

# The Gaits of the Horse

## Equine Science – Chapter 5

The gaits of the horse are what make horses so much fun – an so challenging – to ride. Gait is defined as a pattern of movement or way of going, marked by a distinctive and repetitive rhythm of hoofbeats. There are horses that are said to have “good gaits” and others that are said to have “bad gaits”. A horse with “good gaits” is a horse with smooth, collected gaits that are easy for the rider to sit and that look pleasant to an observer on the ground. A horse with “bad gaits” has rough, disjointed, uncollected movement that is hard for even an experienced rider to sit and that looks unpleasant to an observer.

### The Basic Gaits of the Horse

The following 5 gaits are common to most breeds of horses:

- Walk
- Trot or jog
- Canter or lope
- Gallop or run
- Back.

Detailed information is given in this section about each of these gaits, including type of gait, number of beats in the gait, average length of stride, average speed of the gait and the number of feet the horse has on the ground at one time in that gait.

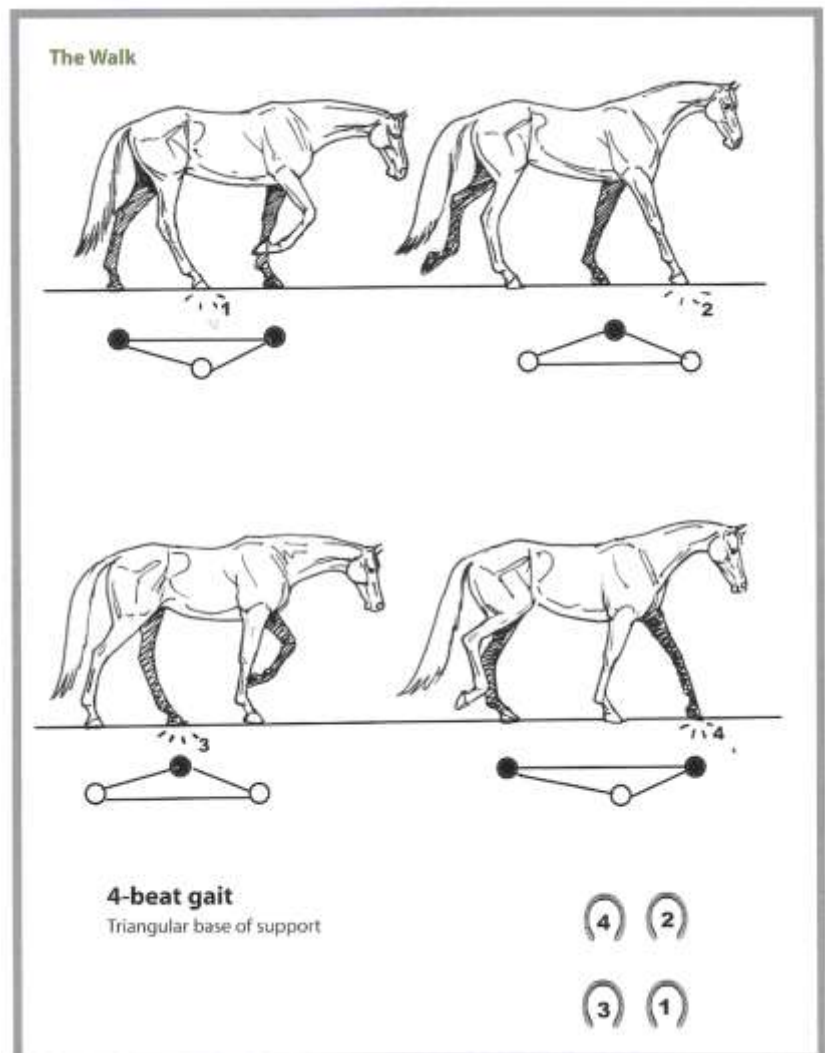
Because horses and ponies vary greatly by breed, size, and individual conformation, length of stride and relative speed in a gait also vary from one horse to the next. The numbers below are averages, intended to give a way of comparing gaits. Diagrams are provided to help visualize the horse’s motion.

