

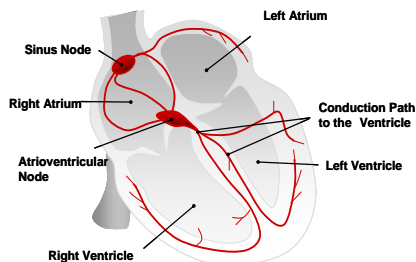
# Interpretation of Electrocardiogram Findings

- A You have no abnormal Electrocardiogram.  
 B You have abnormal Electrocardiogram findings as described in your report, but you do not need an interview with medical staff, further tests or treatment to attend or work in school.  
 C You have abnormal Electrocardiogram findings as described in your report, and you need an interview with medical staff, further tests or follow up to attend or work in school.

If your result is "A" or "B", you have no problem attending or working in school. You will be required to undergo the next periodic health examination and if you have symptoms such as chest pain and pounding heartbeat, please seek medical advice as soon as possible.  
 If you are under the care of a physician, please report the test results to your physician.

## What Does an Electrocardiogram Reveal?

An Electrocardiogram (ECG, EKG) is a medical device used to evaluate the heart rhythm and heart muscle damage. A Holter monitor is used to record ECG tracings continuously for 24 hours or longer to monitor the heart rate during daily activities. An echocardiogram is a test that uses sound waves to measure heart movement and blood flow. It is used to determine the presence of many types of heart disease, such as heart valve disease, congenital heart disease and cardiomegaly.



## What Do the Electrocardiographic Waveforms Represent?

The heart produces a regular pattern of electrical signals initiated by the sinus node, which is located in the roof of the right atrium. The electrical signals are disseminated throughout the heart chambers through the cardiac conduction system, which stimulates the heart to contract and pump blood.

The main components of the cardiac conduction system are the sinus node, atrioventricular node, bundle of His, left and right bundle branches, Purkinje fibers and the ventricles. The electrocardiogram is a recording on the body surface of the electrical activity of the heart showing certain waves called P, Q, R, S and T waves.

### Within Normal Limits 正常範囲内

The electrocardiographic wave form is within normal range for age.

### Sinus Arrhythmia 洞性不整脈

Condition due to disturbances in the impulse discharge from the sinus node. It is usually a benign condition.

### Sinus Bradycardia 洞性徐脈

A rhythm in which fewer than the normal number of impulses arise from the sinus node. It is a condition often seen in elderly adults and trained athletes. Rhythm is not of diagnostic significance unless the rate drops below 45 beats per minute.

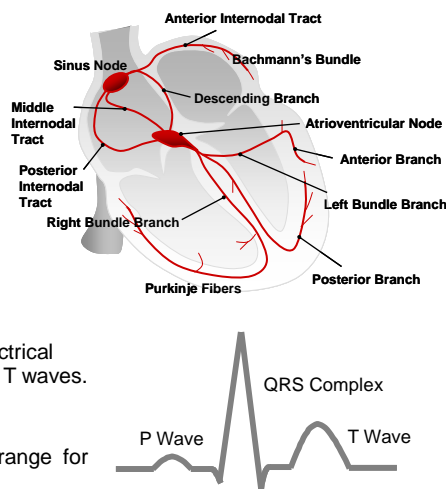
### Sinus Tachycardia 洞性頻脈

A rhythm in which more than the normal number of impulses arise from the sinus node. Rhythm is not of diagnostic significance unless the rate elevates above 130 beats per minute.

### Ectopic Atrial Rhythm, Atrioventricular Junctional Rhythm, Wandering Pacemaker

異所性心房調律, 房室接合部調律, ワンダリングペースメーカー

Terms used in ECG diagnosis that describe conditions in which the impulse formation in the atrium is coming from places other than the sinus node, or a shift in the location of the controlling pacemaker.



They are considered rare conditions that are of no diagnostic significance.

### Premature Supraventricular Contraction, Premature Ventricular Contraction

上室性期外収縮, 心室性期外収縮

Premature contractions of the heart muscles. Further tests are needed when they occur very often or repetitively.

### Supraventricular Tachycardia, Atrial Flutter, Atrial Fibrillation, Ventricular Rhythm

上室性頻拍, 心房粗動, 心房細動, 心室調律

Heart rhythm disorders that require further tests at medical institutions.

### Escape Beat, Atrioventricular Dissociation 補充収縮, 房室解離

Disturbance in the conduction of excitation to the ventricles, which causes heartbeats to occur later than the expected beat when the normal beat has defaulted. They are not considered to be significant per se.

### Artificial Pacemaker Rhythm 人工ペースメーカー

Waveforms seen in patients with artificial pacemakers. Treatment should be continued.

### Sick Sinus Syndrome (Sinus Arrest, Sinoatrial Block), Atrioventricular Block (First, Second or Third Degree (Complete)), Right Bundle Branch Block (Incomplete, Complete), Left Bundle Branch Block, Nonspecific Ventricular Conduction Disturbance

洞不全 (洞停止, 洞房ブロック), 房室ブロック (1度, 2度, 完全) 右脚ブロック (不完全, 完全), 左脚ブロック, 非特異的心室伝導障害

Condition in which there is a defect in the heart's electrical conduction system. Findings vary from insignificant to conditions requiring further tests, depending on the degree and location of the defect.

### Short PR Interval (including LGL Syndrome), WPW Syndrome

PR 短縮 (含 LGL 症候群), WPW 症候群

Pre-excitation syndromes due to an accessory pathway between the atria and the ventricles. Individuals presenting symptoms of paroxysmal tachycardia require further tests.

### Long QT Syndrome, Brugada Syndrome QT 延長, ブルガタ症候群

Conditions characterized by heart rhythm abnormalities which are rarely associated with sudden cardiac death. Individuals with a preceding history of syncope or a family history of sudden cardiac death require further tests.

### Right Atrial Overload, Left Atrial Overload, Right Ventricular Hypertrophy, Left Ventricular Hypertrophy

右房負荷, 左房負荷, 右室肥大, 左室肥大

Indicative of a possible increase in the size and/or volume of the atria and the ventricles. Further tests are required.

### High voltage 高電位差

Seen in conditions in which the heart is dilated or in an abnormal position. It is also seen in individuals with thin chest wall.

### Poor R Progression R 波增高不良

Indicates a diminishment in the progression of the precordial leads. The condition may also be seen in healthy individuals.

### Low Voltage 低電位差

Indicates that the electromotive forces of the heart are low. Besides the pathological factors that are associated, the condition is seen in individuals with a relatively small heart or individuals who are obese.

### Abnormal Q Waves Q 波異常

Abnormal Q waves are a sign of previous myocardial infarction or damage. Further tests are required.

### Myocardial Ischemia 心筋虚血

Condition of insufficient blood flow to the heart, which reduces the heart's oxygen supply. Further tests are required.

### Nonspecific ST-T Changes 非特異性 ST-T 変化

Seen in conditions in which the heart is dilated or ischemic. It is also seen in healthy individuals.

### Right Axis Deviation, Left Axis Deviation, Clockwise Rotation, Counterclockwise Rotation, S1S2S3 Pattern 右軸偏位, 左軸偏位, 時計方向回転, 反時計方向回転, S1S2S3 パターン

Condition in which the electrical axis of the heart is deflected from its normal position. The finding itself is not a risk factor.

### Dextrocardia 右胸心

Condition in which the heart is displaced to the right side of the chest. Treatment is not necessary if there is no associated malformation.