

## **Patient Information**

**For :** Educational Material

### **Ventricular Fibrillation (VF)**

#### **What is ventricular fibrillation?**

Ventricular fibrillation (VF) is an abnormal heart rhythm that causes death. It is responsible for 75% to 85% of sudden deaths due to heart problems. Normally, heart muscle cells squeeze (contract) in rhythm at the same time to pump blood. These groups of cells are located in the bottom two pumping chambers of the heart (ventricles). In someone with ventricular fibrillation, some heart cells contract while others are relaxing, and blood stops flowing.

VF starts very suddenly. With no blood flow, brain death occurs within 3 to 5 minutes.

#### **How does it occur?**

VF can occur whenever the supply of oxygen to the heart muscle is decreased. The most common cause of ventricular fibrillation is a heart attack. Other causes include:

- narrowing of coronary arteries by atherosclerosis
- some medicines and drugs such as cocaine
- electrical shock.

#### **How is it treated?**

If you see someone suddenly lose consciousness or collapse, take prompt action to help the person:

- Call 911 for emergency help.
- Start CPR (cardiopulmonary resuscitation) with mouth-to-mouth breathing and chest compressions.
- If available, use a computer-controlled device called an automatic external defibrillator (AED). AEDs allow a person without medical training to pass a quick electric shock through the chest to change the VF to a normal rhythm. AEDs are available in many public places and on some airplanes.
- Continue CPR until help arrives.

When they arrive, emergency medical personnel will quickly examine the person. Medicines that stabilize heart rhythm and function may be given through a vein, as needed. Normally, the person will be taken to an emergency room at a hospital. He or she may need to stay in the intensive care unit for several days.

Once the VF has been treated and normal heart rhythm restored, the doctor will look for and treat the causes of

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