



LET'S TALK ABOUT

WOBBLY HEDGEHOG SYNDROME (WHS)- ALTERNATIVE DIAGNOSIS

AN APH CARE GUIDE

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My hedgehog is wobbling, what could be the cause? Wobbly hedgehog Syndrome is a typical response to this often posed question, a popular diagnosis since the mid 1990s. However, the likelihood of it being WHS in the UK is now pretty slim as several years ago lines that were known WHS descents stopped being bred by ethical breeders, practically eradicating WHS in the UK. Yet mention a wobbly hedgehog and wobbly hog syndrome seems to be a go to diagnosis. What people do not know is that there are plenty of other more common conditions that can cause your hog to be wobbly, which will be explained in this guide.

SO WHAT IS WHS?

Wobbly hedgehog syndrome is a rather unpleasant degenerative neurological disorder that affects hedgehogs specifically. As of right now, there is no cure. Spongy degeneration of the brain and spinal cord is the diagnostic feature of WHS.

The disease is caused by a condition called progressive multifocal leukoencephalopathy, which is similar to the brain lesions seen in human AIDS patients whose brains have been affected by the HIV virus. At its core, WHS has a lot in common with multiple sclerosis that presents in humans. However, the exact cause of wobbly hedgehog syndrome is not clear. There are some theories that it might be linked to genetics but nothing definitive has been proven yet.

Another theory about the potential cause of wobbly hedgehog syndrome is that dietary factors could have an influence. This is partly due to the fact that certain vitamin supplements can sometimes relieve symptoms temporarily. Again, no firm evidence for this has been found as of yet. It has also been noted that WHS tends to present itself in the age range of 2-3 years old. It is not exclusive to this age range, but the vast majority happen around then.

One of the things you will notice if an African pygmy hedgehog has WHS is they might start to wobble (even when standing still). This is because the disease is attacking the neurological connection between their brain and muscles. WHS often starts with ataxia (loss of full control) or paresis (muscular weakness caused by nerve damage or disease) in the hind legs and can progress to full paralysis of the front and rear legs. At first, the hedgehog might wobble or even drag its legs when trying to stand or move around. It is initially most evident by the "wobble" the hedgehog has when it tries to stand still. It gradually progresses from the hind end and starts to affect the front of the body leading to tetraplegia or quadriplegia (partial or total loss of use of all limbs and torso).

Due to the loss of motor control, their muscles will begin to atrophy or lose mass and strength. This will follow the disease as it works its way to the front of the hedgehog.

While muscle atrophy itself is not as concerning as the other things wobbly hedgehog syndrome eventually impacts, it can be a useful tool for confirming a diagnosis. Since the loss of mobility and motor control will happen first, any lack of progress there combined with atrophy is a further sign that something is wrong. In general, a hedgehog affected by WHS will typically become far less active and not engage with toys or wheels they normally use.

Another early symptom of wobbly hedgehog syndrome is weight loss. This is normally caused by the fact that the affected hedgehog will simply not have the energy or ability to access their food. Even after the diagnosis and adjustments in feeding options, there will still normally be an amount of residual weight loss.

As mentioned earlier, there is no current treatment or cure for WHS. An affected hedgehog is expected to pass away within 18-24 months after the onset of clinical signs. During that time, supportive care can help to minimize the challenges the hedgehog is experiencing, including using towels to help keep your hedgehog upright, making food and water dishes more accessible, and washing your hedgehog if he/she becomes soiled. As the disease progresses, the hedgehog's quality of life needs to be considered and euthanasia may be the only humane option.

WHS SYMPTOMS

- Falling over
- Muscle weakness
- Difficulty walking
- Wobbling when standing still
- Paralysis
- Seizures
- Head tilt
- Circling
- Weight loss
- Aggression/behavioural changes
- Urine retention
- Intestinal stasis
- Difficulty swallowing.

The only way to definitely diagnosis WHS is through a necropsy once a hedgehog has passed away. A biopsy of the brain tissue can be analyzed and special stains can be used to look for the lesions that wobbly hedgehog syndrome causes. By looking at the spinal cord and tissue in the central nervous system a vet can give you a conclusive diagnosis of WHS. Any known WHS diagnosis should be reported back to the original breeder so that they can stop breeding those lines and ensure that those hogs are used as "pets only".

WHAT COULD BE CAUSING MY HEDGEHOG TO WOBBLE?

