

What you should know about heart failure (HF) in dogs



The two most common causes of HF in dogs are:

• Mitral Valve Degeneration (MVD)

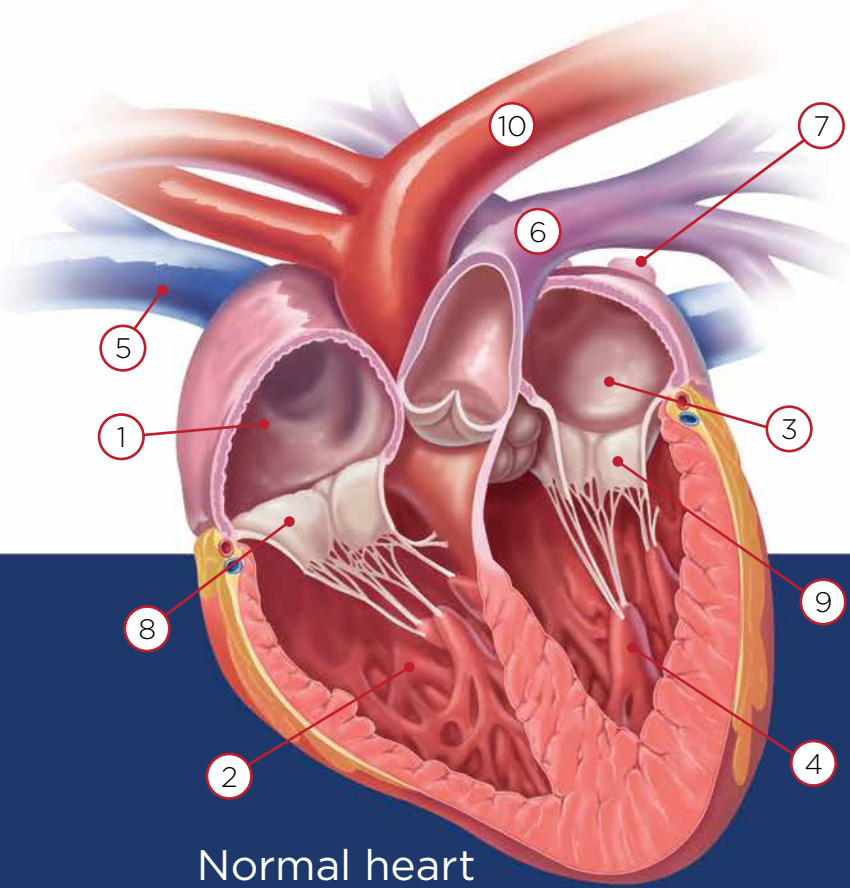
- Degenerative changes to the mitral +/- tricuspid valve causes valve thickening and prevents the valve from closing properly. The leaky valve allows blood to be pumped backwards and the heart enlarges.
- Most common in older, small-breed dogs.

• Dilated cardiomyopathy (DCM)

- Primary disease of the heart muscle itself in which the muscular walls of the ventricle become weakened, decreasing its ability to effectively pump. The weak heart enlarges, which further weakens it.
- More common in middle-aged to older medium to large breed dogs.

• What is heart failure (HF)?

- When the heart becomes enlarged from either MVD or DCM, fluid may back up into the lungs and cause left HF. When the right heart is enlarged, fluid may back up inside the chest & abdomen to cause right HF.

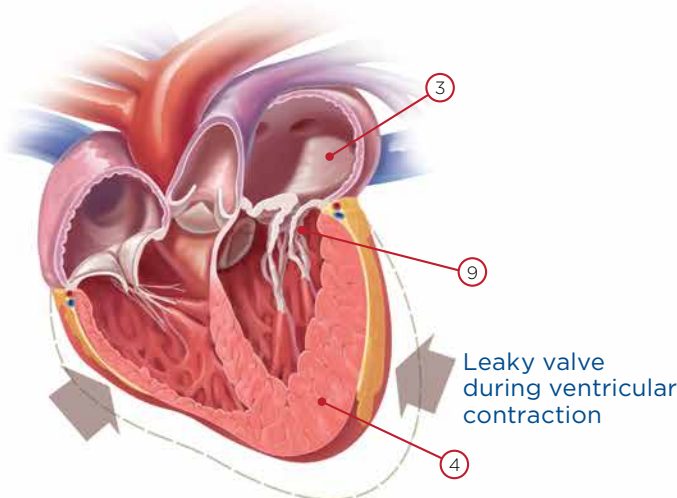


Normal heart

Key

- | | |
|--------------------|--|
| 1 Right atrium | 7 Pulmonary veins |
| 2 Right ventricle | 8 Right atrioventricular (tricuspid) valve |
| 3 Left atrium | 9 Left atrioventricular (mitral) valve |
| 4 Left ventricle | 10 Aorta |
| 5 Vena cava | |
| 6 Pulmonary artery | |

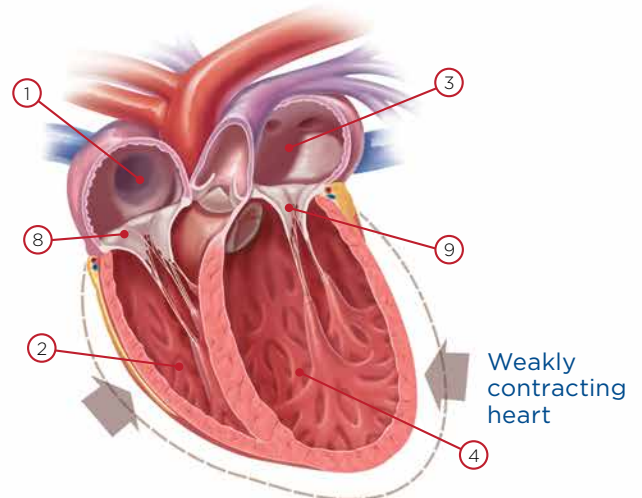
Mitral Valve Degeneration (MVD)



Leaky valve during ventricular contraction

- 9 The mitral valve becomes thickened, prolapses, and does not completely close
- 3 When the left ventricle contracts during systole, blood leaks backwards from the left ventricle to the left atrium, which enlarges due to excessive blood volume
- 4 The left ventricle enlarges due to excessive blood volume

Dilated cardiomyopathy (DCM)



Weakly contracting heart

- 1 2 3 4 The left ventricle (+/- right ventricle) weakens and cannot pump properly, causing the ventricle and atrium to enlarge
- 8 9 The enlarged ventricle pulls the valve leaflets apart, making blood leak back into the atrium