage if they are isolated. When this behavior occurs while being handled by human, the horse is called "herd-bound". However, through proper training, it is possible to teach any horse to accept a human as a type of companion, and thus be comfortable away from other horses.

When confined with insufficient companionship, exercise or stimulation, horses may develop stable vices, an assortment of bad habits, mostly psychological in origin, that include wood chewing, wall kicking, "weaving" (rocking back and forth) and other problems.

**Age:** Depending on breed, management and environment, the domestic horse today have a life expectancy of 25 to 30 years. It is uncommon, but a few horses live into their 40s, and, occasionally, beyond. The oldest verifiable record was "Old Billy," a horse that lived in the 19th century to the age of 62. In modern times, Sugar Puff, who had been listed in the Guinness Book of World Records as the world's oldest then-living pony, died at age 56.

Regardless of a horse's actual birthdate, for most competition purposes, horses are considered a year older on January 1 of each year in the northern hemisphere and August 1 in the southern hemisphere. The exception is endurance riding, where the minimum age to compete is based on the horse's actual calendar age.

The following terminology is used to describe horses of various ages:

**Foal:** a horse of either sex less than one year old. A nursing foal is sometimes called a suckling and a foal that has been weaned is called a weanling. Most domesticated foals are weaned at 4-6 months of age

**Yearling:** a horse of either sex that is between one and two years old.

**Colt:** a male horse under the age of four.

**Filly:** a female horse under the age of four.

**Mare:** a female horse four years old and older.

**Stallion:** a non-castrated male horse four years old and older. Some people, particularly in the UK, refer to a stallion as a "horse." A Ridgling or "Rig" is a stallion which has an undescended testicle. If both testicles are not descended, the horse may appear to be a gelding, but will still behave like a stallion.

**Gelding:** a castrated male horse of any age, though for convenience sake, many people also refer to a young gelding under the age of four as a "colt."

In horse racing the definitions of colt, filly, mare, and stallion or horse may differ from those given above. In the United Kingdom, Thoroughbred horse racing defines a colt as a male horse less than five years old and a filly as a female horse less than five years old. In the USA, both Thoroughbred racing and harness racing defines colts and fillies as four years old and younger. A very rough estimate of a horse's age can be made from looking at its teeth.

**Sleep Patterns:** Horses are able to sleep both standing up and lying down. They are able to doze and enter light sleep while standing, an adaptation from life as a prey animal in the wild. Lying down makes an animal more vulnerable to predators. Horses are able to sleep standing up because a "stay apparatus" in their legs allows them to relax their muscles and doze without collapsing. Unlike humans, horses do not sleep in a solid, unbroken period of time. They obtain sleep by means of many short periods of rest. Horses may spend anywhere from four to fifteen hours a day in standing rest, and from a few minutes to several hours lying down. Total sleep time in a day may range from several minutes to a couple of hours. Horses require approximately two and a half hours of sleep, on average, in a 24-hour period. Most of this sleep occurs in many short intervals of about 15 minutes each.

Horses must lie down to reach REM sleep. They only have to lie down for an hour or two every few days to meet their minimum REM sleep requirements. However, if a horse is never allowed to lie down, after several days it will become sleep-deprived, and in rare cases may suddenly collapse as it involuntarily slips into REM sleep while still standing. This condition differs from narcolepsy, though horses may also suffer from that disorder.

Horses sleep better when in groups because some animals will sleep while others stand guard to watch for predators. A horse kept entirely alone will not sleep well because its instincts are to keep a constant eye out for danger.

**Size:** The English-speaking world measures the height of horses in hands, abbreviated "h" or "hh," and is measured at the highest point of an animal's withers. One hand is 4 Imperial inches, or, as defined in British law, 101.6 mm. Intermediate heights are defined by hands and inches, rounding to the lower measurement in hands, followed by a decimal point and the number of additional inches between 1 and 3. Thus a horse described as 15.2 hh tall, means it is 15 hands, 2 inches, or 62 inches/1.57 m in height.

The size of horses varies by breed, but can also be influenced by nutrition. The general rule for cutoff in height between what is considered a horse and a pony at maturity is 14.2 hands high. (abbreviated "h" or "hh") (147 cm, 58 inches) as measured at the withers. An animal 14.2h or over is usually considered a horse and one less than 14.2h is a pony.

However, there are exceptions to the general rule. Some smaller horse breeds who typically produce individual horses both under and over 14.2h are considered "horses" regardless of height. Likewise, some pony breeds, such as the Pony of the Americas or the Welsh pony, share some features of horses and individual animals may occasionally mature at over 14.2h, but are still considered ponies.