### Walk

The walk is the slowest gait, and it is common to all breeds of horses. The walk is comfortable, easy to sit to, and require little riding experience. It should be ground-covering:

Characteristics of the walk:

- **Type of gait** – slow
- **Number of beats** – 4 beat gait
- **Average length of stride** – less than 6 feet
- **Average Speed** – about 4 miles per hour
- **Number of feet on the ground at one time** – usually 3, giving a “triangular base of support”. However, there are several different types of walk; in some, at times there may be only 2 feet on the ground.

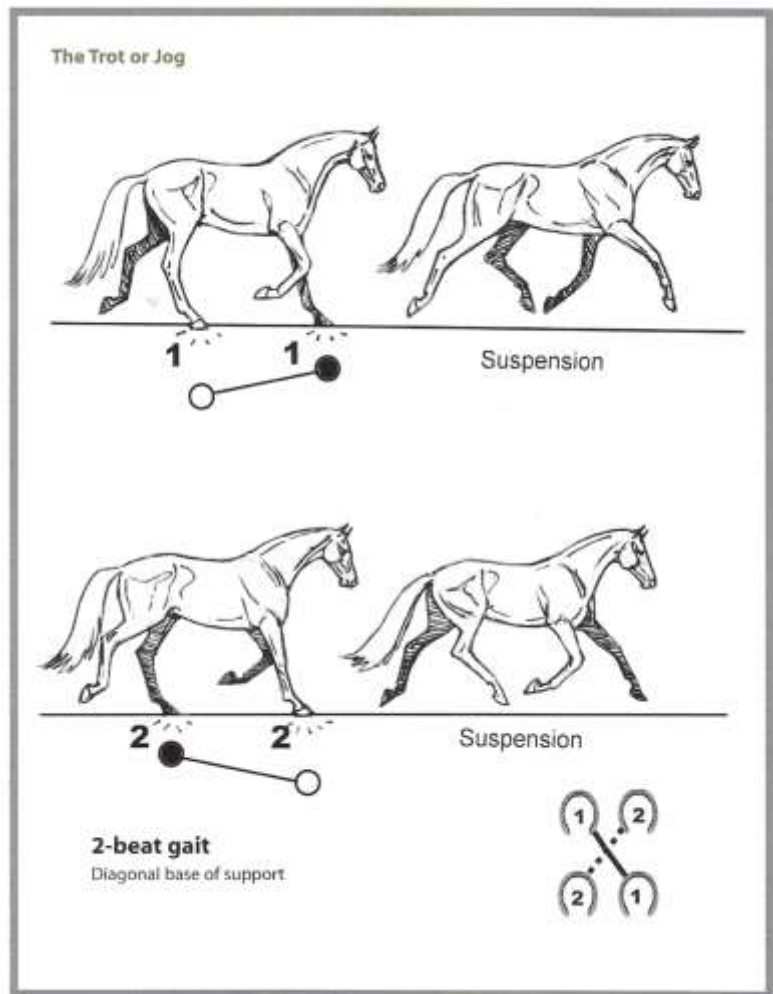


## Trot or Jog

The trot or jog is faster than the walk. For the English style of riding, this gait is referred to as a “trot”; for Western riding, it is referred to as a “jog”. Most of the time, English riders rise with every other beat of the trot, a movement called posting. Western riders sit to the jog. The trot or jog, is one of the more difficult gaits for a new rider to learn to sit properly, particularly if his or her horse has rough, uncollected gaits.

Characteristics of the trot or jog:

- **Type of gait** – faster than the walk
- **Number of beats** – 2 beat gait
- **Average length of stride** – about 8 to 9 feet
- **Average Speed** – varies; about 8 mph for the trot and about 6 mph for the jog; a “trotting” Standardbred racehorse can trot faster than 30 mph!
- **Number of feet on the ground at one time** – 2, with the diagonal pairs of feet (right fore/left hind and left fore/right hind) moving at the same time; the trot is known as a diagonal gait, and it creates a “diagonal base of support”.



