



Bundesministerium
für Gesundheit



Bundeszentrale
für
gesundheitliche
Aufklärung

Information sheet

Information on lay resuscitation in Germany



**You can save
a life!**

CHECK | CALL | COMPRESS

National Resuscitation Action Group



Dear Reader!

The information sheet 2024 is intended to continue to provide you with a clear and constantly up-to-date abridged version of our printed brochure „How Resuscitation Works“.

More than 10,000 human lives could be saved in Germany every year if resuscitation procedures were started as soon as someone suffered a cardiac arrest. This is because cardiac massage is highly effective, if performed correctly. With its information campaign, the BZgA together with its alliance partners from the National Resuscitation Action Group (NAWIB), aims to help to make sure that all citizens are aware of the necessary resuscitation measures and how to apply them in emergencies. As a medical professional, it is especially important to me to encourage you: Please take action in an emergency!

With lay resuscitation, you cannot do anything wrong – other than not helping.



Dr. Johannes Nießen

Commissioner for establishing the Institute for Prevention and Education in Medicine (BIPAM) and Acting Director of the Federal Centre for Health Education (BZgA)



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Situational analysis

Incidence

- A cardiac arrest outside of a hospital is the third most common cause of death in Germany. The emergency services are called to 120,000 people per year. Resuscitation attempts can be made in 60,000 cases. Only 11 percent of those affected survive (Matthias Fischer et al., 2023)

Definition: In the event of a **cardiac arrest**, the pumping function of the heart and the blood circulation stop for various reasons.
Vital organs are no longer supplied with oxygen.

Social impact, disease burden (DALY - disability-adjusted life year)¹

- A good third of the patients who are resuscitated are of working age. The average age is 70.2 years. Two thirds are male (Matthias Fischer et al., 2023).
- Three out of four people who have survived the first 30 days after being resuscitated are able to work again. On average, this is possible five months after being resuscitated (K. Kragholm et al., 2015).

Development of the disease

- The most common causes (GBE, 2022) cited are circulatory disorders of the cardiac muscle, an acute heart attack and heart failure (M. Fischer et al., 2013), cardiac arrhythmias or heart valve defects (Dominik Schmitt and Gülmisal Güder, 2021).
- Only 20 per cent of patients have a rhythm that can be treated with an electric shock (defibrillation). Only in these cases is the treatment of a cardiac arrest with an additional electric shock (defibrillation) possible and also sensible (M. Fischer et al., 2013; C. Metelmann et al., 2023).

¹ Disability-adjusted life year = Investigation of the disease burden and quantification of health losses with the help of composite measures

Measures

- The brain cells suffer irreparable damage after a cardiac arrest after only three to five minutes without blood flow and die (J. Breck-Woldt et al., 2009). It is necessary to bridge this critical time window with the helpful intervention of eyewitnesses (Check. Call. Compress.).