The difference between a horse and pony is not simply a height difference, but also a difference in phenotype or appearance. There are noticeable differences in conformation and temperament. Ponies often exhibit thicker manes, tails and overall coat. They also have proportionally shorter legs, wider barrels, heavier bone, shorter and thicker necks, and short heads with broad foreheads. They often have calmer temperaments than horses and also a high level of equine intelligence that may or may not be used to cooperate with human handlers.

Light riding horses such as Arabians, Morgans, or Quarter Horses usually range in height from 14.0 (142 cm) to 16.0 hands (163 cm) and can weigh from 386 kilograms to about 540 kg (850 to 1200 lb). Larger riding horses such as Thoroughbreds, American Saddlebreds or Warmbloods usually start at about 15.2 hands (157 cm) and often are as tall as 17 hands (172 cm), weighing from 500 kg to 680 kg (1100 lb to 1500 lb). Heavy or draft horses such as the Clydesdale, Belgian, Percheron, and Shire are usually at least 16.0 (163 cm) to 18.0 hands (183 cm) high and can weigh from about 680 kg up to about 900 kg (1500 lb to 2000 lb). Ponies cannot be taller than 14.2h (147 cm), but can be much smaller, down to the Shetland pony at around 10 hands (102 cm), and the Falabella which can be the size of a medium-sized dog. However, while many miniature horse breeds are small as or smaller than a shetland pony, because they are bred to have a horse phenotype (appearance), their breeders and registries classify them as very small horses rather than ponies. The largest horse in history was a Shire horse named Sampson, later renamed Mammoth, foaled in 1846 in Bedfordshire, England. He stood 21.2½ hands high (i.e. 7 ft 2½ in or 2.20 m), and his peak weight was estimated at over 3,300 lb (approx 1.5 tonnes). The current record holder for the world's smallest

horse is Thumbelina, a fully mature miniature horse affected by dwarfism. She is 17 inches tall and weighs 60 pounds.

**Reproduction and Development:** pregnancy lasts for approximately 335-340 days and usually results in one foal (male: colt, female: filly). Twins are rare. Colts are usually carried 2-7 days longer than fillies. Females 4 years and over are called mares and males are stallions. A castrated male is a gelding. Horses, particularly colts, may sometimes be physically capable of reproduction at approximately 18 months but in practice are rarely allowed to breed until a minimum age of 3 years, especially females. Horses four years old are considered mature, though the skeleton usually finishes developing at the age of six, and the precise time of completion of development also depends on the horse's size (therefore a connection to breed exists), gender, and the quality of care provided by its owner. Also, if the horse is larger, its bones are larger; therefore, not only do the bones take longer to actually form bone tissue (bones are made of cartilage in earlier stages of bone formation), but the epiphyseal plates (plates that fuse a bone into one piece by connecting the bone shaft to the bone ends) are also larger and take longer to convert from cartilage to bone as well. These plates convert after the other parts of the bones do but are crucial to development.

Depending on maturity, breed and the tasks expected, young horses are usually put under saddle and trained to be ridden between the ages of two and four. Although Thoroughbred and American Quarter Horse race horses are put on the track at as young as two years old in some countries (notably the United States), horses specifically bred for sports such as show jumping and dressage are generally not entered into top-level competition until a minimum age of four years old, because their bones and muscles are not solidly developed, nor is their advanced training complete. For endurance riding competition, horses may not compete until they are a full 60 calendar months (5 years) old.

**Skeletal System:** horses have, on average, a skeleton of 205 bones. A significant difference in the bones contained in the horse skeleton, as compared to that of a human, is the lack of a collarbone--their front limb system is attached to the spinal column by a powerful set of muscles, tendons and ligaments that attach the shoulder blade to the torso. The horse's legs and hooves are also unique, interesting structures. Their leg bones are proportioned differently from those of a human. For example, the body part that is called a horse's "knee" is actually the carpal bones that correspond to the human wrist. Similarly, the hock, contains the bones equivalent to those in the human ankle and heel. The lower leg bones of a horse correspond to the bones of the human hand or foot, and the fetlock (incorrectly called the "ankle") is actually the proximal sesamoid bones between the cannon bones (a single equivalent to the human metacarpal or metatarsal bones) and the proximal phalanges, located where one finds the "knuckles" of a human. A horse also has no muscles in its legs below the knees and hocks, only skin and hair, bone, tendons, ligaments, cartilage, and the assorted specialized tissues that make up the hoof (see section hooves, below).

**Digestion:** a horse is a herbivore with a digestive system adapted to a forage diet of grasses and other plant material, consumed regularly throughout the day, and so they have a relatively small stomach but very long intestines to facilitate a steady flow of nutrients. A 1000 pound horse will eat between 15 and 25 pounds (approximately 7-11 kg) of food per day and, under normal use, drink 10 to 12 gallons (about 38-45 litres) of water. Horses are not ruminants, so they have only one stomach, like humans, but unlike humans, they can also digest cellulose from grasses due to the presence of a "hind gut" called the cecum, or "water gut," that food goes through before reaching the large intestine. Unlike humans, horses cannot vomit, so digestion problems can quickly spell trouble, with colic a leading cause of death.

