

Safe Travel for All Children: Transporting Children with Special Health Care Needs

Automotive Safety Examination

Total Time Allowed – 1 Hour

Directions: Answer ALL questions by marking directly on the test. Mark the letter for alternatives A, B, or C, which represents the **BEST** answer for each of the following multiple-choice items.

1. In general, children with special health care needs should be:
 - A. transported in conventional car seats or booster seats whenever possible
 - B. transported in professional transport vans
 - C. transported in conventional car seats until they can be forward-facing

2. Modifying the structure of a car seat is:
 - A. recommended in situations in which a child won't fit in the seat
 - B. preferred over using an appropriate specialized car seat
 - C. not recommended because it can change the effectiveness of the seat

3. Car seats for premature infants should have:
 - A. rebound bars
 - B. detachable bases
 - C. small harness dimensions

4. A car bed may be indicated for a premature infant who:
 - A. travels more than one hour
 - B. has documented apnea in a car seat
 - C. has adequate vehicle space

5. The American Academy of Pediatrics recommends that premature infants are observed in car seats prior to discharge to evaluate:
 - A. for apnea, bradycardia, and oxygen levels in the blood
 - B. fit of car seat harness
 - C. car seat's ease of use

6. Acceptable positioning of a premature infant in a car seat can be achieved by:
 - A. placing padding under or behind the infant to fill in space
 - B. centering with rolled receiving blankets, if allowed by the car seat manufacturer
 - C. using a non-regulated positioning insert in the car seat

7. A car seat's angle of recline during observation of a premature infant should be adjusted:
 - A. according to the car seat directions for vehicle use
 - B. as far back as possible to eliminate episodes of apnea
 - C. so that the car seat is in the most upright position

8. A hip spica cast can affect restraint selection if:
 - A. frays the harness straps
 - B. applies pressure to the child's upper extremities
 - C. limits a child's ability to sit up

9. When selecting a child restraint for a child in a hip spica cast:
 - A. do not include the weight of the cast in the child's total weight
 - B. refer to restraint manual for directions regarding casted or non-casted weight
 - C. multiply the weight of the cast by two and include the child's total weight

10. A child in a hip spica cast who does not fit in a conventional or specialized child restraint may need to be transported:
 - A. on a reclined vehicle seat
 - B. by professional transport
 - C. on the floor of the vehicle

11. Selection of a car seat for a child with achondroplasia should be determined by:
 - A. child's weight and height
 - B. child's age
 - C. peer group

12. An older child with poor head, neck, and trunk control is best supported by:
 - A. an upright harness
 - B. a large medical seat
 - C. a modified E-Z-ON Vest

13. Infants and smaller children with low tone or short stature may benefit from:
 - A. conventional car seats that convert to booster seats
 - B. conventional car seats that have polyester harnesses
 - C. conventional car seat that rear-face to higher weights

14. Children with behavioral conditions may be less likely to “escape”:
- A. conventional car seats with shorter crotch straps
 - B. conventional car seats that semi-recline while forward facing
 - C. upright vests with floor mount tethers
15. Infants should travel prone (on their abdomen) in a car bed:
- A. one hour after feeding
 - B. only when medically necessary
 - C. to facilitate sleep
16. Car beds are always installed with the baby’s head facing the:
- A. center of the vehicle
 - B. rear of the vehicle
 - C. side of the vehicle
17. Large medical seats are typically used by children with:
- A. poor muscle control
 - B. hip spica casts
 - C. episodes of apnea
18. Since orders for large medical seats can take months to process, some older children may need:
- A. to stay at home until the seat arrives
 - B. to use conventional car seats that have higher weight harnesses
 - C. to use a car bed
19. Rehabilitation therapists (occupational or physical therapists) should be consulted:
- A. only as a last resort, when a nurse is unavailable
 - B. to assist with installation of conventional car seats and booster seats
 - C. in cases where children have low muscle tone
20. Pommels, or abductor wedges, are useful accessories available with large medical seats or adaptive booster seats for children who:
- A. need to keep their hips back in the seat and legs separated
 - B. need to have thigh support
 - C. need to have additional head support
21. A useful accessory that accommodates growth in a large medical seat is:
- A. an incontinence cover
 - B. a seat depth extender
 - C. a scoliosis harness

22. To help support a child with muscle tone issues in a car seat:
- A. place padding under the child's bottom and along the trunk
 - B. place egg crate foam behind the child and rolled towels along the trunk
 - C. place rolled towels along the side of the child's head or trunk
23. Some type of tethering system is mandatory for installation of:
- A. car beds
 - B. large medical seats
 - C. rear-facing convertible car seats
24. A few large medical seats offer the option of "tethering" by placing the shoulder portion of a seat belt along the inside of the seat. This type of method requiring routing of the seat belt through:
- A. the short seat belt path
 - B. the long seat belt path
 - C. lower anchors
25. Children are **restrained** in adaptive booster seats by means of:
- A. the positioning harness or vest
 - B. a vehicle lap/shoulder belt
 - C. lower anchors and top tether
26. The purpose of the upright E-Z-ON Vest's crotch strap is to:
- A. provide the child with something to hold
 - B. adjust the shoulder straps
 - C. help with proper positioning on the hips and prevent "submarining"
27. During transport, if possible, a child in a wheelchair should:
- A. transfer to a reclined vehicle seat
 - B. face the rear of the vehicle
 - C. transfer to an appropriate conventional or specialized car seat or booster seat
28. WC-19 compliant wheelchairs must have:
- A. a strong, crashworthy frame and clearly marked tie-down locations
 - B. lap trays and collapsible frames for ease of transport
 - C. tilt-in-space features and braking systems
29. Wheelchair occupants should be restrained during transport by:
- A. a postural positioning harness
 - B. a lap tray and postural belt
 - C. a crash tested lap/shoulder belt

30. Selecting car seats or booster seats for children who are overweight or obese can be challenging because:
- A. they often exceed the weight limits of a car seat or booster seat before they are developmentally ready for the next step
 - B. they often resist consistent use of car seats designed for children within their weight range
 - C. they often are unable to sit unassisted and require large medical seats with accessories to accommodate their posture
31. Professionals that can directly bill a client's insurance for a car seat consultation includes:
- A. rehabilitation therapists
 - B. nurse practitioners
 - C. any CPST with special needs training

CASE STUDIES

Directions: For this section of the examination, you will read short case studies. Read through the entire case study. Select the **BEST** answer for each item.