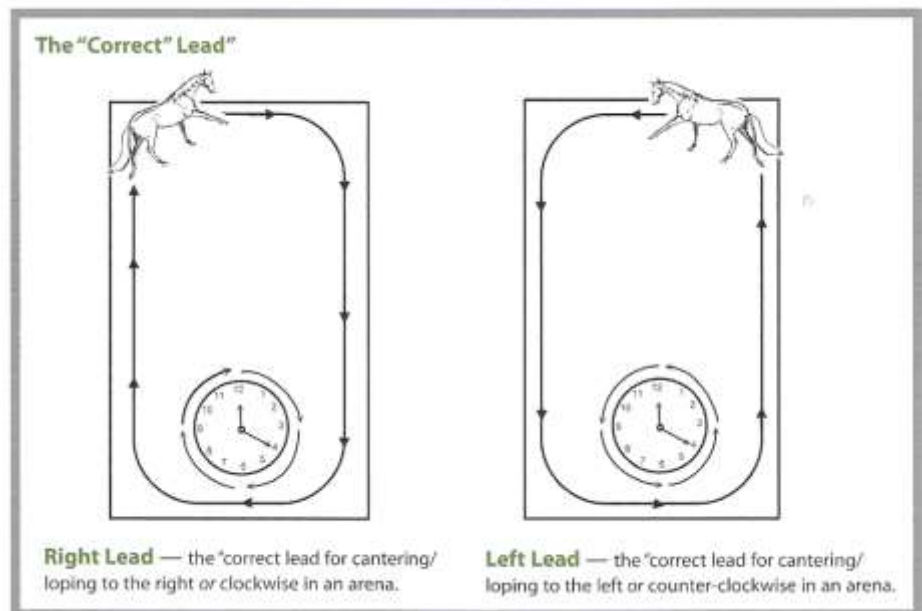
## Canter or Lope

The canter or lope is faster than the trot. English riders call this gait the “canter”, and Western riders call it the “lope”. Typically the canter is faster than the lope.

Many riders consider this the most pleasurable gait of all. If the horse has “good gaits”, the ride is smooth and collected, with a great feeling of freedom. Although learning to sit this gait in a balanced position takes some time and work, the result are worth the effort – because it is fun to canter or lope a horse!

Characteristics of the canter or lope:

- **Type of gait** – faster than trot or jog
- **Number of beats** – 3-beat gait
- **Average length of stride** – about 10 to 15 feet
- **Average Speed** – about 12 mph for canter; the lope is slightly slower
- **Number of feet on the ground at one time** – alternates: first 1 foot, then 2, then 1: there is also a brief moment when all 4 feet are off the ground, called a “period of suspension”.



At the canter or lope, a horse is said to be on the “right lead” or the “left lead”, depending on which front foot it appears to be “leading” with.

A horse on the right lead appears to be leading with its right front leg – although motion studies with start-of-the-art scientific equipment have shown that the right forefoot is actually the last one to hit the ground after a “period of suspension”. The right lead is considered the “correct lead” when a horse is moving to the right or clockwise in a riding arena.

A horse on the left lead appears to be leading with its left front leg – though, again, motion studies show that the left forefoot actually hits the ground last in the sequence of movement when the horse is on the left lead. The left lead is considered the “correct lead” when a horse is moving to the left or counterclockwise in a riding arena.

When a cantering or loping horse is on the right lead with the front legs, it should also be on the right lead with the hind legs. The same true for the left lead.: The horse should be on the left lead with both front and hind legs. If, as occasionally happens, a horse is on one lead in the front and the other in the hind; it is said to be on a “disunited” canter or lope (also referred to as “cross-canter” or “cross-lope”).

## Gallop or Run

The gallop or run is the horse’s fastest gait. The speeds at which horses can gallop or run, as well as the distances over which they can sustain that running gait, vary by breed as well as by individual. Differences in running ability from one breed to another result mostly from differences in conformation and endurance capability. Conformation and size can significantly affect length of stride, the ability to repeat a movement quickly, and the ability to run over short or longer distances with efficiency. The stride of the great Thoroughbred racehorse Secretariat was measured to be at least 29 feet! Most Thoroughbreds’ length of stride measures between 21 and 23 feet. The average length of stride for many other breeds is shorter.

