Marvelous Mules: Special Care Considerations

From The Open Sanctuary Project

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Just as donkeys aren't horses, mules aren't either donkeys OR horses either. This means there are care considerations that will deviate from the care given to horse or donkey residents.

Pony mule, Hiccup, takes a break by lounging on a boulder. Photo courtesy of Little Longears Minature Donkey Rescue

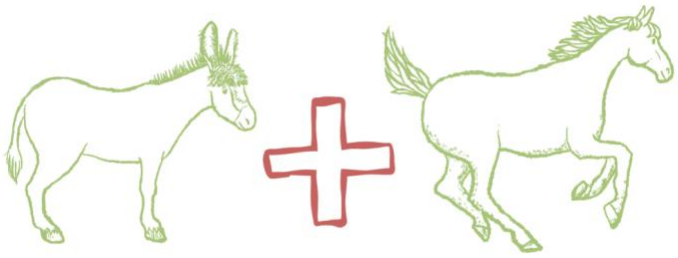
Caring for equine residents can be both rewarding and challenging. If you care for different species of equines, understanding the differences between them is vital to providing the best care for them. Just as donkeys aren't horses, mules aren't either donkeys OR horses either. This means there are care considerations that will deviate from the care given to horse or donkey residents.

In addition to anatomical differences, there are physiological, nutritional, and behavioral differences that make mules unique.

Often general equine care guides only cover horses or only briefly mention donkeys and, rarely, mules. In this resource we will look at some of these key differences and how they impact mule resident care. This resource isn't intended to be an exhaustive guide on all things mules but rather an introduction for caregivers on their unique differences from other equines.

Mules

Mules are the offspring of a female horse and a male donkey



Conversely, a hinny is the offspring of a male horse and a female donkey. Mules are generally more prevalent than hinnies. They are generally sterile, and unable to reproduce, though there are rare instances of offspring being born from male horses and female mules (hule) or male donkeys and female mules (jule/donkule). This resource focuses specifically on the differing characteristics between mules and horses and mules and donkeys. Now that we have that covered, let's take a look at some of the differences between mules and donkeys and mules and horses.

Anatomical Differences

Let's start with anatomical differences. Some of these may seem quite obvious, while other differences will be subtle or internal. While not an exhaustive list, this should give you an idea of the many anatomical variations between mules and horses and donkeys and how it can affect the care they receive. The main differences are in their hooves, nasal passage, and coat.

Hooves

A mule resident's hooves are often closer to a donkey's than a horse's but can also retain horse-like features. This may look like a mule resident's hoof having a heel buttress that is either sickle-shaped (donkey) or triangle-shaped (horse). This means mule residents will need a farrier with experience with donkeys and horses or mules, specifically. Some of the characteristics that differ from horse hooves include a deeper solar conclave, a heel buttress that is farther forward from the baseline of the frog, and thicker walls and soles. Additionally, the hoof is more cylindrical shaped. As you can imagine, these characteristics are important to consider for routine hoof health care. It also means they may be able to handle rockier terrain than many horses if their hooves are healthy.

Nasal Passages

Depending on the individual, mules may have smaller nasal passages compared to horses of the same size. Donkeys have smaller passages and smaller nasogastric tubing is recommended if the need arises. Smaller tubing should also be on hand for use in mule residents to avoid complications and discomfort.

Coats

A horse's coat changes between seasons. This means a thicker coat in the winter and a thinner coat in the summer. Donkey coats do not change in a measurably significant way between seasons as they don't have the undercoat that horses have. This makes them more vulnerable to cold weather. A mule's coat lies somewhere in between as they do seem to grow a winter coat but not one as thick as many horses. (Coats can vary between breeds of horses as well.)If you have only had horse residents in the past, be sure to remember that your mule resident may not have as thick and layered a coat and they may be more likely to require a blanket in extreme winter weather conditions.

Physiological Differences

A mule's physiology works differently from a horse's in several ways. These differences are incredibly important as they determine varying dietary needs, medication doses, and even surgical techniques. Once again, this is a small list of physiological differences meant to demonstrate the importance of further research and discussion with a qualified veterinarian regarding appropriate care for mule residents. Let's look at a few of these physiological differences mules have from horses. In this case, the following are also true of donkey residents though this may be to a different degree.

- Gut motility
- Water compartmentalization and conservation
- Metabolism
- Hemostasis system

Gut Motility

Mules (and donkeys) have slower gut motility. This means that it takes longer for food to work its way through their digestive symptoms. Their guts can digest fiber better than those of horses. Basically, they can do more with less. It is important to remember this when developing an appropriate nutritional plan for mule residents. Failing to consider this difference in physiology could result in mule residents gaining unnecessary weight.

