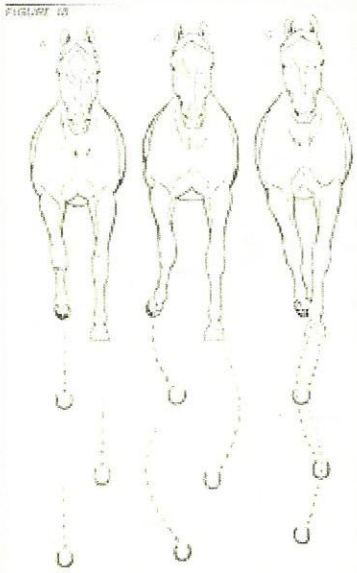
Leg Movement and Front Leg Conformation

Last week's lecture was on the gaits of the horse. This week we will look at how horses legs move based onbody structure (specifically the horse's front legs). ***Leg movement refers to how the horse's limbs lift, swing, and land.*** A horse's movement is generally determined by his body shape, or **conformation (the physical structure of a horse's body).** Horses that move well usually have good leg conformation. ***Leg conformation refers to the structure and correctness of a horse's limbs.***

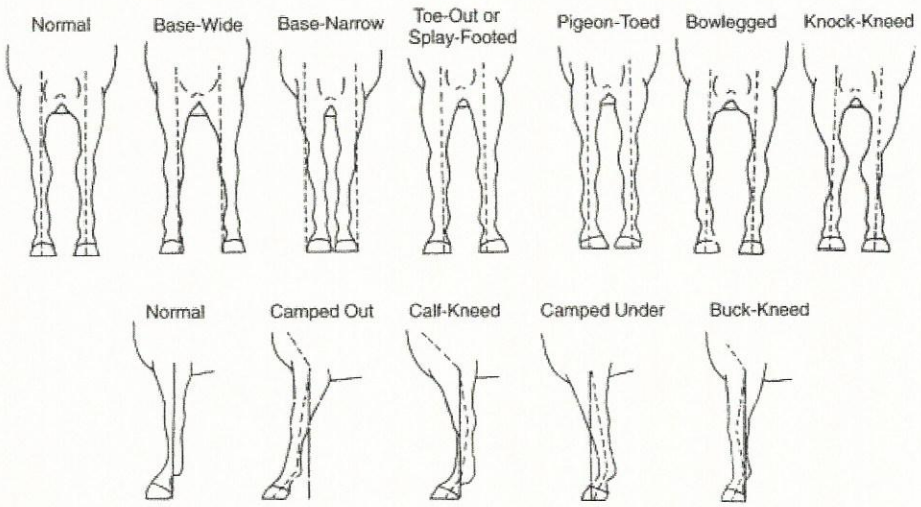
Good leg movement is straight and efficient. In the illustration below, figure "A" shows correct leg conformation and movement.

A **B** **C**



Examples "B" and "C' demonstrate incorrect movement because the legs do not move straight. These legs do not travel in a straight line because the horses have conformation faults. If "A" is our baseline (the correct example) discuss how "B" and "C" are different from A. Use the conformation of the front legs chart to help in your descriptions. How do these structural differences affect movement?

Conformation Faults of Forelegs



Using this chart, we can describe Horse "B" as "base-wide" and "Pigeon-toed." Horse "C" is "base-narrow" (and possibly "splay-footed", but it is hard to tell in the picture).

Examples of undesirable leg movement include:

1) **Interfering:** striking one leg against another.
   →This can be caused by toed-out conformation, which causes legs to wing in.
2) **Forging:** hitting a front foot with the toe of the hind foot.
   →this is common in a horse that moves on his forehand or with long toes. It can also be present in a horse that has a short back and long legs
3) **Over-reaching**: the toe of the hind foot grabs the heel of the front foot causing injury.
   →the same flaws that cause forging also cause over-reaching
4) **Paddling:** the foot swings outward.
   →this is a flaw of pigeon-toed horses
5) **Winging-in**: the foot swings in towards the opposite leg.
   →this is a flaw of splay footed-horses. It may lead to interfering

Horse "B" is "paddling"

Horse "C" is "winging-in" (which could lead to "interfering")

Since so much force is directed downward toward each leg when a horse works at speed, the faster the horse works the greater the force. A limb and its tendons and ligaments are designed to take this force straight down the middle. Any deviation (difference) from the normal means part of the leg will take more force than it should, and this will lead to damage or breakdown. The front legs take 65% of the horse's weight, which is greatly added by the forces of forward motion, so it is very important for a horse to have correct forelimbs.

Although horses might be described as having conformation faults, this does not necessarily make the horse bad. Champion Thoroughbred racehorse Seabiscuit, grandson of the great Man o'War, was notorious for his poor conformation. Despite his small size and being "over at the knee", Seabiscuit went on to claim the 1938 Horse of the Year title following his win over War Admiral in what was called the "match of the century."

*Note Seabiscuit's front left leg. The knee sticks out kind of far and looks bent even though his legs are straight.