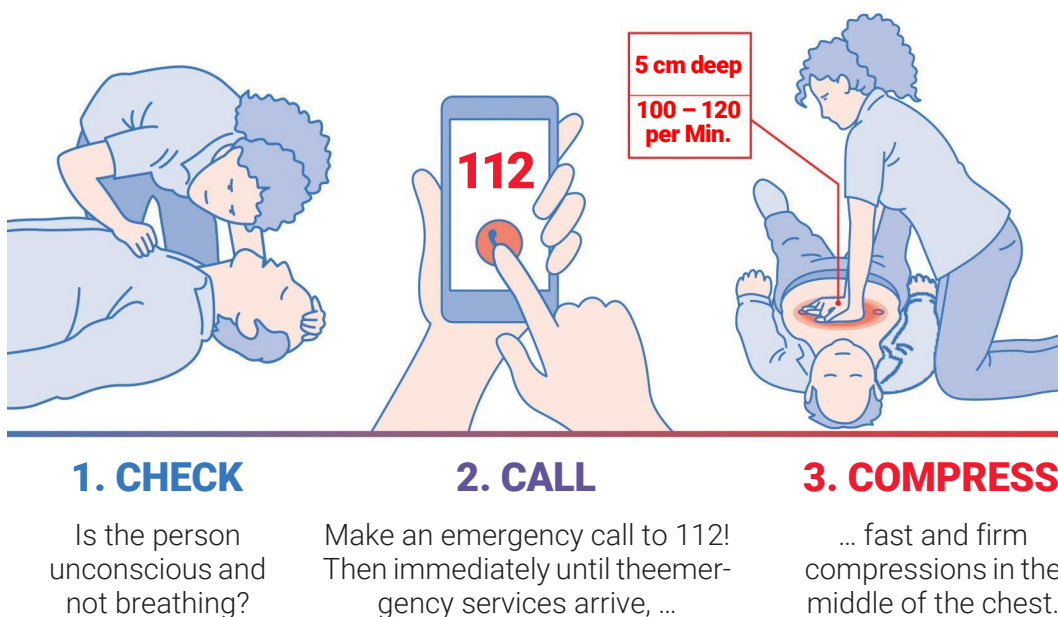


Figure 1 Lay resuscitation: Check. Call. Compress.
Source: Federal Centre for Health Education (BZgA).

- It is essential for the patient's chances of survival to shorten the therapy-free interval and to optimise the interaction within the rescue chain (resuscitation measures taken by first-aiders, care given by the emergency services, admission to a hospital) (Holger Gessler et al., 2020; J. T. Gräsner et al., 2020).
- It takes an average of eight minutes or longer for the emergency services to arrive (Jürgen Neukamm et al., 2011; Matthias Fischer et al., 2023).



- A good 65 percent of cardiac arrests occur at home and 19 percent occur in public (Matthias Fischer et al., 2023). Up to 45 percent of all cardiac arrests are witnessed by family members, friends or other people (B. W. Böttiger et al., 1999; M. L. Weisfeldt et al., 2011).
- If passers-by or family members were to immediately start cardiac massage in an emergency (see Figure 2), 10,000 lives could be saved each year in Germany, and an estimated 100,000 lives or more could be saved in Europe (J. T. Gräsner et al., 2014; B. W. Bötti, 2015).

Germany in a Europe-wide comparison

- More and more people in Europe and around the world start cardiac massage in an emergency (Chika Nishiyama et al., 2023). In Germany, the so-called lay resuscitation rate increased from 14 percent in 2010 to a good 51 percent in 2022 (M. Fischer et al., 2018; Matthias Fischer et al., 2023)

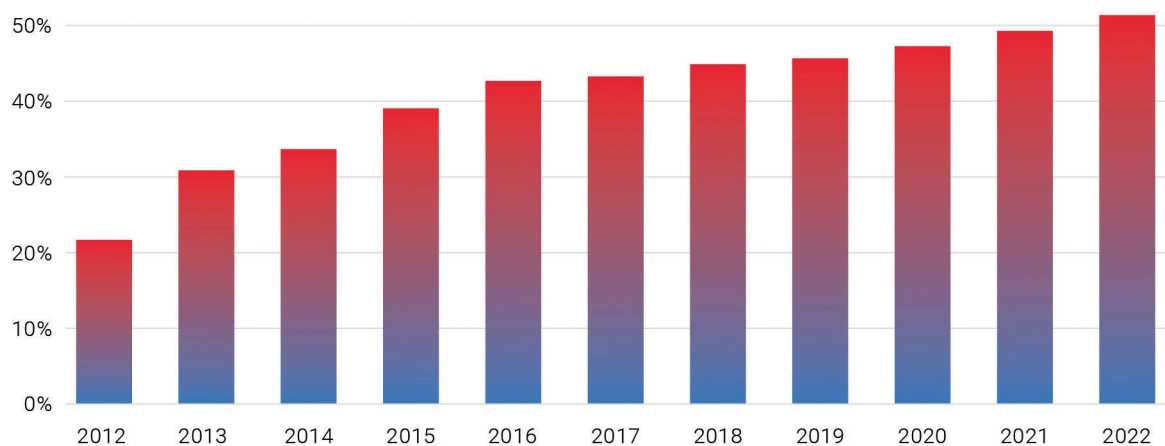


Figure 2 Lay resuscitation rate in Germany 2012 – 2022.

