

reverse the bronchospasm of anaphylaxis (beta effect). For all children with allergic reactions associated with wheezing, administer epinephrine, 0.01 mg/kg (0.01 mL/kg) of 1:1000 solution (maximum 0.3 mg or 0.3 mL) subcutaneously (SQ). If a child has hypoperfusion with anaphylaxis, administer epinephrine by IV, using a maximum dose of 0.1 mg and a more dilute solution to decrease the possibility of an adverse drug reaction. Draw up 0.01 mg/kg (0.1 mL/kg) of the 1:10,000 epinephrine solution (maximum 0.1 mg or 1 mL of the epinephrine) and dilute the solution further with 10 mL of normal saline to reduce the epinephrine concentration to 1:100,000.

### Treatment of Cardiogenic Shock

If cardiogenic shock is suspected by history and/or physical assessment, transport after general noninvasive treatment. On the way to the ED, consider vascular access. If the diagnosis of cardiogenic shock is uncertain, give a cautious fluid bolus of only 10 mL/kg of crystalloid fluid, and then reassess appearance, work of breathing, capillary refill time, heart rate, and blood pressure.

If there is no rhythm disturbance on the cardiac monitor, and the child remains poorly perfused after the initial fluid bolus, consider a vasopressor agent, either dobutamine, dopamine, or epinephrine, if the transport time is long. Start vasopressors at low doses, based on per kilogram nomograms, and then titrate to achieve acceptable perfusion (improved appearance and skin circulation and decreased heart rate and respiratory rate). If the child is known to be in congestive heart failure with cardiogenic shock, avoid fluid boluses and consider vasopressor therapy as front-line treatment if perfusion is severely compromised.

The major difference between treatment of hypovolemic, distributive, and cardiogenic shock is the amount of fluid administration and consideration of a vasopressor.



Tip

Successful treatment of cardiogenic shock involves minimizing the volume of fluid administered and early consideration of a vasopressor.

Advanced Life Support

### Treatment of Obstructive Shock

The additional option for treatment of obstructive shock from **pneumothorax** is needle **thoracostomy** to decrease air tension as explained in **Needle Thoracostomy, Procedure 22**. This technique will not remove blood, but will place the pleural space at atmospheric pressure, and release air tension. Rapid transport is an essential feature of field management of chest injury.

### Initial Assessment: Transport Decision

After completing the initial assessment and beginning general treatment when appropriate, the prehospital professional must decide whether to go or stay on scene. If the PAT and ABCDEs are normal and the child has no history of serious illness or injury mechanism, no anatomic abnormalities, and no pain, the child does not usually require urgent treatment or immediate transport. Take the time to get a focused history and physical exam and perform a detailed physical examination (trauma) on the scene if possible.

On the other hand, if the child has a serious mechanism of injury, a physiologic or anatomic abnormality, severe pain, or if the scene is not safe, transport immediately. With such patients, do the additional assessment and attempt specific treatment on the way to the hospital, if possible.

The transport decision is sometimes difficult in a child with a suspected cardiovas-