

Pulmonic Stenosis

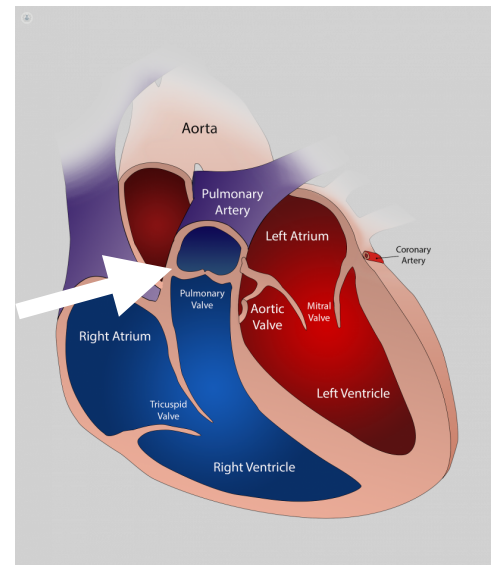
The right heart

Blood leaves the right ventricle (bottom right chamber of the heart) and travels to the lungs via the pulmonary artery, to pick up oxygen. The pulmonary valve sits between the right ventricle and pulmonary artery: its role is to allow blood through to the lungs and then close, preventing backwards flow of blood.

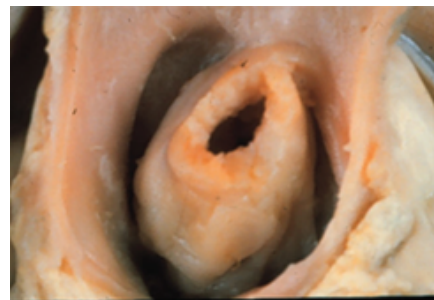
What is Pulmonic Stenosis?

Pulmonic stenosis is a disease of the pulmonary valve. The valve is formed fused together, sometimes with thicker 'leaflets', which means the space in which blood then has to travel through is narrower. This makes the right ventricle pump harder in order to push blood through the pulmonary artery.

Pulmonic stenosis is a congenital defect, meaning your pet was born with it and there was no way to prevent it happening.



Normal valve



Thickened valve

What are the signs of Pulmonic Stenosis?

Usually the first sign is a heart murmur heard by your vet during an examination, though they can be hard to detect sometimes, meaning they don't get picked up until later on.

If your pet has a milder form of the disease, there may be no signs at all. In more severe cases, the right ventricle (pumping chamber) has to work harder and thickens as a result. This can lead to exercise intolerance, weakness or even collapse (syncope, or fainting). It can also cause irregular heart rhythms. In very severe or longstanding cases, the right ventricle's ability to pump blood reduces, causing congestion of the vessels surrounding the heart resulting in right-sided heart failure and fluid build-up within the abdomen (ascites).

Some breeds are more commonly affected, these include Boxers and Bulldogs, but we can see it in any breed of dog or cat.

How is Pulmonic Stenosis diagnosed?

If your vet has heard a murmur and are suspicious of pulmonic stenosis, they are likely to refer you to a cardiologist for further investigation.

Your pet will need an echocardiogram (heart scan) which is a safe and non-invasive ultrasound scan, in order to diagnose pulmonic stenosis. During the scan, the heart will also be checked for any other defects. At this stage, the severity of the stenosis will be assessed in order to decide upon the best treatment plan.

How is Pulmonic Stenosis treated?

Pulmonic stenosis is categorised as mild, moderate or severe. Treatment depends on the severity of the disease, if there are any other abnormalities, and if your pet is showing any clinical signs.

Mild Stenosis

In mild cases, usually no treatment is required. However, follow-up heart scans will be recommended to monitor your pet for any progression of the disease. This is especially important in young animals as the disease can progress rapidly as they grow.

Moderate Stenosis

In moderate cases we sometimes start a medication known as a beta-blocker. This helps to support heart function and reduce the frequency, or to try prevent, abnormal heart rhythms that can be associated with pulmonic stenosis. We will also recommend follow-up heart scans to monitor for any progression.

Severe Stenosis

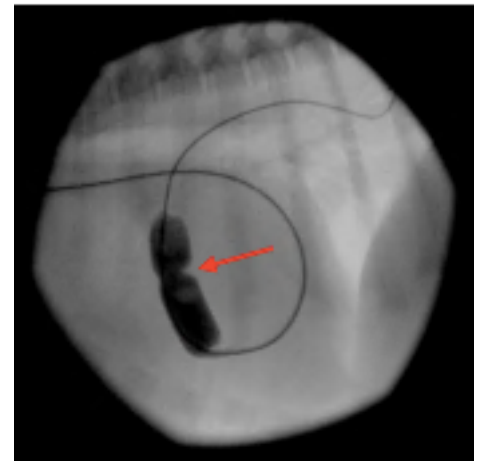
If the stenosis is categorised as severe then your pet will need to start beta-blocker medication and if they are a suitable candidate, we will recommend surgical correction known as Balloon Valvuloplasty.

What is Balloon Valvuloplasty?

At HeartVets, we are one of the few centres in the UK to perform this type of surgical procedure.

Balloon Valvuloplasty involves inserting a catheter through the pulmonic valve, and inflating a balloon attached to the catheter, in order to stretch open the narrowed valve (picture on the right).

The procedure is carried out using a minimally invasive technique, meaning no open-chest surgery. Instead, the catheter is passed through a vein in the neck to gain access to the heart via the blood vessels (“key-hole surgery”).



If you would like more information about the procedure, please go to our information sheet page on our website using the QR code.

What can I do if my pet has Pulmonic Stenosis?

Regularly monitoring your pet for breathlessness, exercise intolerance, collapse/weakness or enlargement of their abdomen is key. Alongside this, taking your pet for regular checks at the vets and following the Cardiologist's advice about treatment and giving medications as directed is important.

There is no need to change their lifestyle, however we would recommend preventing any exercise that may overexert your pet, like swimming, ball chasing or intense physical activity. There is no specific diet you need to feed your pet if they have pulmonic stenosis.

What is the prognosis of Pulmonic Stenosis?

The prognosis depends on the severity of the stenosis and if/how quickly the disease progresses. It can be scary and confusing to find out your beloved pet has a heart defect, please do not hesitate to contact our team if you have any questions.