With all the talk about WHS, it is easy to jump to the conclusion that a hedgehog must be afflicted with WHS if it has a hard time walking, particularly if this is progressive. There are, however, other conditions that can mimic the symptoms of WHS so it is important to consult with a veterinarian immediately, to avoid losing precious time for treatable disorders. Once your vet has ruled everything else out, they will be able to help you move forward with a course of action for treatment and comfort care.

All of the following can look like wobbly hedgehog syndrome initially:

- Hibernation attempts
- Injury
- Tumours

- Bacterial and fungal problems
- Stroke
- Inner ear infection
- Nutritional deficiencies
- Dehydration
- Old age
- Other neurological diseases

Hibernation is probably the most frequent cause of wobbliness in hedgehogs. There may be mild wobbliness or the hedgehog might not be moving at all. Hibernation is not safe for hedgehogs of African origins and they should not be allowed to hibernate. A hedgehog that is trying to hibernate is often cool to the touch. Onset is often rapid, although symptoms of mild wobbliness and lack of appetite can drag on for quite some time if a hedgehog is kept on the brink of hibernation. Hibernation can generally be reversed within a few hours by slowing warming up the hedgehog. Holding the hedgehog under your shirt, skin to skin contact is the best method to use for hibernation attempts. (see Harry's Hibernation Tips Album for more in depth help)

Injury is another frequent cause of wobbliness. Hedgehogs can break legs or even slip disks. X-ray or ultrasound can be used to quickly determine whether an internal injury appears to contribute to the symptoms. Hedgehogs can develop problems with excessive bone calcification, leading to progressive wobbliness. This can also be diagnosed with ultrasound or x-ray. External injury, such as overgrown nails that have curved into the pad of the foot or hairs wrapped around a leg, can also cause a hedgehog to look wobbly so you should visually inspect for these types of problems.

Tumours can create problems with balance and locomotion. These can very strongly mimic WHS. Tumours of the abdomen or brain can create progressive difficulty with movement. These kinds of problems can sometimes be diagnosed by ultrasound or exploratory surgery and can sometimes be treated successfully by early detection and removal of the tumour.

Bacterial and fungal problems of the skin have been reported to cause a wobbly appearance in afflicted hedgehogs. Hedgehogs with these types of problems have a noxious odor in addition to seeming wobbly. At least one case of a hedgehog with allergic dermatitis that gave the appearance of wobbliness has been reported.

Inner ear infections can cause a hog to exhibit a head tilt or to be circling to one side. Ear infection cause dizziness and a lack of coordination. Please remember not all ear infections have discharge coming out of the ears, especially if the infection is in the early stages.

Strokes do occur in hedgehogs and can give the appearance of WHS. However, onset is rapid and not progressive. Early treatment of a mild stroke can help to reverse some of the damage in many cases, or there may be slow, spontaneous recovery over time.

Dehydration can also cause wobbliness so make sure your hedgehog has access to fresh water and is drinking regularly. A bowl of water should always be available in their enclosure.

Nutritional deficiencies can create a symptom picture that looks like WHS. If you are concerned about dietary issues, consult a knowledgeable veterinarian about how diet can be improved. If nutrition is the issue, you will see improvement with a healthier diet. It is often recommended to experiment with vitamin and nutritional improvements as a way to treat some of the potential symptoms of WHS. The most common course of action is to add or increase the amount of vitamin E that your hedgehog is consuming. This has been linked to temporary improvements for symptoms in a number of hedgehogs. However, it is important to know that the level of efficacy is not predictable and will inevitably fail. Some hedgehogs respond very well to an increase in vitamin E, while others do not see much improvement. After a while though, it will not make a difference to their quality of life. Despite the fact that it is a short-term measure, it is 100% worth trying. Whatever needs to be done to provide some extra comfort to a hedgehog should be done. Always talk to your vet before introducing a vitamin E supplement into your hedgehog's diet so they can recommend the most suitable one based on your hedgehog's specific needs/weight etc.

Sadly, like humans, as hedgehogs age they get a number of aches and pains. Hedgehogs are prone to arthritis and this can cause them to wobble and be slightly unsteady on their feet. Older hogs also prefer a warmer enclosure, so increasing the temperature of their enclosure a couple of degrees can help with that "wobble".

So, in conclusion, before you jump on the WHS band wagon please consider the above options that could be contributing to your hedgehog's wobble. If in doubt get to an exotic vet asap for a proper diagnosis.

Caption: A normal Hedgehog side sleeping. B. A wobbly affected hedgehog.

