

Car Seat Trial

Background

The American Academy of Pediatrics (AAP) recommends that infants meeting criteria should have a period of observation in a child safety seat prior to discharge to monitor for possible apnea, bradycardia, or oxygen desaturation while traveling.

Inclusion Criteria

Infant qualifies for a car seat trial if any of the following conditions are met:

- Preterm and low birth-weight newborns:
 - Born younger than 37 weeks
 - Weight less than 2500 grams at birth
- Hypotonia (e.g. Down Syndrome or congenital neuromuscular disorders)
- Micrognathia (e.g. Pierre Robin sequence)
- Infants who have undergone congenital heart surgery
- Being discharged with an apnea monitor or oxygen therapy
- Provider Request

Supplies

- Appropriate Car Seat
 - Ensure car seat provided by family meets the following criteria:
 - ✓ Lower weight limit of seat
 - ✓ Correct fit of baby in the car seat
 - ✓ Car seat is not expired
 - ✓ No recall of seat
 - If no to above, check availability of lower weight limit seat
 - Consider a car bed if car seats do not provide correct fit
- Cardiorespiratory monitor
- Pulse Oximetry

Steps

Perform car seat trial within 7 days of discharge, if possible. Only medical equipment that is going home with the infant should be in place during trial.

1. Place infant on cardiorespiratory monitor and pulse oximetry
2. Monitor settings with alarm limits as follows:
 - Heart Rate (HR) alarm <80 bpm
 - Apnea alarm
 - SpO₂ 88% or as specified by provider for cardiac patients
3. Place infant correctly in child restraint:
 - Buttocks and back flat against the back of the car seat

- **Nothing** should be placed under infant
 - **If car seat manufacturer allows**, may place rolled receiving blankets on sides of infant; small washcloth or cloth diaper may be placed between infant's legs and buckle.
4. Position harness retainer clip on the infant's chest at armpit level.
 5. Verify that shoulder straps meet the seat at or below the level of the infant's shoulders.
 6. Verify the crotch strap meets the newborn's diaper area.
 7. Adjust the straps until they are snug.
 8. Place car seat in base, if available, and obtain correct angle recline (30-45 degrees)
 9. The infant should have a clean diaper and be fed shortly before the start of the screening.
 10. Perform trial for 90 minutes or for the length of travel home, whichever is longer.
 11. Monitor closely for alarms.

Alert!

If the patient becomes symptomatic:

- Stop the test
- Initiate appropriate interventions to ensure the newborn's immediate safety (e.g. removal from car seat, oxygen administration)
- Notify provider if newborn experiences criteria of failure

Pass/Fail Criteria

The goal of the car seat trial is not to get a "pass" but to make sure that infant can tolerate riding in a semi-reclined position without experiencing apnea, bradycardia, and/or oxygen desaturation.

Pass

- No apnea, bradycardia, or desaturation **or**
- Apnea, bradycardia, or desaturation lasting for a shorter duration than the failure criteria

Fail

- Apnea > 20 seconds
- 10 seconds of bradycardia (60-80 bpm) with associated desaturation
- 10 seconds of bradycardia (<60 bpm), regardless of desaturation
- A single desaturation < 80%, lasting ≥ 10 seconds
- 2 or more desaturations < 88%, lasting ≥ 10 seconds

Repeat Trials

Reference attached Failed Car Seat Trial Algorithm

- If infant fails initial screening, the nurse must wait 24 hours before attempting again
- If the patient fails the second screening, a car bed can be attempted after 12-24 hours

For assistance with acquiring specialty seats (e.g. car bed) please contact:

Special Needs Resource Center – Peoria, IL
877-277-6543