**Teeth:** horses are adapted to grazing. In an adult horse, there are 12 incisors (six upper and six lower), adapted to biting off the grass or other vegetation, at the front of the mouth. There are 24 teeth adapted for chewing, the premolars and molars, at the back of the mouth. Stallions and geldings have four additional teeth just behind the incisors, a type of canine teeth that are called "tushes." Some horses, both male and female, will also develop one to four very small vestigial teeth in front of the molars, known as "wolf" teeth, which are generally removed because they can interfere with the bit.

There is an empty interdental space between the incisors and the molars where the bit rests directly on the bars (gums) of the horse's mouth when the horse is bridled.

The incisors show a distinct wear and growth pattern as the horse ages, as well as change in the angle at which the chewing surfaces meet. The teeth continue to erupt throughout life as they are worn down by grazing, and while the diet and veterinary care of the horse can affect the rate of tooth wear, a very rough estimate of the age of a horse can be made by looking at its teeth.

**Hooves:** the critical importance of the feet and legs is summed up by the traditional adage, "no foot, no horse." The horse hoof begins with the distal phalanges, the equivalent of the human fingertip or tip of the toe, surrounded by cartilage and other specialized, blood-rich soft tissues such as the laminae, with the exterior hoof wall and horn of the

sole made essentially of the same material as a human fingernail. The end result is that a horse, weighing on average 1,000 pounds, travels on the same bones as a human on tiptoe. For the protection of the hoof under certain conditions, some horses have horseshoes placed on their feet by a professional farrier. The hoof continually grows, just like a large fingernail, and needs to be trimmed (and horseshoes reset, if used) every six to eight weeks.

**Senses:** the senses of a horse are generally superior to those of a human. As prey animals, they must be aware of their surroundings at all times. They have very large eyes (among land animals only the ostrich has a larger eye), with excellent day and night vision, though they may have a limited range of color vision. The side positioning of the eyes gives the horse a wide field of vision of about 350°. While not color-blind, studies indicate that they have difficulty distinguishing greens, browns and grays. Their hearing is good, and the pinna of their ears can rotate a full 360 degrees in order to pick up sound from any direction. Their sense of smell, while much better than that of humans, is not their strongest asset; they rely to a greater extent on vision.

A horse's sense of balance is outstanding; the cerebellum of their brain is highly developed and they are very aware of terrain and placement of their feet. Horses' sense of touch is better developed than many people think; they immediately notice when a fly or mosquito lands on them, even before the insect attempts to bite. Their sense of taste is well-developed in order to determine the nature of the plants they are eating, and their prehensile lips can easily sort even the smallest grains. Horses will seldom eat most poisonous plants or spoiled food unless they have no other choices, although a few toxic plants have a chemical structure that appeals to animals, and thus poses a greater risk of being ingested.

**Gaits:** all horses move naturally with four basic gaits: the walk, trot or jog, canter or lope, and gallop. Besides these basic gaits, some horses pace, instead of trot. In addition, there are many "ambling" gaits such as the slow gait, rack, fox trot running walk, and tölt. These special gaits are often found in specific breeds, often referred to as "gaited" horses because they naturally possess additional gaits that are approximately the same speed as the trot but smoother to ride. Technically speaking, "gaited horses" replace the standard trot (which is a 2 beat gait) with one of the four beat gaits.

Horse breeds with additional gaits that often occur naturally include: the Tennessee Walking Horse which naturally performs a running walk; the American Saddlebred which can be trained to exhibit a slow gait and the rack; Paso Fino, which has two ambling gaits, the paso corto and paso largo; the Peruvian Paso, which exhibits the paso llano, and sobreandando; and Icelandic horses which are known for the tölt. The fox trot is found in several breeds, most notably the Missouri Foxtrotter. Standardbreds, depending on bloodlines and training, may either pace or trot.

**Horse Care:** horses are animals that were evolved to graze. They eat grass or hay, sometimes supplemented with grain. They require a plentiful supply of clean water, a minimum of 10 to 12 gallons per day. Although horses are adapted to live outside, they require shelter from the wind and precipitation, which can range from a simple shed or shelter to an elaborate stable.

Horses require annual vaccinations to protect against various diseases, need routine hoof care by a farrier, and regular dental examinations from a veterinarian or a specialized equine dentist. If horses are kept inside in a barn, they require regular daily exercise for their physical health and mental well-being. When turned outside, they require well-maintained, sturdy fences to be safely contained. Regular grooming is also helpful to help the horse maintain good health of the hair coat and underlying skin.

