

What Causes Sudden Cardiac Arrest in Young People?

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Sudden cardiac arrest is responsible for 65,000 deaths in Germany each year. It is often seen as an issue for the elderly, but it can also occur in younger individuals: each year, it affects 1000 to 2000 people younger than 40 years. Many of these deaths at a young age [are preventable](#).

Sudden cardiac arrest is the term given to death that results from a cardiac cause and occurs within an hour of symptoms being observed. If no witnesses are present, sudden cardiac arrest is present if the person had been in apparently good health 24 hours before cardiac death. Fatality is usually a result of sustained [ventricular fibrillation](#) or sustained [ventricular tachycardia](#) that leads to cardiac arrest.

What should primary care practitioners consider in order to detect at-risk patients in time?

Recognizing Warning Signs

Warning signs that should prompt physicians to consider an increased risk of sudden cardiac arrest include the following:

- Unexplained, brief [fainting](#) episodes that above all occur with stress, physical activity, or loud noises (eg, alarm ringing)
- Seizures without a clear pathologic EEG result (eg, epilepsy)
- Unexplained accidents or car crashes
- [Heart failure](#) or pacemaker dependency before age 50 years

"These are all indications that could point to an underlying heart disease that should be investigated by a medical professional," explained Silke Kauferstein, PhD, head of the Center for Sudden Cardiac Arrest and Familial Arrhythmia Syndrome at the Institute of Forensic Medicine of the University Frankfurt am Main, Germany, in [a podcast](#) by the German Heart Foundation.

Sports Rarely Responsible

Sudden cardiac arrest has numerous causes. Sudden cardiac arrests in a professional sports environment, especially in young, fit soccer players, always attract attention. Yet sports play a less important role in sudden cardiac arrest than is often assumed, even in young individuals.

"The incidence of sudden cardiac arrest is on average 0.7 to 3 per 100,000 sports players from all age groups," said Thomas Voigtländer, MD, chair of the German Heart Foundation, in an interview with *Medscape German Edition*. Men make up 95% of those affected, and 90% of these events occur during recreational sports.

Inherited Disorders

The most significant risk factor for sudden cardiac arrest is age; it is often associated with [coronary heart disease](#). This factor can be significant from as early as age 35 years. Among young individuals, sudden cardiac arrest is often a result of congenital heart diseases, such as [hypertrophic cardiomyopathy](#) or [arrhythmogenic right ventricular cardiomyopathy](#). Diseases such as long QT syndrome and [Brugada syndrome](#) can also lead to sudden cardiac arrest.

Among young sports players who experience sudden cardiac arrest, the cause is often an overlooked hereditary factor. "Cardiac screening is recommended in particular for young, high-performance athletes from around 14 years old," said Voigtländer, who is also a cardiologist and medical director of the Agaplesion Bethanien Hospital in Frankfurt.

Testing of Family

"If sudden cardiac arrest or an unexplained sudden death occurs at a young age in the family, the primary care practitioner must be aware that this could be due to heart diseases that could affect the rest of the family," said Voigtländer.

In these cases, primary care practitioners must connect the other family members to specialist outpatient departments that can test for genetic factors, he added. "Many of these genetic diseases can be treated successfully if they are diagnosed

promptly."

Lack of Knowledge

Kaufenstein, who runs such a specialist outpatient department, said, "Unfortunately, many affected families do not know that they should be tested as well. This lack of knowledge can also lead to fatal consequences for relatives."

For this reason, she believes that it is crucial to provide more information to the general population. Sudden cardiac arrest is often the first sign of an underlying heart disease in young, healthy individuals. "We do see warning signals in our in-depth testing of sudden cardiac arrest cases that have often been overlooked," said Kaufenstein.

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