

**Pediatric Sepsis Guidelines**

**Purpose:** The purpose of this guide is to assist the Provider in the care and treatment of the pediatric patient with sepsis/and or septic shock.

**Contents:**

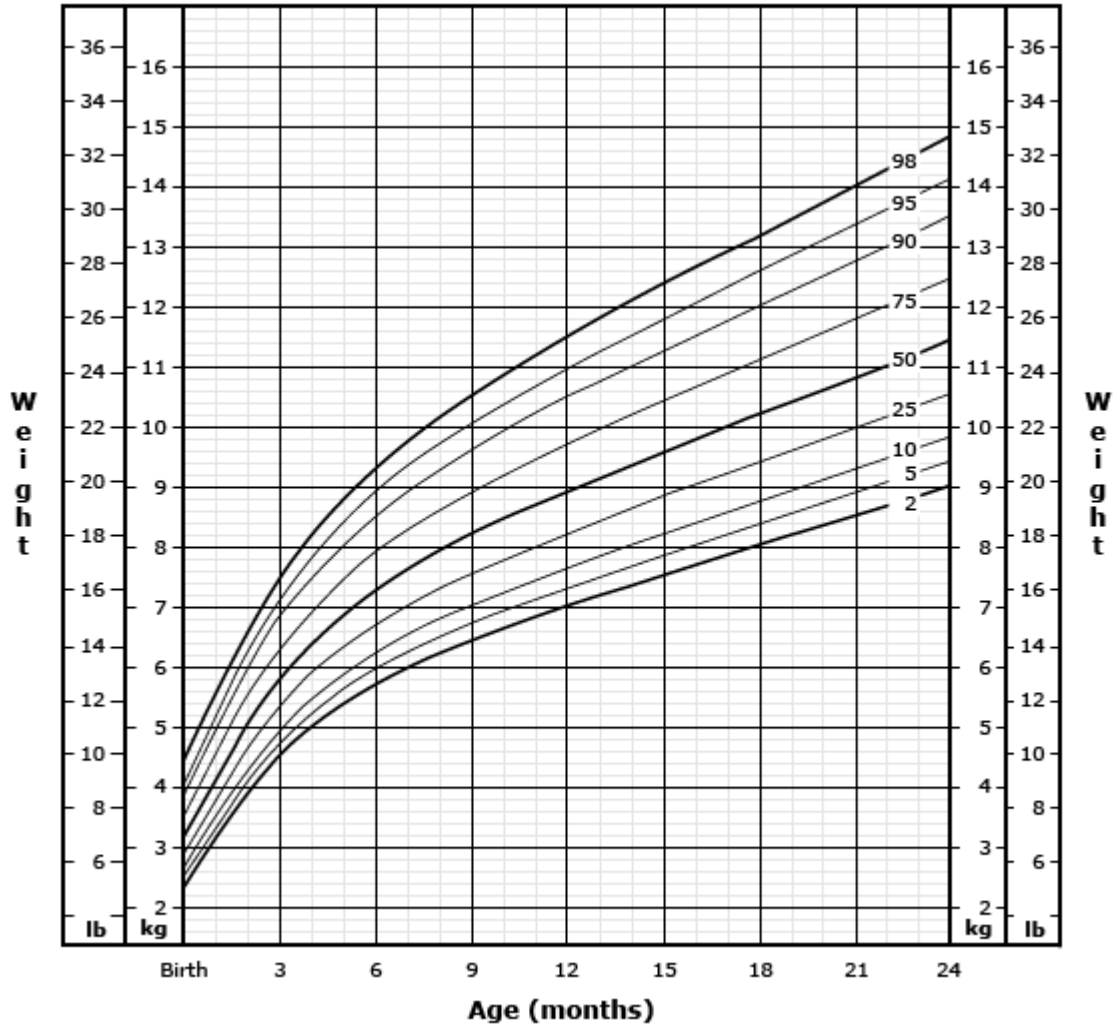
- 1. World Health Organization (WHO) Fluid Management Guidelines.**
- 2. WHO Gender Weight-For-Age Growth Standards.**

**World Health Organization 2016 guidelines: Fluid management in children with signs of impaired circulation in resource-limited settings.**

