

SYNCOPE (FAINTING)

Syncope is the term for a sudden brief loss of consciousness due to lack of blood flow to the brain. This results in collapse, which may last from seconds to minutes and is usually followed by a rapid recovery. There are many different causes, hence a number of tests are used to try and identify the underlying problem. However, the cause is not always found, and it is important to remember that in human medicine as many as 40% of cases remain undiagnosed despite extensive hospital investigation.

Signs you may see

- Sudden weakness and collapse with loss of consciousness, usually at exercise or after sudden excitement.
- Your pet may cry out or look very distant just beforehand.
- Sometimes patients may become very rigid following collapse, which can appear like a seizure (fit).
- Urination or defecation occasionally occur.



Common cardiac investigations for syncope

A healthy heart is essential for maintaining blood pressure in the circulation, hence the heart is the starting point for investigation. The following tests can be useful:

- **Blood pressure** measurement.
- A **cardiac ultrasound scan (echocardiography)** provides information about the structure and function of the heart. Heart muscle diseases such as dilated cardiomyopathy (DCM) can weaken the heart, causing it to enlarge and reducing the ability to pump blood. This is most common in large breeds such as Dobermans and Boxers. Degenerative valve disease can cause valves to leak, resulting in a build up of pressure in the heart and lungs which may result in syncope. This is especially common in small breeds of dog such as Cavalier King Charles Spaniels. Rarely, growths can be found within the heart which obstruct blood flow.
- An **ECG** records the electrical activity of the heart. It is a useful screen for abnormal rhythms which may interrupt normal blood supply to the brain. Abnormally fast heart rates (tachyarrhythmias) mean the heart cannot fill with blood fast enough to pump properly. Very slow heart rates (bradyarrhythmias) mean the heart cannot respond appropriately to the demands of exercise or excitement.
- We may fit a **24-hour ambulatory ECG (Holter monitor)** to see how your pet's heart is beating over a longer period of time. We encourage you to exercise your pet as normal, and keep a diary so we can see what happened, especially if a collapse episode occurs. You will normally need to return to the hospital the next day to have this removed.
- **Chest radiographs (X-rays)** are sometimes needed to look at the overall size and shape of the heart, and to evaluate the lungs and other structures within the chest.
- **Blood tests** are used as a general screen for disease and also to specifically evaluate the heart further.

Neurocardiogenic (vasovagal) syncope

Syncope does not always mean there is a serious heart problem underlying. In some cases the heart can be very sensitive to changes in blood pressure following excitement, which stimulates a reflex slowing of the heart and dropping of blood pressure. This is called neurocardiogenic (or vasovagal) syncope and is most common in Boxer dogs. The drop in heart rate is often accompanied by vasodilation (opening of superficial blood vessels to reduce resistance to blood flow) which causes a profound drop in blood pressure.

Non-cardiac syncope

In cases where cardiac investigations do not identify a problem, further tests may be needed:

- A neurological examination can be performed to test the function of the brain and spinal cord. In cases where seizures are suspected rather than true syncope then we may recommend referral to a neurologist. MRI scans are useful to look more closely at the brain.
- An abdominal ultrasound scan may be useful to assess other organs for evidence of disease which may be having a knock-on effect on the heart and blood pressure.
- Further blood tests

Sometimes certain events can be a trigger for syncope, such as coughing, or occasionally urination or defecation. These problems are more common in “brachycephalic” breeds (those where breeding has resulted in a shortened nose and upper jaw such as Boxers, Bulldogs and Pugs).

Treatment of syncope

There is no specific treatment for syncope since it is so dependant on the underlying cause. If cardiac disease is present then treatment will be introduced to help the heart to perform as normally as possible. Cases of neurocardiogenic syncope can often be helped with drug treatment or pacemaker implantation, although this is not curative in all cases.

What can I do?

If your pet suffers a collapse episode then a few simple checks can help us to find the cause:

- Did the episode occur at exercise or during sleep/resting? Have you noticed a trigger?
- Does your pet remain awake or do they truly lose consciousness?
- What colour are the tongue and gums during collapse e.g. normal pink, pale or blue-ish?
- Can you feel a heart beat (on the chest wall behind the elbow) during collapse, and if so is it unusually fast or slow?
- How quickly does your pet recover?

Further Information

Not all sources of information (especially on the internet) are reliable. We would recommend the following website for information about different aspects of syncope:

<http://www.petplace.com/dogs/syncope-in-dogs/page1.aspx>