**Equine Benefits:** horses are trained to be ridden or driven in many different sporting events and competitions. Examples include horse shows, gymkhana and O-Mok-See, rodeos, endurance riding, fox hunting, and Olympic-level events such as three-day eventing, combined driving, dressage, and show jumping. Although scoring varies by event, most emphasize the horse's speed, maneuverability, obedience and/or precision. Sometimes the equitation, the style and ability of the rider, is also considered.

Sports such as polo and horseball do not judge the horse itself, but rather use the horse as a partner for human competitors as a necessary part of the game. Although the horse assists this process and requires specialized training to do so, the details of its performance are not judged, only the result of the rider's actions -- be it getting a ball through a goal or some other achievement. Examples of these sports of partnership between human and animal also include jousting (reenacting the skills used by medieval knights), where the main goal is for one rider to dismount the other, and buzkashi, a team game played throughout Central Asia, the aim being to capture a goat carcass while on horseback.

The most widely known use of horses for sport is horse racing, seen in almost every nation in the world. There are three types: "flat" racing; steeplechasing, i.e. racing over jumps; and harness racing, where horses trot or pace while

pulling a driver in a small, light cart known as a sulky. Most race horses in the developed world are Thoroughbreds, a breed which can reach speeds up to 40 mph/70 km/h. In the case of a specialized sprinting breed, the American Quarter Horse, speeds over 50 mph have been clocked. In harness racing, performed by Standardbred horses, speeds over 30 mph have been measured. A major part of the economic importance of horse racing, as for many sports, lies in the gambling associated with it.

There are certain jobs that horses do very well, and no amount of technology appears able to supersede. Mounted police horses are still effective for crowd control. Cattle ranches still require riders on horseback to round up cattle that are scattered across remote, rugged terrain. Search and rescue organizations in some countries depend upon mounted teams to locate people, particularly hikers and hunters, who are lost in remote areas.

Some land management practices such as cultivating and logging can be efficiently performed with horses. In agriculture less use of fossil fuels, reduced soil compaction and degrading of soil structure can be seen over time with the use of draft animals such as horses. In forestry, logging can be done with horses and can result in reduced damage to soil structure and less damage to trees due to more selective logging.

Horses can also be used in other areas where it is necessary to avoid vehicular disruption to delicate soil. Examples include areas such as a nature reserve. They may also be the only form of transport allowed in wilderness areas. They are also quieter than motorized vehicles. Peace officers such as rangers or game wardens may use horses for patrols, and horses may also be used for clearing trails or other work in areas of rough terrain where vehicles are less effective.

In less affluent countries such as Romania, Kyrgyzstan, and many parts of the Third World, horses, donkeys and mules are routinely used for transport and agriculture. In areas where roads are poor or non-existent and fossil fuels are scarce or the terrain rugged, riding horseback is still the most efficient way to get from place to place.

People with disabilities obtain beneficial results from association with horses. The movement of a horse strengthens muscles throughout a rider's body and promotes better overall health. In many cases, riding has also led to increased mobility for the rider. Horses also provide psychological benefits to people whether they actually ride or not. The benefits of equestrian activity for people with disabilities has also been recognized with the addition of equestrian events to the Paralympic Games and recognition of para-equestrian events by the FEI.

Hippotherapy and therapeutic horseback riding are names for different physical, occupational and speech therapy treatment strategies that utilize equine movement. In the hippotherapy environment, a therapist uses the horse's movement to provide carefully graded sensory input, whereas therapeutic horseback riding uses specific riding skills.

"Equine-assisted" or "equine-facilitated" psychotherapy uses horses as companion animals to assist people with psychological problems. Actual practices vary widely due to the newness of the field; some programs include Therapeutic Horseback Riding and hippotherapy. Non-riding therapies simply encourage a person to touch, speak to and otherwise interact with the horse. People appear to benefit from being able to be around a horse; horses are very sensitive to non-verbal communication and are an ideal resource for working with individuals who have "tuned out" human therapists.

Equine Assisted Learning (EAL), Equine guided education, or equine assisted professional development, is another relatively new field of experiential learning for corporate, professional and personal development. There also have been experimental programs using horses in prison settings. Exposure to horses appears to improve the behavior of inmates in a prison setting and help reduce recidivism when they leave. A correctional facility in Nevada has a successful program where inmates learn to train young mustangs captured off the range in order to make it more likely that these horses will find adoptive homes. Both adult and juvenile prisons in New York, Florida, and Kentucky work in cooperation with the Thoroughbred Retirement Foundation to re-train former racehorses as pleasure mounts and find them new homes. Horses are also used in camps and programs for young people with emotional difficulties.

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