

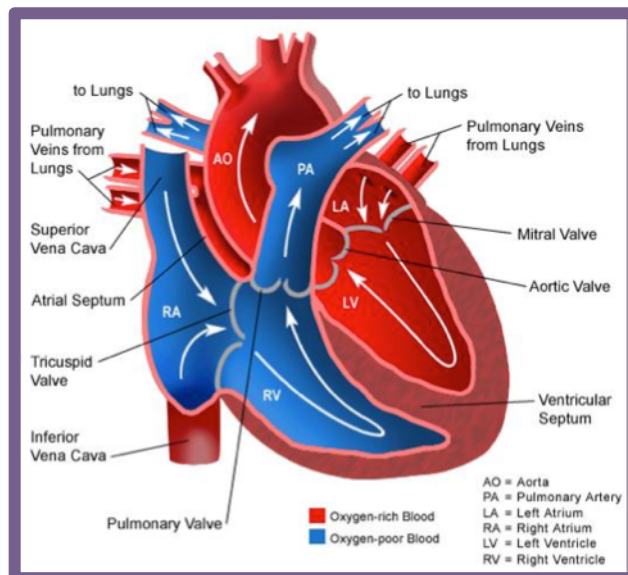
### Patent Ductus Arteriosus

Your pet has been diagnosed with a Patent Ductus Arteriosus (PDA). The patent ductus is a vessel that is present in fetal life so that blood can bypass the yet functioning lungs. Once exposed to oxygen after birth, this vessel should close on its own. However, in your pet, this did not happen.

In order to understand how this disease may affect your pet, it is important to understand normal circulation in the heart. Blood drains from the body into the right collecting chamber (called "atrium") where it passes through the tricuspid valve and into the right pumping chamber (called "ventricle"). From here, blood is pumped into the pulmonary artery and subsequently to the lungs where it picks up oxygen. The oxygenated blood then drains passively into the left atrium, through the mitral valve, and into the left ventricle. The left ventricle then pumps the blood through the aorta and back to the body.

In your pet's case, the PDA (open vessel) causes a portion of the blood from the aorta to shunt to the pulmonary artery through the lungs and back to the left side of the heart. This causes over-circulation of the lungs and left heart. This over-circulation causes the left heart to dilate and, overtime, increases the pressure in the left heart. This increased pressure in the pulmonary veins (the vessels that drain into the left heart from the lungs) eventually causes fluid to exude into the lungs which is a condition called congestive heart failure. Symptoms of congestive heart failure include difficulty breathing, coughing, and exercise intolerance. Untreated, it is fatal.

The good news is that this condition is repairable with an interventional or surgical procedure. If repair occurs early in life and is successful, your pet will have a normal life expectancy and quality of life. Most pets with this condition are candidates for interventional occlusion of the defect. This consists of anesthetizing your pet and placing a catheter into the femoral artery and deploying a device in the defect. This device then prohibits blood from crossing the defect. If your pet is too small or the defect is of a shape that is not amendable to interventional repair, surgical closure can be performed. Occasionally, with a PDA, the pressures in the lungs are high which may prohibit closure of the defect. If this condition is present in your pet, we will discuss therapeutic measures that can be performed.



*Flow of blood through a normal heart.*