

Understanding a Normal ECG

A step-by-step breakdown of a normal electrocardiogram (ECG) to help you recognize key waveforms and intervals.



What is an ECG?

An electrocardiogram (ECG) is a **graphical recording** of the **heart's electrical activity** over time.

quick

noninvasive

affordable

How it works

By placing **adhesive electrodes** on the skin, an ECG captures electrical impulses from multiple angles, providing a **3D view** of the **conduction system, myocardium, and cardiac structures**.

In a **healthy heart**, the ECG shows **consistent, predictable waveforms** that correspond to normal cardiac function.

In **pathologic conditions**, an ECG can help detect:

Arrhythmias

Ischemia

Inflammation

Other abnormalities



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Key components of a normal ECG

P Wave

Represents **atrial depolarization**; should be smooth and rounded.

PR Interval

Measures time from **atrial to ventricular activation**
(Normal: 0.12–0.20 sec).

QRS Complex

Reflects **ventricular depolarization**; normally narrow (<0.12 sec).

ST Segment

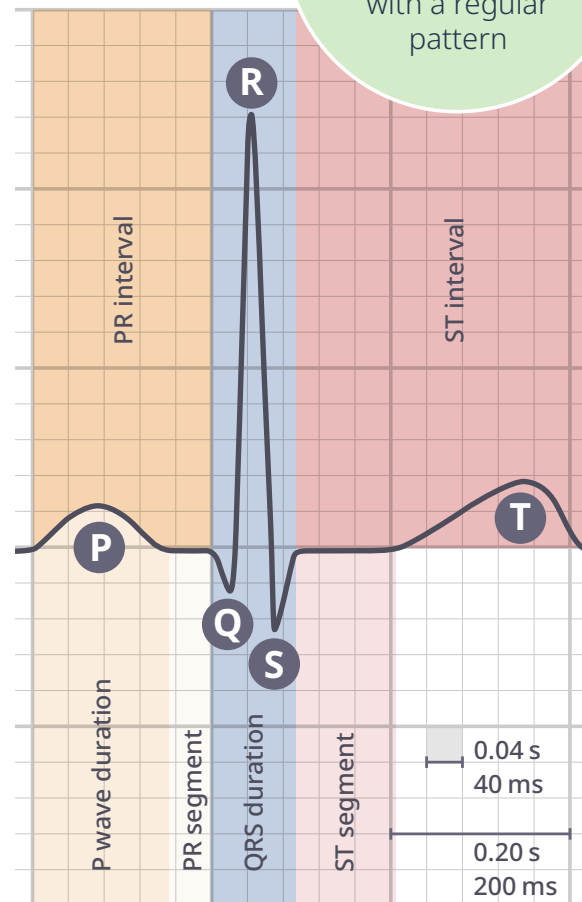
Should be **flat**.

T Wave

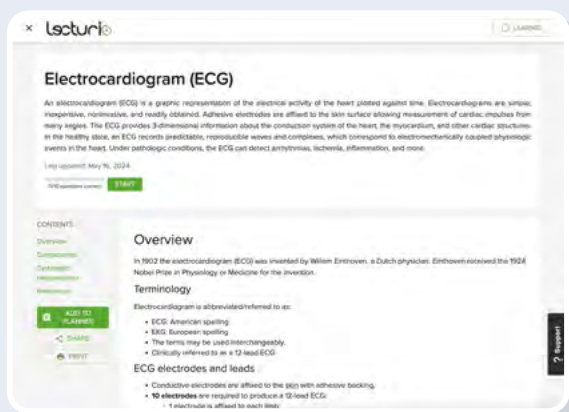
Represents **ventricular repolarization**.

Heart Rate
60–100 bpm

Normal **sinus rhythm**
with a regular
pattern



Mastering normal ECG interpretation is key before recognizing abnormalities.



Want a deeper dive into ECG interpretation?

Click the link to explore the full **Concept Page!**