# Summary of High-Quality CPR Components for BLS Providers

<table>
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<tr>
<th>Component</th>
<th>Adults and adolescents</th>
<th>Children (age 1 year to puberty)</th>
<th>Infants (age less than 1 year, excluding newborns)</th>
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<tbody>
<tr>
<td>Verifying scene safety</td>
<td>Make sure the environment is safe for rescuers and victim</td>
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</table>
| Recognizing cardiac arrest | Check for responsiveness  
No breathing or only gasping (ie, no normal breathing)  
No definite pulse felt within 10 seconds  
(Breathing and pulse check can be performed simultaneously in less than 10 seconds) | | |
| Activating emergency response system | If a mobile device is available, phone emergency services (9-1-1)  
Witnessed collapse  
Follow steps for adults and adolescents on the left  
Unwitnessed collapse  
Give 2 minutes of CPR  
Leave the victim to activate the emergency response system and get the AED  
Return to the child or infant and resume CPR; use the AED as soon as it is available | | |
| Compression-ventilation ratio without advanced airway | 1 or 2 rescuers  
30:2 | 1 rescuer  
30:2 | |
| | 2 or more rescuers  
15:2 | | |
| Compression-ventilation ratio with advanced airway | Continuous compressions at a rate of 100-120/min  
Give 1 breath every 6 seconds (10 breaths/min) | Continuous compressions at a rate of 100-120/min  
Give 1 breath every 2-3 seconds (20-30 breaths/min) | |
| Compression rate | 100-120/min | | |
| Compression depth | At least 2 inches (5 cm)* | At least one third AP diameter of chest  
Approximately 2 inches (5 cm) | At least one third AP diameter of chest  
Approximately 1½ inches (4 cm) |
| Hand placement | 2 hands on the lower half of the breastbone (sternum) | 2 hands or 1 hand (optional for very small child) on the lower half of the breastbone (sternum) | 1 rescuer  
2 fingers or 2 thumbs in the center of the chest, just below the nipple line | 2 or more rescuers  
2 thumb-encircling hands in the center of the chest, just below the nipple line  
If the rescuer is unable to achieve the recommended depth, it may be reasonable to use the heel of one hand |
| Chest recoil | Allow complete recoil of chest after each compression; do not lean on the chest after each compression | | |
| Minimizing interruptions | Limit interruptions in chest compressions to less than 10 seconds with a CCF goal of 80% | | |

*Compression depth should be no more than 2.4 inches (6 cm).  
Abbreviations: AED, automated external defibrillator; AP, anteroposterior; CCF, chest compression fraction; CPR, cardiopulmonary resuscitation.

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