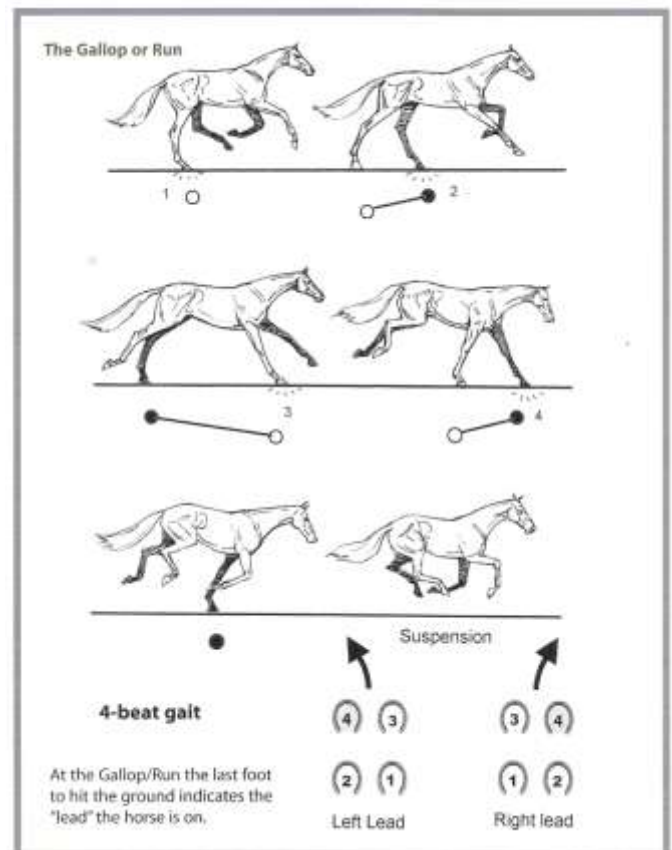
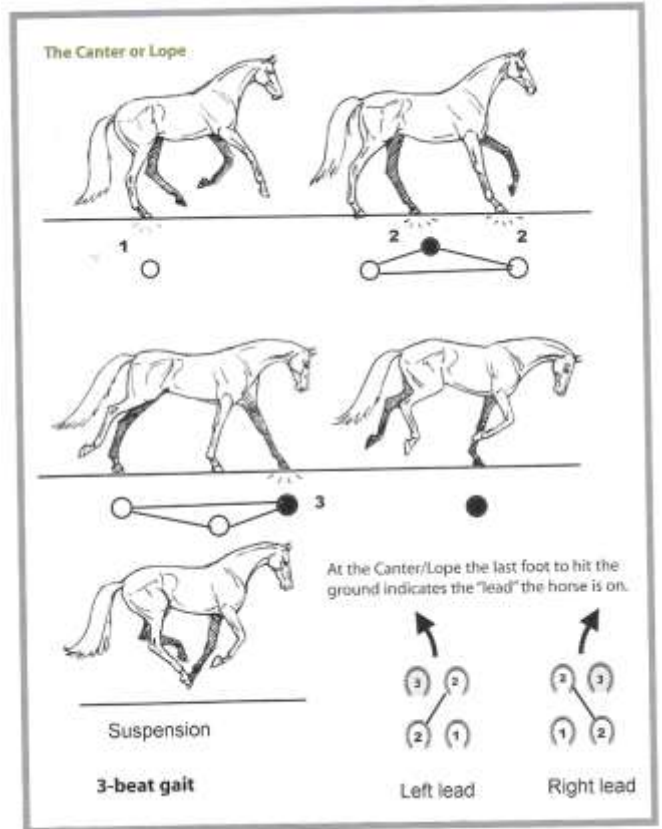
Characteristics of the gallop or run:

- **Type of gait** – fastest of the gaits
- **Number of beats** – 4-beat gait
- **Average length of stride** – varies greatly: 15 to 20 feet for most riding horses; 21 to 23 feet for Thoroughbred race horses.
- **Average Speed** – about 18 mph, but can vary greatly: Thoroughbred racehorses run about 35 mph; racing Quarter Horses have been clocked at up to 50 mph when running a quarter-mile!
- **Number of feet on the ground at one time** – 1; in this gait the “period of suspension” is longer than the canter or lope.

