

# Equine Newsletter

## HYDRATION

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Providing water to our horses may seem like such a simple concept that many horse owners don't give it a second thought; however, there is some truth to the saying "You can lead a horse to water, but you can't make it drink." The intricacies of keeping a horse properly hydrated are often overlooked, but it is such an important part of your horse's well being that we wanted to take this opportunity to have a more in-depth look.

### HOW MUCH WATER DOES A HORSE ACTUALLY NEED?

First off, it is important to realize how much water a horse actually needs. The average-sized horse (1100 lbs) requires at minimum 20-40 L of water daily. It is interesting to note that the average water bucket can only hold 17-20 L of water. There are many things that will affect the amount of water a horse requires; some examples include age, workload, health status, external environment, and diet. A complete list of all the different factors would be impossible, but some common examples include:

- Having a workload will increase a horse's daily water requirements. The 20-40 L requirement is the baseline for a horse that is not in any work. The higher the horse's workload, the more water it will require.
- Elevated environmental temperatures will increase the amount of water a horse will require.
- Certain disease conditions will result in horses losing more than the normal amount of water through their manure or urine. Some common diseases that result in increased water loss include diarrhea and uncontrolled PPID (Equine Cushing's Disorder).
- Protein content in a horse's diet will have a direct effect on the amount of water a horse needs. Water is needed to digest protein properly, so higher protein diets will result in a higher water requirement. Remember that alfalfa hay has significantly higher protein than grass hay.
- Horses on a diet with a low water content, such as dry hay, will need to drink more water when compared to a horse on lush pasture.



### HOW DO WE ENCOURAGE HORSES TO DRINK?

Now that we have a better understanding of things that can affect a horse's water requirements, we can look at some factors that will affect how much water a horse actually drinks.

Many people know that there is some connection between drops in temperature and colic. This is typically the result of horses decreasing their water intake in response to a drop in the ambient temperature. This phenomenon is seen even when horses have access to a suitable water source. The horses decrease in water intake leads to dehydration and an increased risk of impaction colic. In an effort to try and prevent this decrease in water intake, we can add loose salt to a horse's feed when we know there will be temperature swings. Consuming salt will increase a horse's water intake. We are often asked about how much is too much salt. Overfeeding of salt is not a concern if there is plenty of fresh water available to the horse.





The water source will have a direct impact on how much a horse drinks. The water needs to be at an appropriate temperature, fresh, and palatable. Horses are very sensitive to changes in the taste or smell of their water, and will often decrease their intake when introduced to a new water source until they have become acclimated. If you need to change a horse's water, such as when you attend a multi-day show or when moving barns, it may be helpful to get the horse used to drinking flavoured water prior to the switch. Gatorade, molasses or commercial electrolyte powders can be used to flavour the water. Then when the water source changes the same flavouring aide can be used to mask any change in smell or taste. The flavouring would be gradually decreased to allow the horse to adapt over an extended period.



We are often asked about the suitability of snow as a water source. In general, snow is not a viable alternative. The water content of snow is quite a bit lower than unfrozen water, and because of this, a horse would have to consume significantly more snow on a volume basis to achieve its water requirements. Additionally, energy is required to warm up the snow so that it melts into water. Increased energy output means the horse will need to consume more calories. The more calories a horse consumes the more water it requires. This would in turn increase the amount of snow a horse would have to ingest.

## CONSEQUENCES OF NOT GETTING ENOUGH WATER

If a horse is not consuming enough water it will become dehydrated. Dehydration results in a decrease in blood volume. We have to remember that blood has an extremely important role to play in the body, providing nutrients and oxygen to all the tissues. If blood volume decreases, the tissues of the body begin to starve. As such, the body has developed several mechanisms to combat decreased blood volume.

First, the heart rate and blood pressure will increase so that the smaller volume of blood can get around the body faster. Second, the body will pull fluid from organs. This is one of the mechanisms behind impaction colics; water is pulled from the intestinal contents to combat a decrease in blood volume. Finally, the body will decrease its fluid output and urination frequency, and the volume will decrease.

We can see clinical signs of dehydration when a horse has lost 4-6% of the total amount of water present in its body. These signs include an elevated heart rate, tacky mucous membranes, and a decrease in skin elasticity (the skin tent test). Unfortunately, a horse's performance will be adversely affected at only 2% dehydration, before any clinical signs are evident. More severe dehydration occurs at 8-10% water loss, and will cause clinical signs such as sunken eyes and a tucked up abdomen. Mild dehydration can often be corrected by providing clean fresh water. More severe dehydration, however, will require the intervention of a vet to safely rehydrate. As such, it is important to recognize the clinical signs of dehydration so that it can be corrected before it becomes more serious.



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