



*Assistive and Instructional Technology
Supporting Learners with Disabilities*

ASSISTIVE TECHNOLOGY SUPPORTS FOR MOBILITY

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The Let's Participate! Project



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Early mobility influences cognitive and social development. Children may need assistance in moving to explore their environments, a critical component of participation. AT supports can help children achieve early developmental milestones including crawling, standing, walking and using ride-on toys and bikes. To find the best “fit” for a child and her family, consider the various features of commercially available items as well as adaptive equipment for a full range of options. Then match them to the child’s abilities and needs as well to the environment she will be using it in. Adaptations can further help to provide a more customized fit.

CRAWLING

Crawling (or creeping) is an important developmental milestone as it impacts future physical and perceptual motor abilities. A child will likely start crawling soon after s/he's able to sit well without support. As an initial foray into independent exploration, crawling continues to develop the muscles a child needs for walking.

Supports to assist a young child to crawl include:

- **Motivating toys**

Providing lots of tummy play will help the child to develop muscles and strength needed to crawl. Present rolling toys to chase after (e.g., Lamaze *Mirror crawl*) or toys with wheels or that can be pushed help to motivate a child to move to “get them”.



Mirror crawl

- **Scooters**

Supports can include home-adapted skate board/scooter with pool noodle bumpers and Velcro straps (for an infant crawling device)



Scooter with Handles

- **Inflatable “peanut” rolls or cylinders**

Use a bolster or an inflatable “peanut” to lift a child’s torso off the floor. Make sure his hands and knees are firmly on the ground. Rocking back and forth can help develop muscles for crawling. Cylindrical rollers can be firm or inflated but can also provide upper body support a child needs.



Peanut Roll

Adaptive materials/Tips

- Place a backwasher strap (3”X 12-15”) around a child’s chest to hold her upper body above ground in order to facilitate crawling
- Play tunnels help to further develop crawling skills



STANDING

This position allows a child to see and interact with their environment from a higher perspective and encourages movement. Depending on the child's ability to stand, varying levels of support may be necessary.

NOTE: These supportive devices should only be used once a child has gained head and neck control.

- **Stationary Play Centers** allow a child to rock, move, bounce and/or turn in place while playing with toys on the circular tray. Their supportive seats allow children to maintain an upright position to practice standing while taking in the action around them. They do not allow children to move around a room. Look for ones with adjustable height, seats with full supports, flat bases, and replaceable toys.



Baby Activity Zone

- **Play Activity Tables** provide minimal support but encourage exploration and play. Look for ones with adjustable height and where the interactive area can be removed to play on the floor or elsewhere. Removing 2 legs props the table at an angle. Look for tables with sensory features including songs, drums, lights and learning.



Adventure Learning Table

- **Jumping Platforms** and supports provide a way to stand and bounce at the same time to build coordination and strength. Look for ones that hang in doorways, are adjustable, or ones with handles that can provide additional stability and support.



Bouncer Trampoline

Adaptive materials/Tips

Before encouraging your child to stand, bounce or jump or placing them in a supportive device:

- The child should be able to hold his/her head in an upright position.
- The child's full foot should make contact with the standing surface - so they are not standing on their tiptoes.
- Add pillows or other supports to the child's sides to make sure her trunk is supported.
- The seat height should allow a child to straighten his/her legs while maintaining a slight bend in the knees.
- The keys to positioning any child are moderation and variety! Limit the amount of time the child spends in supported standing to 10 to 15 minutes at a time.

- Consult your therapist for additional information. Stenders and Standing aids (DME) are available through rehabilitation resources.

WALKING

Commercial shopping carts that a child stands behind and pushes can provide adequate walking support for many children. They can be adapted with weights to make them more stable. Make sure the handle height provides the maximum stability for a child.



Little Helpers Grocery Cart



Kaye Walker Wagon



Rattle Rumble Push Toy

Adaptive materials/Tips

- Add weights to the wagon or basket to make the mobility support stable.
- Try applying Velcro around the wheels, which when making contact with some types of home carpeting, adheres to the carpet providing a stable support for standing and walking.
- Always consult with a child's therapist before using a walking aide.

RIDING, ROCKING AND SWINGING

Low to the floor rocking and riding toys provide options for children to experience developmental movements in supportive positions. Children who experience delays in developing large motor skills often require opportunities for supported movement. These items help children to integrate sensory input by providing important opportunities for vestibular and proprioceptive input. Look for items with back and front supports that are fitted to a child's size. Easy-to-use climbing and sliding equipment for toddlers and other items such as safety swings for backyard play can often be found in local stores.



Crocodile Rocker



PlasmaCar



Sit + Spin

Adaptive materials/Tips

- Use non-slip shelf liner or nonskid carpet material on the seat of ride-ons to keep a child from slipping off.
- Make sure a child's feet touch the floor for added stability.

POSITIONING FEATURES TO CONSIDER:

- | | |
|---|--|
| <input type="checkbox"/> Appropriate size for child's height/weight | <input type="checkbox"/> Washable |
| <input type="checkbox"/> Firm back/front support | <input type="checkbox"/> Portable |
| <input type="checkbox"/> Adaptable seat for turning | <input type="checkbox"/> Adjustable floor height |
| <input type="checkbox"/> Head/neck support | <input type="checkbox"/> Safety restraints |
| <input type="checkbox"/> Side/lateral support | <input type="checkbox"/> Stable, wide base, slip resistant |
| <input type="checkbox"/> Seat support | <input type="checkbox"/> Bounce response |
| <input type="checkbox"/> Foot rest | <input type="checkbox"/> Visual, sound, texture |
| <input type="checkbox"/> Handle or table height | <input type="checkbox"/> Toy holders /attachers |
| <input type="checkbox"/> Removable/adjustable insert | <input type="checkbox"/> Family aesthetic appeal |

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