When a horse gallops or runs, it is on either the right or left lead, just as in the canter, and the information given previously about the right and left leads applies to the gallop or run as well. Remember, however, that the gallop or run is a 4-beat (rather than a 3-beat) gait.

## Back

Horses do have a “reverse”: the gait known as the back! This is an extremely important gait to the horse and to people that work around it. Horses are large animals; when they get into tight places, they need to be able to back out of those places. Usually people are the ones who put horses into tight



spots. In the wild, or even out in a pasture, horses rarely get themselves into situations that require backing. This most likely is due to their cautious nature and the “fright and flight” behavior. They want to be able to get away if they need to.

Many horses feel uncomfortable when being asked to back – for example, off a horse trailer. The horse seems to sense that it is in a vulnerable situation; remember, a horse cannot see behind itself! Some horses actually need to be taught how to back. But backing is a necessary skill and well worth practicing, for the safety of both horse and handler. Backing can also be a very useful tool when evaluating a horse for lameness.

Although one might expect the back to be a walk in reverse, it is not.

Characteristics of the back:

- **Type of gait** – slow and deliberate
- **Number of beats** – 2-beat gait
- **Average length of stride** – 3 feet or less
- **Average Speed** – not measurable
- **Number of feet on the ground at one time** – 2

## Some Other Gaits

There is much debate about what is a “natural gait” in the horse. For the purposes of this book, we will recognize that there are several gaits, such as the pace, the single-foot gaits, and the running walk, that are natural to some breeds or crossbreeds of horses. Other gaits seem to be natural to some but not all horses of a certain breed. Still other gaits are said to be “man-made”. This book will discuss a few of these gaits and list other that you may want to research on your own.

## Pace

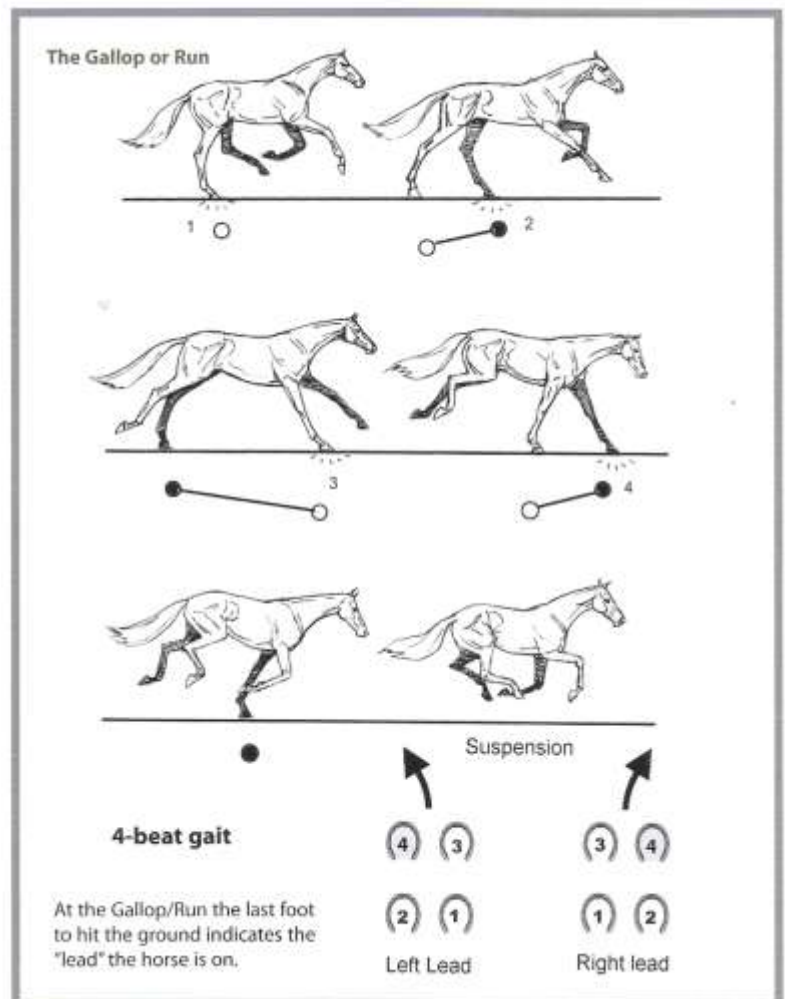
The pace is a gait that is primarily seen in Standardbreds. It is the faster of the two racing gaits of “harness” racehorses, the other being the ‘trot’. But where “trotters” are exhibiting a very fast trot, “pacers” are exhibiting another gait altogether. The pace is a two-beat gait, with both legs on one side of the body moving together and at the same time – called a “lateral” gait. Today’s Standardbred racehorse can pace at more than 30 mph when racing.

