

THE EDITOR'S CORNER

Staying Alive

Cardiopulmonary resuscitation (CPR) is a life-saving technique used to restore breathing and circulation when a person's heart stops. The American Heart Association (AHA) updates the CPR guidelines every five years based on the latest scientific evidence. Orthodontists and their teams should receive up-to-date professional training so that they can effectively respond to medical emergencies such as choking or cardiac arrest.

CPR proficiency includes four essential skills: performing high-quality chest compressions and rescue breaths to maintain circulation and oxygenation; effectively using an automated external defibrillator (AED); managing choking incidents by applying the Heimlich maneuver for adolescents and adults or back blows for infants; and coordinating an emergency response team with clearly assigned roles to ensure a swift reaction, particularly to a cardiac arrest.

The first step upon witnessing a cardiac arrest is to assess responsiveness and breathing. If the individual is unresponsive and not breathing, call for emergency help immediately. Then, begin CPR using the 30:2 rule: 30 chest compressions followed by two rescue breaths. After five cycles, reassess the situation and begin again if necessary. The recommended CPR compression rate is 100 to 120 compressions per minute—the tempo of “Stayin’ Alive” by the Bee Gees.

CPR keeps blood circulating until an AED is available. An AED is a portable device designed to analyze the heart's rhythm and, if necessary, deliver an electric shock to restore a normal heartbeat (defibrillation). The device comes with two adhesive electrode pads that are placed on the person's bare chest, one on the upper right side, just below the collarbone, and one on the lower left side, below the rib cage. These pads detect the heart's electrical activity to help the AED determine whether a shock is needed.

While the AHA doesn't mandate AEDs, it strongly recommends having one on-site at any health-care facility, including an orthodontic office. AEDs can significantly improve survival rates for patients experiencing cardiac arrest; for added safety, I keep one in each of my offices and at home. The average cost of the device is around \$1,800. Electrode pad sets (about \$100) and batteries (about \$300) should be replaced every two to five years.

Doctors and clinical staff must renew their CPR certification every two years. While administrative staff are not required to have CPR training, I strongly recommend it, since they are usually patients' first point of contact. With training, they can quickly recognize signs of distress and provide lifesaving CPR or AED support until clinical staff can take over. They also play a critical role in contacting and directing emergency responders, and managing office flow. For these reasons, I require all of my employees to become CPR certified.

Because scheduling CPR training can be challenging for busy practices, especially those with multiple offices, I delegate this responsibility to an office manager, who books the CPR instructor, blocks off a two-hour lunch, and confirms employee attendance. Regular training and updated recertification ensure that our team will be able to handle an emergency with confidence and poise.

Fortunately, cardiac arrests in dental offices are exceedingly rare. For an orthodontist in a busy practice, the risk is about 1 in 500,000 visits, or roughly one incident in an entire career. It's important to note that the emergency doesn't always happen in the dental chair. Early in my career, a local colleague responded to a landscaper outside his office who had gone into cardiac arrest while mowing the lawn—a powerful reminder that emergencies can strike anywhere.

NDK