Water Compartmentalization And Conservation

The donkey, and to a lesser extent the mule, is highly efficient in water compartmentalization and conservation; it is reported that they can lose 20% to 30% of body weight and recover faster once fluid is provided. Plasma volume is maintained even with 20% dehydration. Under normal conditions, they have a lower urinary output than horses when water is unrestricted.

Metabolism

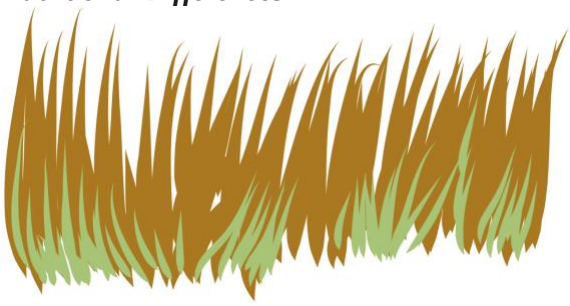
Mules have a faster metabolism than horses. This, and the fact they also have higher cellular water content, can result in a need for significant differences in medication needs. Generally speaking, mules take the same medications as horses. However, sometimes they require up to 50% MORE in an initial sedation dose before administering anesthesia! The half-life of a medication can be shorter in mules than in horses, requiring more frequent dosing of certain medications.

It is vital you have a veterinarian that is experienced in caring for mules or has extensive equine experience and expert knowledge of mule physiology and how this affects the dosages for various medications. Failing to have this knowledge and dosing certain medications as one would a horse resident could have serious consequences for both the mule resident and caregivers and vets working with them. NEVER assume dosages of medications. Always refer to an experienced veterinarian.

Hematological Differences

There are several variations between blood characteristics in mules and horses and donkeys. White blood cell count is significantly lower in mules than in horses. However, mules are generally reported to be “hardier” than horses. How can that be? One theory is that mules may have larger white blood cells. There are a number of other hematological differences that include red blood cell counts, hematocrit values, lymphocyte and monocyte count differences and more. As you can imagine, if mules are diagnosed using typical horse hematological baseline values, misdiagnosis can happen.

Nutritional Differences



While donkeys, horses, and zebras share a common ancestor, the species Equus divided long ago. This eventually led to the modern horses and donkeys we know and care for today.

Donkeys evolved in arid, inhospitable regions, resulting in their ability to thrive on diets a horse simply could not. They have an efficient digestive system, allowing them to digest rough, fibrous plant matter and eat more shrubs and tree matter with low nutritional value. They digest food

more slowly than horses, allowing them to absorb more nutrients from this poorer-quality plant matter. A pasture where a horse would thrive is a pasture where a donkey might need special attention to ensure their nutritional requirements are met and not exceeded. Remember, donkeys can do more with less and tend to browse more than horses!

Mules tend to have more similar nutritional needs to donkeys than horses. If you were to feed a mule resident the same diet as a horse with the same health, age, size, and so on, you might find the mule resident's nutritional needs are not only met but exceeded! This isn't always the case for young, senior, or ill mule residents. Always work with an experienced veterinarian, as well as an equine nutritionist if possible, to develop healthy diet plans for mule residents.

Pay close attention and take care when introducing mule residents to lush spring pastures. Too much of this tasty, tender grass has been known to cause health issues in equines, ruminants, and camelids. Mules, ponies, and donkeys may be more susceptible to health issues caused by excessive intake of lush spring grasses. This doesn't mean you shouldn't feed mule residents good quality hay, though!

Behavioral Differences

It can be tempting to approach mule residents as you might horse residents, but it is important to understand that there are behavioral differences. These differences will vary between individuals, with some mules displaying more horse-like behaviors and others more donkey-like behaviors. If you care for mule residents but not donkey residents, it can be helpful to learn more about donkeys as it will inform caregivers on appropriate mule care. Understanding resident behavior creates a safer environment and more comfortable interactions between caregivers and individuals. Let's look at a few key differences. Remember, this is just a basic list and doesn't include all possible behavioral differences that exist.

- Stoic, less overt signs of pain
- Prudent nature
- Both donkey and horse fight or flight influences

Stoicism

Mules often lie somewhere in the middle of the Donkey-Horse spectrum in several areas and how they display discomfort and pain is one of them. Mules are generally more likely to show signs of pain than a donkey resident and less than a horse resident might. Because a mule resident might not show indicators of pain and discomfort as quickly as a horse resident, caregivers must understand what is normal for each resident and observe the behavior of mule and donkey residents. If any signs of discomfort or pain are noticed, immediate action should be taken as the issue may be well advanced at that point.

Prudent Nature

Along with donkeys, mules seem to get a bad rap for being stubborn and obstinate in nature. This is a misunderstanding of the species. Donkeys and mules tend to want to understand what is going on in a situation before walking into it. They have strong self-preservation instincts and may balk at the idea of walking somewhere or allowing someone to halter or lead them if they are uncertain of the activity or destination. As caregivers, it is important to be patient with them and recognize when they may be feeling uncertain or concerned about a situation. Then caregivers can work with them slowly, introducing learning opportunities to facilitate communication and understanding. It is also an opportunity to identify possible triggers that can be moved from or changed in the environment before continuing.