Many young Standardbreds can be seen pacing in the pasture at the side of their dams. These young animals have come to the gait naturally. However, some members of the breed need to be taught to pace.

## Single-Foot Gaits

There are many gaits that can be classified as “single-foot” gaits. In these gaits, as the name indicates, there are brief moments in the movement when a horse has only one foot on the ground. Some of these “single-foot” gaits are:

- **Running Walk** – the ground-covering walk of the Tennessee Walking Horse; a fast, 4-beat, lateral gait; also known as the “plantation gait”; easy on the horse and rider.
- **Slow gait** – performed by the American Saddlebred or “five-gaited” show horse; a slow, 4-beat, lateral gait, with high leg action and animation; also called the stepping pace or amble; physically demanding of the horse and the rider.
- **Rack** – performed by the American Saddlebred or



“five-gaited” show horse; a fast, 4-beat, lateral gait with extremely high leg action, especially in the front legs; physically demanding of the horse but easy on the rider.

- **Fox Trot** – a gait that originated with the Missouri Fox Trotter breed; a medium-speed, 4-beat, diagonal gait; easy on horse and rider.

Many breeds of horse perform one or more of the many “single-foot” gaits; however, most of the animals have not been taught to perform these gaits.

## More gaits

There are many names for gaits specific to particular breeds of horses—and in some cases individual breed associations refer to very similar gaits by different names. Some additional gait names you may here include:

- Flat-footed walk
- Pacing walk
- Animated walk
- Paso fino or fine walk
- Paso corto or short walk
- Paso largo or long walk
- Park trot
- Slow jog
- Road gait
- Extended trot
- Full-speed trot
- Smart trot
- Parade gait
- Hand gallop

Many of these gaits appear in some of the “new” crossbreeds currently being bred in the United States.

## A Summary of Gaits

The gaits of horses have a major influence on both shaping the horse industry and determining an individual animal’s success. Long, fluid, fast galloping strides determine which Thoroughbreds will be successful in flat-track racing. In the harness-racing industry, long, quick lateral strides determine success for “pacing” Standardbreds, as do long, quick diagonal strikes for “trotting” Standardbreds. Hunters and jumpers need long, soft, sweeping, group-covering gaits that are comfortable to the rider and efficient for the horse. Working ranch horses need gaits that are comfortable for the rider and easy on the horse as both work at least an 8-hour day. The high-stepping, animated, fancy gaits of “gaited horses” are what make these horses valuable to potential buyers and enthusiasts of this discipline. The prized Western riding horse is one whose smooth gaits make it a pleasure to ride.

Regardless of what style of riding you do or what breed of horse you prefer, the variety of gaits helps to make the horse industry what it is today. The unique gaits of different breeds have intrigued man and created a desire to tame, ride or drive this beautiful beast throughout history. Horses have carried man for thousands of years and will probably carry him for thousands of years yet to come.