

# **Community and Workplace CPR/AED Guideline Changes and Rationale**

Six areas have been changed.

## **Assess/Alert**

### 2000 Guideline

A rescuer alone with an unresponsive infant or child should give one minute of CPR before calling 911.

### 2005 Guideline

Give two minutes of CPR before calling 911.

### Reason for the Change

The need to deliver more oxygen to vital organs before interrupting to call 911.

*Circulation.* 2005;112:IV-12-IV-17

## **Airway**

### 2000 Guideline

Use jaw-thrust to open airway of injured victim. Use head tilt–chin lift for uninjured victim.

### 2005 Guideline

Give two minutes of CPR before calling 911. Use head tilt–chin lift method.

### Reason for the Change

To provide simplification and ease of training. The jaw-thrust is difficult to learn and perform. It is often not effective and may cause spinal movement.

*Circulation.* 2005; 112: IV-18-IV-34

## **Breathing**

### 2000 Guideline

Take a deep breath and seal your lips around the victim's mouth, creating an airtight seal.

### 2005 Guideline

Take a regular (not deep) breath before giving a rescue breath to a victim.

### Reason for the Change

Taking deep breaths when performing rescue breathing is unnecessary and may cause harm to the rescuer (hyperventilation) and victim (gastric distention/vomiting/aspiration).

*Circulation.* 2005; 112: IV-18-IV-34

2000 Guideline

Give each rescue breath over 1 to 2 seconds making sure the victim's chest rises with each breath.

2005 Guideline

Give each rescue breath over 1 second with enough volume to produce visible chest rise.

Reason for the Change

To provide simplification and to reduce excessive ventilation.

*Circulation.* 2005;112:IV-12-IV-17

2000 Guideline

For respiratory arrest, when chest compressions are not being performed, provide approximately 10 to 12 breaths per minute (1 breath every 4 to 5 seconds).

2005 Guideline

Rescue breathing without chest compressions should not be taught.

Reason for the Change

To provide simplification and ease of practicing CPR skills.

*Circulation.* 2005;112:IV-12-IV-17

## **Compressions (Formerly known as Circulation)**

2000 Guideline

Check for "signs of circulation" (normal breathing, coughing or movement in response to the rescue breaths) before beginning chest compressions and reassess every few minutes.

2005 Guideline

Do not check for signs of circulation. After delivery of 2 rescue breaths, immediately begin chest compressions (and cycles of compressions and rescue breaths) and do not stop unless victim begins to move or AED and/or EMS arrives.

Reason for the Change

Checking for signs of circulation to determine if the heart is beating is not reliable and delays chest compressions that are essential for providing blood flow to vital organs.

*Circulation.* 2005;112:IV-12-IV-17

2000 Guideline

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*Circulation.* 2005;112:IV-12-IV-17

## **CPR Compression to Ventilation Ratio**

#### 2000 Guideline

The compression to ventilation ratio for adults: 15:2.

The compression to ventilation ratio for infant/child: 5:1.

#### 2005 Guideline

The compression to ventilation ratio is 30:2 for single rescuer, for all ages (except newborn infants).

**Note:** Focus on "effective" chest compressions to maximize the quality of CPR. Effective means push hard, fast, allow complete chest "recoil," and minimize interruptions. Hard means 1-1/2 to 2 inches in an adult and about one third to one half the depth of chest in a child/infant. Fast means 100 compressions per minute. Compression and recoil time should be approximately equal.

#### Reason for the Change

To provide for simplification and ease of training. Also, to provide longer periods of uninterrupted chest compressions. Blood flow to heart and brain is better with hard and fast compressions. Complete chest recoil allows blood to return to and refill heart.

*Circulation.* 2005;112:IV-12-IV-17

## **AED Adult**

#### 2000 Guideline

The AED is programmed to analyze the victim's rhythm and provide a series of three shocks. During the series of shocks, the rescuer should not interrupt or interfere with the rapid analysis and shock pattern. AEDs are programmed to pause after each group of three shocks to allow 1 minute for CPR.

### 2005 Guideline

When using an AED, deliver one shock followed by immediate CPR, beginning with chest compressions for 5 cycles (approximately 2 minutes) and then reassess heart rhythm until EMS arrives.

**Note:** New recommendations for rescuers are to rapidly integrate CPR with use of the AED.

### Reason for the Change

To minimize interruptions in chest compressions. The heart does not pump blood effectively for a few minutes after shock. Compressions are needed to provide blood flow. Also, newer AEDs are more effective at stopping ventricular fibrillation on the first shock.

*Circulation.* 2005;112:IV-35-IV-46

## **AED Infant /Child**

### 2000 Guideline

Use of AEDs in infants and children 8 years old or younger is NOT recommended.

### 2005 Guideline

Use of AEDs on infants and children 1 to 8 years old IS recommended. Rescuer should use a pediatric dose-attenuator system, if available. If not available, use a standard AED. This change supports previous ILCOR Advisory Statement.

*Circulation* JUL 2003; 107: 3250 – 3255

### Reason for the Change

Many AEDs can accurately detect Ventricular Fibrillation in children of all ages. There is insufficient data to make a recommendation for or against the use of AED for infants.

*Circulation.* 2005;112:IV-35-IV-46