Source: Based on Fischer et al. 2023 (new calculation basis, see www.reanimationsregister.de).

- However, in Germany too few people still do not intervene in an emergency: In other countries, such as the Netherlands, rates of about 70 percent are already achieved (J. T. Gräsner et al., 2013), and in Sweden even more than 80 percent. A correlation was found there between this development and the survival rate of those affected (Matilda Jerkeman et al., 2022).



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National Resuscitation Action Group

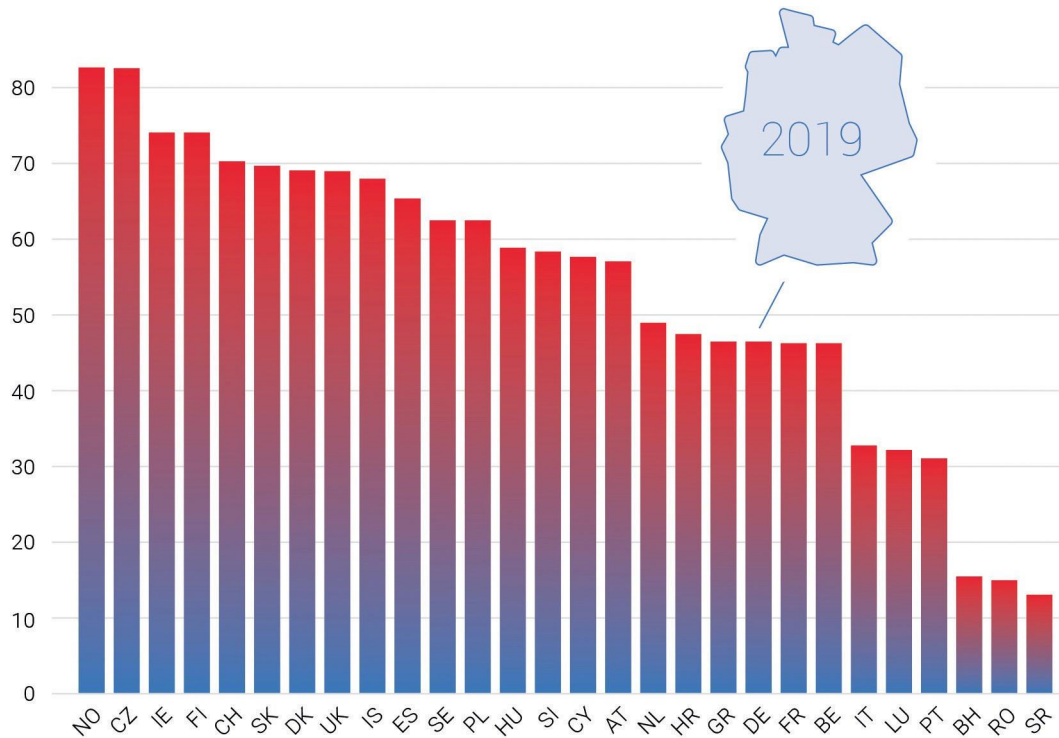


Figure 3 Lay resuscitation rate in Europe in 2019.

Source: Own illustration based on Gräsner et al., 2020, Supplemental EuReCaTWO

- The example of Denmark shows that national initiatives, such as the introduction of resuscitation measures in school education and a broad information campaign, have increased the lay resuscitation rate from 20 percent in 2000 to over 45 percent by 2010. The survival rate of people affected by cardiac arrest in Denmark tripled during this period (M. Wissenberg et al., 2013).
- If more people were to take immediate resuscitation measures, the survival chances of patients could double to triple (K. Kragholm et al., 2017; B. W. Böttiger et al., 1999) and reduce the admissions to nursing homes after a cardiac arrest (K. Kragholm et al., 2017).

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Figure 2 Lay resuscitation rate in Germany 2010 – 2022.

Figure 3 Lay resuscitation rate in Europe in 2019.

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