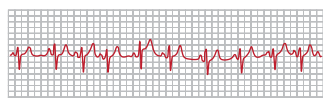


# ECG Abnormalities Chart

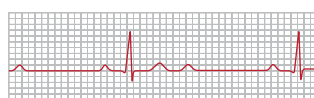
<b>Patient name:</b>	<b>Date:</b>
<b>Patient ID:</b>	<b>Date of birth:</b>

**Symptoms or diagnosis:**

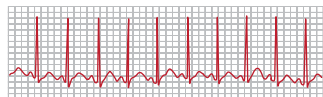
## ECG abnormalities



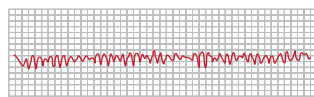
Sinus arrhythmia



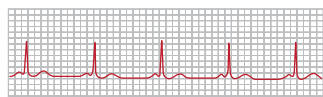
Atrioventricular block



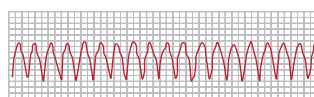
Sinus tachycardia



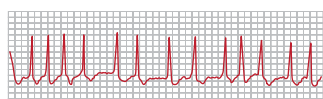
Ventricular fibrillation



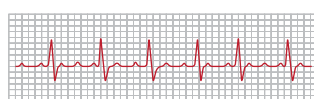
Sinus bradycardia



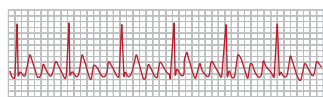
Ventricular tachycardia



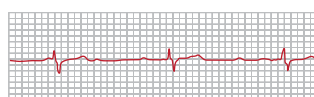
Atrial fibrillation



Second-degree partial block



Atrial flutter



Third-degree partial block

Abnormality	ECG illustration description	Probable causes
<b>Sinus tachycardia</b>	<ul style="list-style-type: none"> <li>The resting heart rate is &gt; 100 bpm in adults or above the normal range in children.</li> <li>P waves are discrete or hidden from the previous T wave.</li> </ul>	Exercise, anxiety, pain, hypoxia, pulmonary embolism, caffeine, beta-agonists, antimuscarinics.
<b>Sinus bradycardia</b>	<ul style="list-style-type: none"> <li>The resting heart rate is slower than 50 bpm.</li> <li>Prominent U waves.</li> </ul>	High vagal tone, during intense emotional stress, Sinus Node Dysfunction (SND), hypothyroidism, hypothermia, hyperkalemia
<b>Atrial fibrillation</b>	<ul style="list-style-type: none"> <li>Absence of P-waves.</li> <li>Has an irregularly irregular ventricular rate.</li> <li>Fibrillatory waves may be present and vary from small to large (fine to coarse).</li> </ul>	Ischaemic heart disease, hypertension, electrolyte disturbance, pulmonary embolus, drugs/alcohol
<b>Atrial flutter</b>	<ul style="list-style-type: none"> <li>Atrial activity is from 250 bpm to 300 bpm.</li> <li>Regular flutter waves give the baseline a saw-tooth appearance.</li> </ul>	Has significant heart disease (predominantly ischemic heart disease)
<b>Atrioventricular block</b>	<ul style="list-style-type: none"> <li><b>First-degree:</b> PR interval is greater than 0.22 seconds.</li> <li><b>Second-degree:</b> Not all P-waves are followed by QRS complexes.</li> <li><b>Third-degree:</b> Independent atrial and ventricular rates. Absence of AV conduction.</li> </ul>	Idiopathic fibrosis, ischemic heart disease, vagal stimulation, structural heart disease, congenital, digoxin, beta blockers
<b>Ventricular fibrillation</b>	<ul style="list-style-type: none"> <li>Ventricular rate of greater than 300 or heart rate anywhere between 150 to 500 per minute.</li> <li>Discreet or no identifiable P waves, QRS complexes, or T waves.</li> </ul>	Cardiac (myocardial infarction, cardiomyopathy, aortic stenosis/dissection, cardiac tamponade), Respiratory (pulmonary embolism, aspiration, sleep apnea, tension pneumothorax), Toxic and metabolic (drugs), Environmental (electrical shocks, sepsis), Neurological (seizure, CVA)
<b>Ventricular tachycardia</b>	<ul style="list-style-type: none"> <li>Uniform, wide QRS complexes</li> <li>Equal to or more than 3 consecutive ventricular beats with rates that are more than 100 beats per minute (around 100 - 250).</li> </ul>	Coronary heart disease, heart failure, cardiomyopathy, valvular disease,

Notes			

Patient's results			
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Abnormality	ECG illustration description and observations	Potential causes	Notes

**References**

ECG and Echo Learning. (n.d.). Clinical ECG interpretation. <https://ecgwaves.com/course/the-ecg-book/>  
 Life in the Fast Lane. (2018). *ECG library • LITFL • ECG library basics*. <https://litfl.com/ecg-library/>