HILLS
Veterinary Centre

Spring Newsletter 2016

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Opening Hours

Monday - Friday
8.00am - 8.00pm

Saturday
9.00am - 4.00pm

Sunday
10.00am - 1.00pm

Public Holidays
Closed

Halloween Animals

Given Halloween is just around the corner and our back page story on bats, we thought we might look at some other Halloween animals historically associated with the dark arts.

Black Cats

Cats were long considered sacred in ancient Egyptian and Roman times and in the former case killing one was a capital offence. In the 17th century black cats became associated with witchcraft and were allegedly able to sense spirits. In Britain and Japan black cats are considered lucky, where as in the USA and much of Europe they are considered a bad luck omen.

Ravens

Ravens are primarily scavengers so often found around corpses. This has not helped their reputation at all. They were believed to carry messages for witches, as well as acting as an all seeing lookout.

Wolves

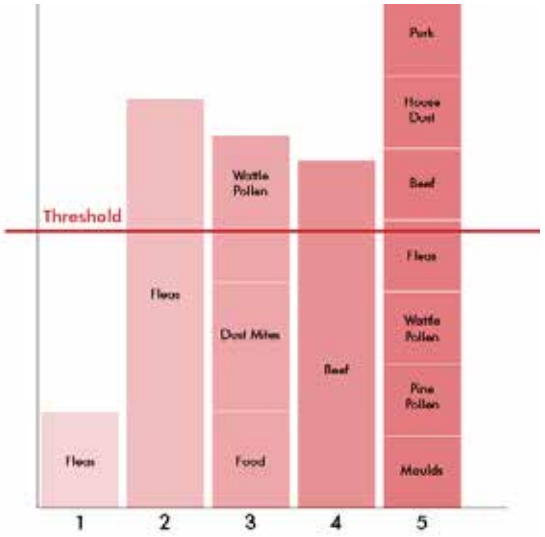
The alleged potential for people to turn into wolves on a full moon, has made them popular at Halloween but less so in other walks of life!

A new way to stop pets scratching!

In Australia one in four dogs and slightly less cats, suffer from allergic skin disease. Clinical signs vary from mild and intermittent symptoms that you may not even notice, to severe and even life threatening disease.

Animals can be allergic to allergens from a range of sources including insect bites, food and airborne agents such as dust, dust mites and pollens. Most animals will be affected by allergens from a number of different sources as the illustration below demonstrates. In affected animals these allergens stimulate special cells in the skin called mast cells to release histamine. The histamine causes inflammation which causes itching. In people histamine causes itching directly so by using antihistamines we can act before the skin becomes inflamed.

In this diagram the threshold represent the point at which histamine is released in the skin, and initiates the itch response. As you can see dog 5 is allergic to numerous allergens: in this example any 4 of the 7 will make her itchy. This creates very complex patterns that are hard to diagnose. Dogs two and four have single allergies so we can work through these problems and possibly cure the disease.



If it is impractical, or impossible to avoid the allergens your pet is exposed to then we need to treat the symptoms of your pet's disease.

However the corner stone of treatment for the past decades has been cortisone. Cortisone is a drug produced naturally by the body in times of stress. Corticosteroids shut off non-essential functions to allow for crisis management (there is no point trying to heal a sore finger, if you are about to be eaten by a lion. Run now. Deal with the sore finger later). As part of this function it minimizes inflammatory responses, and in high doses can shut down the immune system completely. Cortisone is very effective at controlling the symptoms of allergic skin disease. However due to it's far reaching effects it can also affect other parts of the body. In the short term it can cause increased appetite, thirst and sometimes behavioural change. All these signs stop as soon as the medication is withdrawn. Chronic medium to high dose use can cause more serious and diverse side effects such as gastric ulcers, liver disease, and diabetes. That said these are incredibly useful medications that will have a central role in veterinary medicine for the foreseeable future.

A new therapyh option has just emerged for teh treatment of allergic skin disease. A new family of drugs called Janus kinase inhibitors (JAKi's) are now available in Australia. Unlike cortisone with its far reaching effects, JAKi's are very specific and have a very narrow spectrum of activity. That means they are only useful for a very limited range of disease conditions, but cause very few side effects. In effect they stop the itch reaction within the skin. They are not anti- inflammatory but simply stop the desire to itch and break the allergy cycle before secondary problems arise.

Research overseas has shown no significant side effects after years of continual use. Dogs that have relied on ongoing cortisone for allergy control should consider a change to this new form of medication, often experiencing a dramatic improvement in their quality of life. JAKi's can also be used for short term allergy control and are good for short or long term therapies.

If you think your pet may benefit from this sort of medication please give us a ring and we can discuss if this sort of treatment may be of value to your pet.
JAKi's are only registered for use in dogs at this time, although there is some limited information that they may help some cats. Overall they appear not to work as well for cats, but may warrant trial therapy in cats with severe disease, where other treatments are not working well.

Bats and echolocation

Bats are not blind; in fact they can see almost as well as humans. However as they hunt in the dark they use a remarkable high frequency system called echolocation to locate prey and avoid obstacles.
Echolocation works in a similar way to sonar. Bats make calls as they fly and listen to the returning echoes to build up a sonic map of their surroundings. The bat can tell how far away something is by how long it takes the sounds to return to them.

In terms of loudness, bats emit calls as high as 120 dB, which is louder than a smoke detector 10 cm from your ear.

For bats to listen to the echoes of their original emissions and not be temporarily deafened by the intensity of their own calls, the middle ear muscle (called the stapedius) contracts to separate the three bones there (the malleus, incus and stapes, or hammer, anvil and stirrup) and reduce the hearing sensitivity. This contraction occurs about 6 milliseconds (ms) before the larynx muscles begin to contract. The middle ear muscle relaxes 2 to 8 ms later. At this point, the ear is ready to receive the echo of an insect one meter away, which takes only 6 ms. To put that in perspective the quickest movement our eye can register is about 100ms.

Some visually impaired people have developed a similar system for navigating around their environment. This occurs as parts of the brain that would have been used for sight, are 'rewired' to allow echolocation to develop.

Kittis hog nosed bat is the worlds smallest bat (an d possibly smallest mammal) at about 3cm long and weighing about 2g.

The Golden-capped fruit bat is one of the largest, bats with a wing span up to 1.8m and weighing up to 1.2 kg.

Bats are the only flying mammals.

About 20% or all mammal species are bats (90-1200 species), second only to rodents.

Bats can live for up to 20 years.

Vampire legend existed for hundreds of years before vampire bats were discovered; the bats being named because of the legend.