

Chart 10. How to give glucose intravenously

- ▶ Insert an IV line, and draw blood for emergency laboratory investigations.
- ▶ Check blood glucose with a glucose monitoring stick. If the level is < 2.5 mmol/litre (45 mg/dl) in a well-nourished or < 3 mmol/litre (54 mg/dl) in a severely malnourished child or if blood glucose cannot be measured as no stick test is available, treat as for hypoglycaemia:
- ▶ Give 5 ml/kg of 10% glucose solution rapidly by IV injection

Age (weight)	Volume of 10% glucose solution as bolus (5 ml/kg)
< 2 months (< 4 kg)	15 ml
2–< 4 months (4–< 6 kg)	25 ml
4–< 12 months (6–< 10 kg)	40 ml
1–< 3 years (10–< 14 kg)	60 ml
3–< 5 years (14–< 19 kg)	80 ml

- ▶ Recheck the blood glucose in 30 min. If it is still low, repeat 5 ml/kg of 10% glucose solution.
- ▶ Feed the child as soon as he or she is conscious. If the child is unable to feed without danger of aspiration, give:
 - milk or sugar solution via a nasogastric tube (to make sugar solution, dissolve four level teaspoons of sugar (20 g) in a 200-ml cup of clean water), or
 - IV fluids containing 5–10% glucose (dextrose) (see Annex 4, p. 377)

Note: 50% glucose solution is the same as 50% dextrose solution.

If only 50% glucose solution is available: dilute one part 50% glucose solution in four parts sterile water, or dilute one part 50% glucose solution in nine parts 5% glucose solution. For example, 10 ml 50% solution with 90 ml 5% solution gives 100 ml of approximately a 10% solution.

Note: To use blood glucose stick tests, refer to instructions on box. Generally, the strip must be stored in its box at 2–3 °C, avoiding sunlight or high humidity. A drop of blood should be placed on the strip (it should cover all the reagent area). After 60 s, the blood should be washed off gently with drops of cold water and the colour compared with the key on the bottle or on the blood glucose reader. (The exact procedure varies for different strips.)

Note: Sublingual sugar may be used as an immediate 'first aid' measure in managing hypoglycaemia if IV access is impossible or delayed. Place one level teaspoonful of sugar moistened with water under the tongue every 10–20 min.