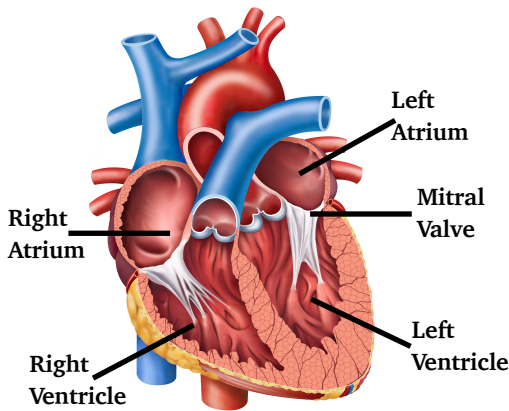


Atrial Fibrillation

QUICK FACTS:

- ♥ Atrial fibrillation (AF) is an arrhythmia - it causes an irregular heart beat
- ♥ Giant breed dogs such as Irish Wolfhounds and Great Danes are predisposed to AF
- ♥ Usually AF occurs secondary to significant heart disease in dogs and cats
- ♥ 50% of dogs with dilated cardiomyopathy will also have atrial fibrillation
- ♥ Medications such as diltiazem and digoxin are the primary treatments to slow down the heart rate in animals with AF
- ♥ Signs of AF include weakness, collapse/fainting, decreased activity level, poor appetite
- ♥ The presence of AF is a poor prognostic indicator and will shorten life expectancy

Atrial Fibrillation (“AFib” or AF) is an irregular heart beat (arrhythmia). Electrical signals in the heart tell the heart muscle when to contract. Normally, a region in the right atrium (“SA node”) sends an electrical signal to start each heart beat, and this signal travels through the right and left atrium, and then down to the ventricles in a coordinated pattern. With AF, the electrical activity in the atria becomes erratic, uncoordinated and can cause rapid heart rates.

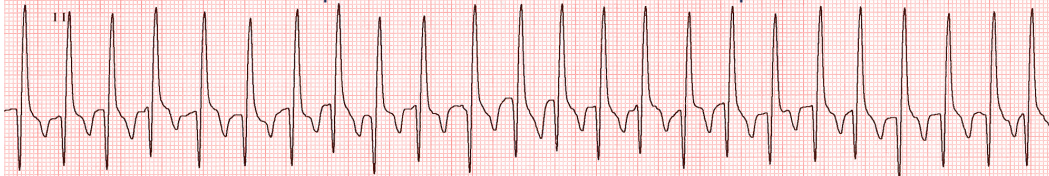


AF is usually associated with stretching/enlargement of the heart due to various underlying heart conditions such as dilated cardiomyopathy or myxomatous valve disease in dogs. AF is rare in cats, but can occur with severe heart disease. Some large breed dogs (e.g. Irish Wolfhound, Great Dane) may develop “lone AF” without underlying heart disease.

Physical examination will detect an irregular heart rhythm (usually very erratic, “irregularly irregular”). An **echocardiogram** (ultrasound of the heart) is a non-invasive test that allows us to look inside the heart and is recommended for patients with AF to determine if there is underlying heart disease. Other tests that may be indicated with AF:

- ◆ Chest X-ray - to assess overall heart size and the lungs
- ◆ Electrocardiogram (ECG) or Holter - this is the only way to accurately assess the heart rate in patients with AF
- ◆ Blood pressure
- ◆ Blood tests such as thyroid panel, taurine, troponin to look for other diseases that can affect the heart, and indirectly cause AF

ECG example of AF - Heart Rate ~ 270 beats per minute



Treatment is aimed at slowing the heart rate with AF. Attempts to convert a patient back to a normal (“sinus”) heart rhythm are usually unsuccessful if there is underlying heart disease. The combination of diltiazem and digoxin has been shown to provide the best heart rate control with AF in dogs, but other medications such as beta-blockers may also be used in some cases. Signs of congestive heart failure (CHF) often occur with AF, so many patients will also require diuretics such as furosemide, an ACE inhibitor (benazepril/enalapril) and pimobendan