

# Sudden cardiac death

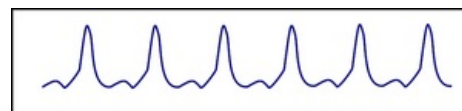
**Sudden cardiac death** (sudden cardiac death) is a natural death from a cardiac cause that occurs within one hour of the onset of symptoms and the time and manner of death is unexpected. Heart disease may or may not be previously known<sup>[1][2]</sup>.

In 85% of cases, NSS occurs as a result of malignant arrhythmia (ventricular fibrillation, ventricular tachycardia)<sup>[3]</sup>.

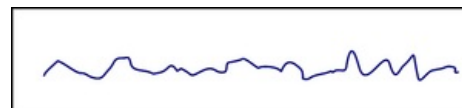
## Causes

Based on ECG analysis of resuscitated patients, NSS is believed to be caused by:

- **ventricular fibrillation** (often preceded by ventricular tachycardia) - no.,
- **electromechanical dissociation**,
- **asystole**.



Ventricular tachycardia - scheme



Ventricular fibrillation - scheme

The most common causes of NSS <sup>[4][5][6]</sup>	
He is sick with structural <u>heart</u> disease	Patients without structural heart disease
CHD (acute ischemia, scar after MI)	Long QT Syndrome
Hypertrophic cardiomyopathy	Wolff-Parkinson-White syndrome
Idiopathic <u>dilated cardiomyopathy</u>	Idiopathic ventricular fibrillation (Brugada syndrome catecholamine-dependent familial polymorphic ventricular tachycardia syndrome?)
Arrhythmogenic right ventricular cardiomyopathy	
<u>Valvular defects</u>	
Inflammatory heart diseases	
<u>Amyloidosis/Sarcoidosis</u>	
Coronary artery spasm	
Congenital heart defects (Tetralogy of Fallot, transposition of great vessels, <u>aortic stenosis</u> , pulmonary vascular obstruction)	
Presence of myocardial bridges	

In the context of malignant arrhythmias, cocaine, antiarrhythmics and hypomagnesemia can have a proarrhythmic effect.

## Treatment

- Cardiopulmonary resuscitation (Basic Life Support, Advanced Cardiac Life Support).
- Treatment of structural heart disease (if present).
- Implantation of an implantable cardioverter-defibrillator (ICD)/catheter ablation of an arrhythmogenic deposit.

## Primary prevention

In high-risk patients, the most effective primary prevention is ICD implantation<sup>[5]</sup>.

## Links

### Related Articles

- Ventricular fibrillation
- Antiarrhythmics

### References

1. PRIORI, SG. Task Force on Sudden Cardiac Death of the European Society of Cardiology. *Eur Heart J*. 22, vol. 16, p. 1374-450, ISSN 1522-9645. PMID: 11482917.
2. MEYERBURG, R. *Braunwald Textbook of Heart Disease*. 6. edition. 2001. ISBN 9781416041078.
3. HUIKURI HEIKKI, V. Sudden death due to cardiac arrhythmias. *N Engl J Med*. 2001, y. 345, vol. 20, p. 1473-

1482, ISSN 1533-4406.

4. ASCHERMANN, Michael. *Cardiology*. 1. edition. Galen, 2004. pp. 1183-1185. ISBN 80-7262-290-0.

5.

6. BRUGADA, P – BRUGADA, J. Right bundle branch block, persistent ST segment elevation and sudden cardiac death: a distinct clinical and electrocardiographic syndrome. A multicenter report. *J Am Coll Cardiol*. 20, vol. 6, p. 1391-6, ISSN 0735-1097. PMID: [1309182](#).

## References

- ASCHERMANN, Michael. *Kardiologie*. 1. edition. Galen, 2004. pp. 1183-1185. ISBN 80-7262-290-0.