CASE A: THOMAS

Thomas is an 11-year-old male with a diagnosis of cerebral palsy. He weighs 98 pounds and is 4 feet 10 inches tall. He has poor head, neck, and trunk control.

He is transported to clinic appointments by his mother in a 2003 Honda Accord, which has lower anchors and top tether anchors in the outboard positions of the back seat and a tether anchor in the center.

He is restrained in the front seat by a lap/shoulder belt, but cannot sit up well enough to use it properly. His mother tries to prop him up by placing pillows around him.

Thomas has an appointment with an occupational therapist to pick up the Churchill adaptive booster seat.

32. An appropriate seating position in the vehicle for Thomas, when restrained in the Churchill is:
- A. any location in the back seat
 - B. the front seat
 - C. either outboard position in the back seat
33. This seating position is necessary because:
- A. the seat belt can be locked at the retractor
 - B. it has lower anchors and a tether anchor
 - C. transferring Thomas is more difficult here

CASE B: DAVIDSON

Davidson is a 9-month-old male with severe hydrocephalus, who weighs 15 pounds and is 24 inches long.

Mom reports that his head falls forward in his rear-facing only seat during travel. She is worried that his breathing will be affected and has requested an evaluation of the car seat by an occupational therapist.

34. One of the first things the therapist should check is:
- A. if the vehicle has LATCH
 - B. the type of seat belts that are in the vehicle
 - C. the angle of the car seat
35. Once the infant outgrows the rear-facing only seat, the baby would benefit from:
- A. riding forward-facing in a semi-reclined position
 - B. riding rear-facing in a convertible car seat to higher weight
 - C. riding rear-facing in a combination car seat
36. Due to the baby's hydrocephalus, the baby's head may need to be positioned:
- A. to the side
 - B. nose down
 - C. with a strap around the head and top of the car seat

CASE C: ANNA

Anna is a 3-year-old female with a diagnosis of achondroplasia. She weighs 25 pounds and is 29 inches tall.

Her parents arrive for her appointment and inform you that they are using a forward-facing convertible seat that is expired.

37. What would be the **best practice** recommendation for the family in this situation?
- A. Replace the car seat with a new one and keep Anna forward-facing.
 - B. Replace the car seat with a new one that can be used rear-facing to 35-40 pounds and position Anna rear-facing.
 - C. Move Anna into a booster seat.
38. What are some physical characteristics that could influence the need to keep Anna rear-facing longer?
- A. Larger head size and small stature
 - B. Scoliosis and brittle bones
 - C. Increased risk for spinal cord injuries due to having a larger foramen magnum

CASE D: HANNAH

You are called up to the NICU to make recommendations for safe transport home of Hannah, a newborn with Pierre-Robin Sequence. She weighs approximately seven pounds.

Hannah has failed her angle tolerance test in a rear-facing only car seat due to her tongue obstructing her airway.

The doctor has stated that she must be transported prone (on her abdomen). Hannah must be transported with her apnea monitor, feeding pump, suction machine, and oxygen tank.

39. After evaluating Hannah, you would recommend:
- A. a convertible car seat tethered for rear-facing
 - B. a car bed so that Hannah can travel prone
 - C. a different rear-facing only car seat with a smaller internal harness
40. You go out to the family's car and notice that the medical equipment is just sitting on the vehicle seat and on the floor board. After checking the vehicle owner's manual for permission, your recommendation to the family would be to secure the equipment:
- A. by hanging it on the back of the driver and passenger seats
 - B. by placing it on the floor board secured by wedging rolled towels or pillows
 - C. by tying it down with bungee cords on the floor board

MATCHING

Directions: Please match the following child restraints listed in the right column with the descriptions listed in the left column. Fill in the letter of your response on the line next to the number of the child restraint in the left column.

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| 41. _____ Roosevelt | A. Convertible seat for children in casts; 5-80 pounds; uses hammock to accommodate casted hip angles |
| 42. _____ Angel Ride | B. Vest for occupants 31-168 pounds; tether required; zipper-back option for behavior |
| 43. _____ Modified E-Z-ON | C. Car bed for infants 5-20 pounds |
| 44. _____ Wallenberg | D. Large medical seat for occupants 35-115 pounds; EZ-tether and anti-escape features |
| 45. _____ Dream Ride | E. Large medical seat for occupants 3 years or older and 22-106 pounds |
| 46. _____ Monza Nova 2 Reha | F. Vest for children who must lie down and can fit lengthwise on a vehicle seat |
| 47. _____ Wallaroo | G. Adaptive booster seat for occupants 33.1-110.2 pounds |
| 48. _____ Upright E-Z-ON | H. Car bed for infants up to 9 pounds |
| 49. _____ Churchill | I. Car bed for infants 4.5-35 pounds; has 3-pt harness or restraint bag option |
| 50. _____ Hope | J. Classified as a belt-positioning booster for occupants 65-175 pounds |

-- END OF EXAM --