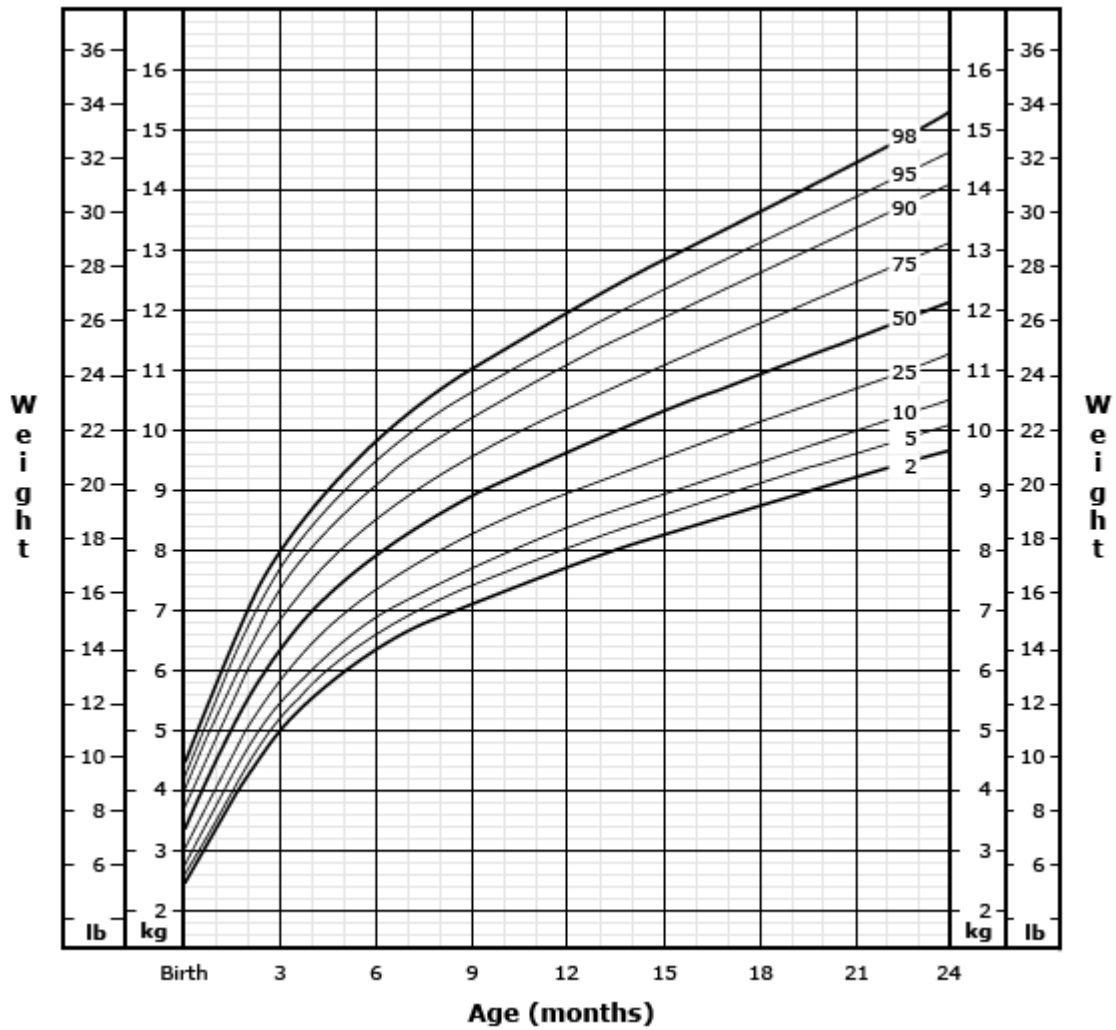
<b>Children Who Are Not in Shock but Have Signs of Circulatory Impairment</b>
1. Children with only 1 or 2 signs of impaired circulation (e.g., cold extremities, capillary refill >3 seconds, or a weak and fast pulse) but who do not have the full clinical features of shock (i.e., all 3 signs present together) should not receive any rapid infusion of fluids but should still receive maintenance fluids appropriate for their age and weight.
2. In the absence of shock, rapid IV infusion of fluids may be particularly harmful to children who have severe febrile illness, severe pneumonia, severe malaria, meningitis, severe acute malnutrition, severe anemia, congestive heart failure with pulmonary edema, congenital heart disease, renal failure, or diabetic ketoacidosis.
3. Children with any sign of impaired circulation (i.e., cold extremities; prolonged capillary refill; or weak, fast pulse) should be prioritized for full assessment and treatment and reassessed within 1 hour.
<b>Children who are in shock</b>
1. Children who are in shock (i.e., who have all the following signs: cold extremities with capillary refill >3 seconds and a weak and fast pulse) should receive IV fluids. <ul style="list-style-type: none"> <li>• They should be given 10 to 20 mL/kg body weight of isotonic crystalloid fluids over 30 to 60 minutes.</li> <li>• They should be fully assessed, an underlying diagnosis made, receive other relevant treatment, and their condition monitored.</li> <li>• The child should be reassessed at the completion of infusion and during subsequent hours to check for any deterioration: <ul style="list-style-type: none"> <li>○ If the child is still in shock, consider giving a further infusion of 10 mL/kg body weight over 30 minutes</li> <li>○ If shock has resolved, provide fluids to maintain normal hydration status only (maintenance fluids)</li> </ul> </li> <li>• If, at any time, there are signs of fluid overload, cardiac failure, or neurologic deterioration, the infusion of fluids should be stopped and no further IV infusion of fluids should be given until the signs resolve.</li> </ul>
2. Children in shock and with severe anemia (erythrocyte volume fraction [hematocrit] <15 or hemoglobin <5 g/dL as defined by WHO) should receive a blood transfusion as early as possible and receive other IV fluids only to maintain normal hydration.
3. Children with severe acute malnutrition* who are in shock should receive 10 to 15 mL/kg body weight of IV fluids over the first hour. Children who improve after the initial infusion should receive only oral or nasogastric maintenance fluids. Any child who does not improve after 1 hour should be given a blood transfusion (10 mL/kg body weight slowly over at least 3 hours).
IV: intravenous; WHO: World Health Organization; MUAC: mid-upper arm circumference. * In infants and children aged 6 to 59 months, severe acute malnutrition is defined as weight-for-height Z-score <-3 using WHO growth standards, MUAC <11.5 cm, or clinical signs of bilateral edema of nutritional origin.

