

Periodic breathing or apnea

Anuria

Stupor or coma

At all stages, the principal differentiating signs are observed in the (1) degree of tachycardia and perfusion to the extremities, (2) level of consciousness, and (3) BP. Additional signs or modifications of these more universal signs may be present depending on the type and cause of the shock. Initially, the child's ability to compensate is effective; therefore, early signs are subtle. As the shock state advances, signs are more obvious and indicate early decompensation.

Additional signs may be present, depending on the type and cause of the shock. In early septic shock, there are chills, fever, and vasodilation, with increased cardiac output that results in warm, flushed skin (hyperdynamic, or “hot,” shock). A later and ominous development is disseminated intravascular coagulation (DIC) (see [Chapter 24](#)), the major hematologic complication of septic shock. Anaphylactic shock is frequently accompanied by urticaria and angioneurotic edema, which is life threatening when it involves the respiratory passages (see [Anaphylaxis](#), later).

Laboratory tests that assist in assessment are: blood gas measurements, pH, and sometimes liver function tests. Coagulation tests are evaluated when there is evidence of bleeding, such as oozing from a venipuncture site, bleeding from any orifice, or petechiae. Cultures of blood and other sites are indicated when there is a high suspicion of sepsis. Renal function tests are performed when impaired renal function is evident.

Therapeutic Management

Treatment of shock consists of three major interventions: (1) ventilation, (2) fluid administration, and (3) improvement of the pumping action of the heart (vasopressor support). The first priority is to establish an airway and administer oxygen. After the airway is ensured, circulatory stabilization is the major concern. Establishment of adequate IV access, ideally with multilumen central lines, is essential to deliver fluids and medications.