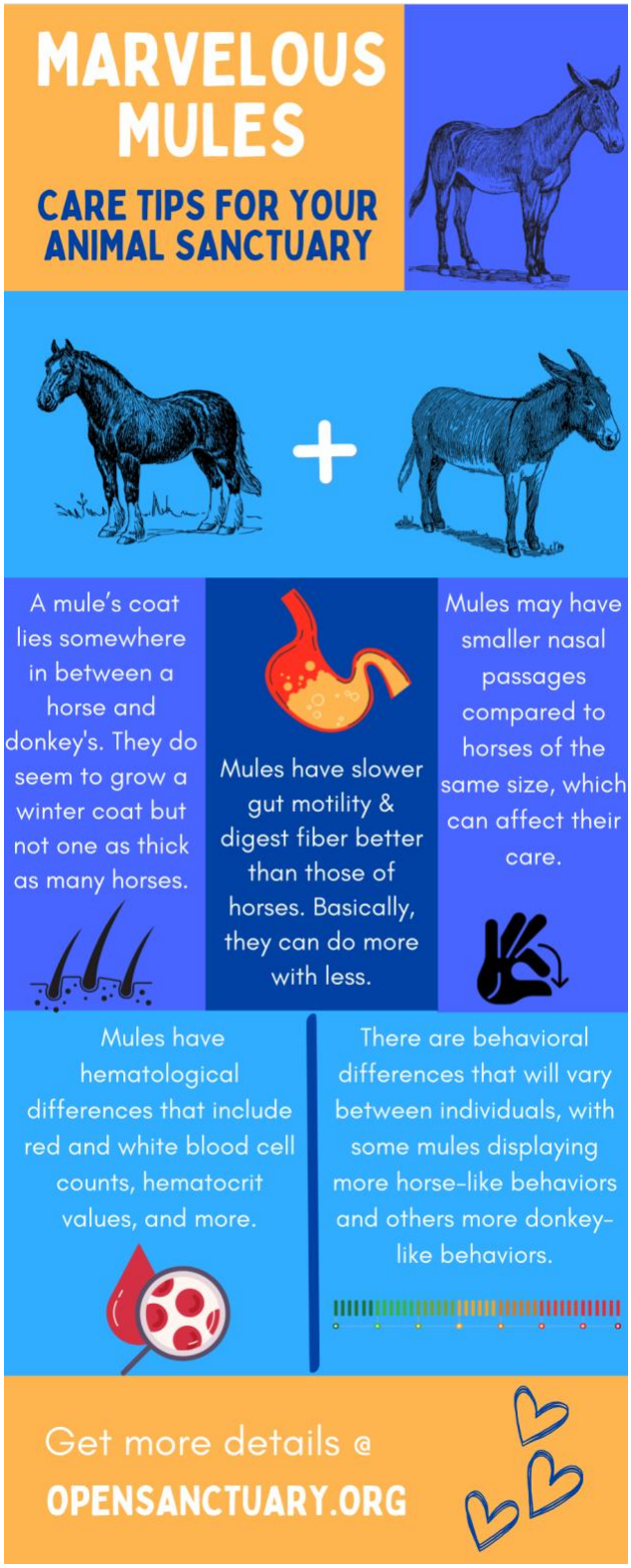
Fight And Flight

Mules often retain both fight (or stand ground in the presence of danger) and flight (remove themselves from danger) of their donkey and horse parents. If a caregiver isn't observing mule residents carefully, especially during health checks, hoof trims, and other potentially stressful situations, they may miss subtle signs of concern or fear and be surprised and possibly injured when a mule resident kicks, rears, or pulls away seemingly "out of nowhere". In reality, they did show signs of discomfort with the situation, just less readily so than many horse residents might. Obviously, all residents are individuals, and you can care for a horse that doesn't show as many signs of discomfort and a more expressive donkey than most. It is best if caregivers spend time getting to know them as individuals while considering their parentage and how that may affect their behaviors.

While this isn't an exhaustive list of differences between mules and horses and donkeys, we hope this has provided you with a foundation to build your knowledge of mules and their care needs. We know you want all the residents you care for to be happy and healthy! Speaking with an experienced veterinarian and care expert is important, especially if you are new to caring for mule residents. However, even if you have some experience with their care, it is always good to discuss any care considerations with an experienced veterinarian.

Infographic

Copy of Marvelous Mules by Amber D Barnes



Sources

Non-Compassionate Source?
If a source includes the (***Non-Compassionate Source***) tag, it means that we do not endorse that particular source's views about animals, even if some of their insights are valuable from a care perspective. See a more detailed explanation here.

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