# WHO Gender Weight-For-Age Growth Standards.

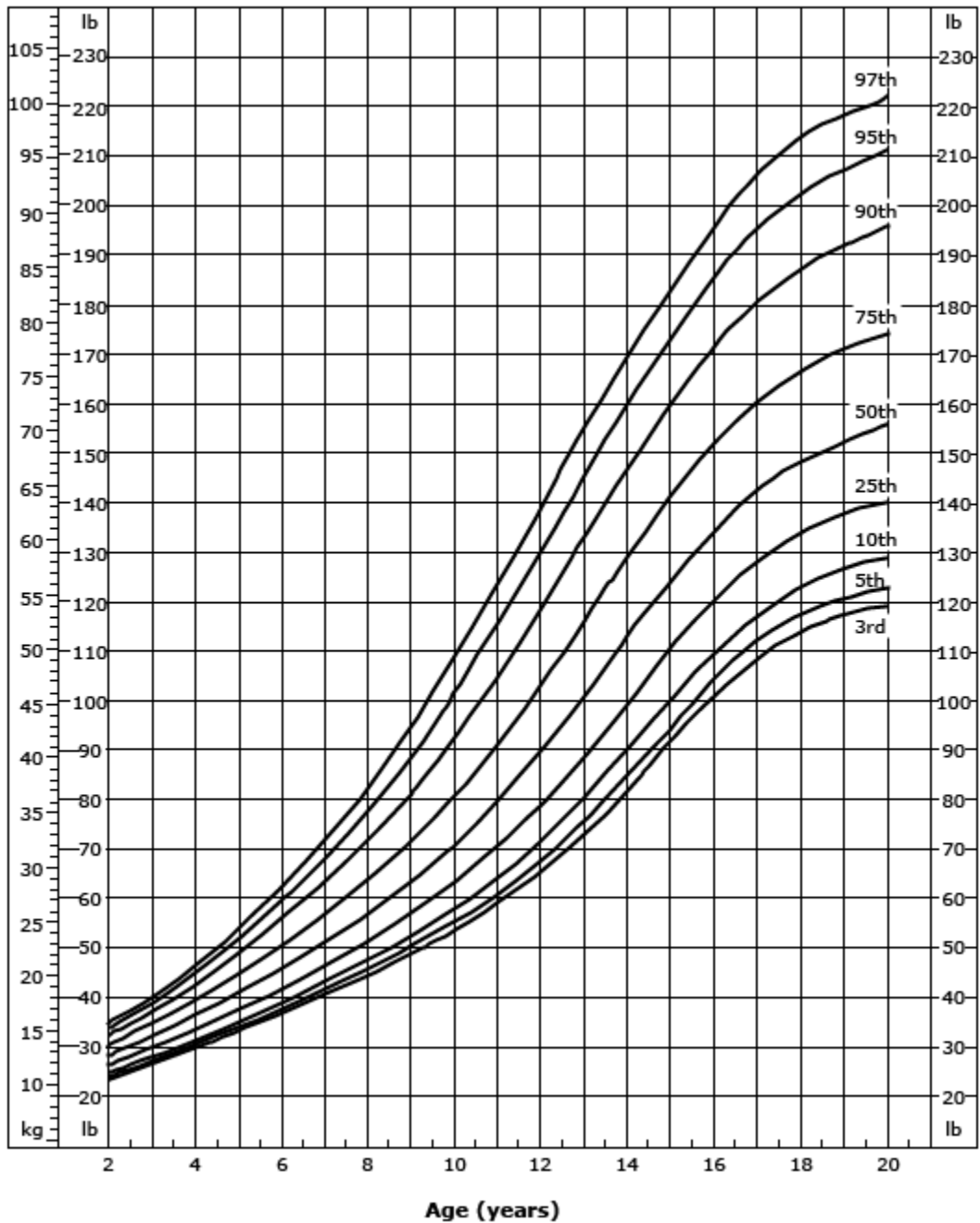
Figure 1A Weight-for-age percentiles, girls 0 to 24 months, WHO growth standards



**Figure 1B Weight-for-age percentiles, boys 0 to 24 months, WHO growth standards**



**Figure 2A Weight-for-age percentiles, boys, 2 to 20 years, CDC growth charts: United States**



**Figure 2B Weight-for-age percentiles, girls, 2 to 20 years, CDC growth charts: United States**

