

## **Take Heart Australia**



### **Sudden Cardiac Arrest**

Approximately thirty thousand Australians have a sudden cardiac arrest each year, and about 90% of them die. Deaths from cardiac arrest are three times more common than deaths from major trauma, almost four times more common than deaths from stroke, and equivalent to three quarters of all deaths from cancer.

#### **90% of Australians who suffer cardiac arrest do not survive**

So what is this major killer?

Our bodies need oxygen from the air to function, and the part of us that needs it most is the brain. The brain is the most special part of a human being, with up to 100 billion nerve cells; it accounts for about 2% of body weight but uses 20% of all the oxygen in the blood.

The oxygen carrying blood is pumped to the brain by the heart. In an average person, your heart beats 80 times each minute, 4,800 times each hour and a whopping 115,200 times each day. Over the course of a year, your heart beats about 42,048,000 times, and if you live to be 80 years old, your heart beats about 3,363,840,000 times!

The problem with a fantastically specialised organ like the brain is that if it is deprived of its vital oxygen supply, it can be quickly destroyed. If the heart stops beating for the time it takes to make a slice of toast or to count to 200, there will be irreversible brain damage.

When the heart stops beating, it is called a sudden cardiac arrest, or SCA.

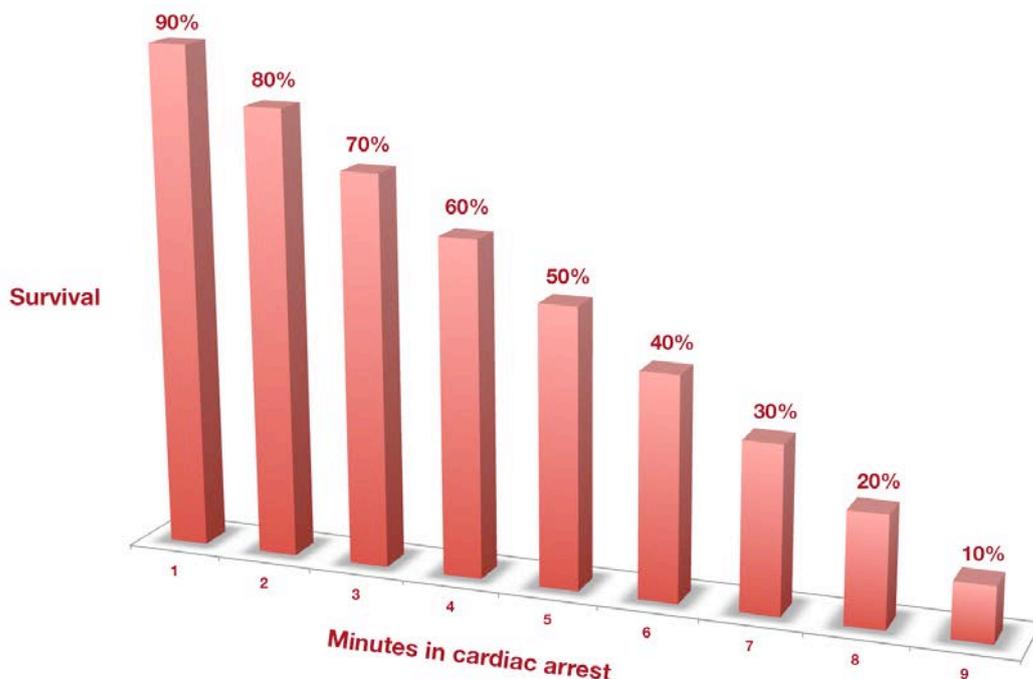
#### **A cardiac arrest can happen to anyone**

A cardiac arrest can happen to anyone. There are common causes, and less common causes, with a heart attack being one of the most common; we talk about heart attacks, what they are, and the difference between a heart attack and a cardiac arrest elsewhere.

Cardiac arrests can even happen to children and young adults. Experts estimate that approximately 4 people under the age of 35 suffer a cardiac arrest each week, but the reasons are often different to older adults.

From the moment the heart stops beating all the cells and tissues in the body start to die, starting with the brain. The blood stands still, poisonous products of body metabolism build

up in all the cells of the body, and the chances of survival drop with every passing moment. In fact, when the heart has stopped the chances of survival for that person drop by 10% each minute! Thus means that, except for very unusual circumstances, all cardiac arrest sufferers die within about ten minutes of the heart stopping.



This is where we hit another major problem. Across Australia, just like in the rest of the world, the minimum time taken for an ambulance to arrive at a cardiac arrest victim is about 8 minutes. There is usually some time taken for passers-by to recognise that something serious has happened and to call an ambulance, and sometimes more time taken for the paramedics to reach the victim, so that 8 minutes can quickly get much longer.

### **The minimum ambulance arrival time is about 9 minutes**

This is not inefficiency, but simply geography, but if the brain starts to suffer from brain damage because of the lack of oxygen at 3-4 minutes, and survival decreases at 10% each minute, we can all see that relying solely on emergency services cannot lead to much chance of survival.

So what can be done? The answer is that we all, as Australians, need to take the responsibility to save the life of the person standing next to us.

### **We all need to be able to save the life of the person next to us!**

We all need to know about the Chain of Survival, including how to recognise cardiac arrest when it happens, how to call for emergency services, how to do High-Quality Cardio-Pulmonary Resuscitation (CPR) and how to use an Automated External Defibrillator (AED).

But most of all, we need to be prepared to save the life of the person standing next to us!