**History of ECG**

**Evolution of electrocardiography techniques from the time of Willem Einthoven up to our modern time**

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**1893**: In 1893 Willem Einthoven (1860-1927) introduced the term 'electrocardiogram'. In 1895 he described how he used a galvanometer to visualize the electrical activity of the heart. The breakthrough came when Willem Einthoven, working in Leiden, The Netherlands, used the string galvanometer invented by him in 1901, which was much more sensitive than the capillary electrometer that Waller had used. He connected electrodes to a patient and showed the electrical difference between two electrodes on the galvanometer. We still now use the term: Eindhoven's leads. The string galvanometer was the first clinical instrument on the recording of an ECG.

**1905**: Einthoven recorded the first 'telecardiogram' from the hospital to his laboratory 1.5 km away.

**1906**: Einthoven assigned the letters P, Q, R, S and T to the various deflections, and described the electrocardiographic features of a number of cardiovascular disorders. In 1906, Einthoven published the first article in which he described a series of abnormal ECGs: left- and right bundle branch block, left- and right atrial dilatation, the U wave, notching of the QRS complex, ventricular extrasystoles, ventricular bigeminy, atrial flutter and total AV block.

**1924**: He was awarded the Nobel Prize in Medicine for his discovery.

**Modern History**: Though the basic principles of that era are still in use today, there have been many advances in electrocardiography over the years. The instrumentation, for example, has evolved from a cumbersome laboratory apparatus to compact electronic systems that often include computerized interpretation of the electrocardiogram.

**Present Day**: In contrast to the 12 leads of data and the limited anterior or front view of the heart from a traditional EKG, an 80 lead EKG utilizes 80 leads placed on both the front and back of the patient to analyze a 360-degree spatial view of the heart. This new technology may allow the more rapid and accurate detection of STEMI and thereby potentially speed the delivery of care.