

Let's Talk About...

Spina Bifida and Physical Therapy

It is important that you teach your child with spina bifida to be independent. A key factor to independence is being mobile. You can encourage your child to be mobile by teaching him to:

- Walk
- Walk with the use of braces
- Walk with an assistive device such as forearm crutches or a walker
- Use a manual wheelchair (one the user pushes)
- Use a power wheelchair

To prepare for walking, the physical therapist can teach your child exercises that improve balance and motion. The therapist can also teach your child to use aids such as wheelchairs, braces, crutches, and other equipment.

What are the different types of braces?

Braces are usually named according to the joints the brace crosses and the location of the brace on the body. The following are the most common types of leg and foot braces.

- **Foot orthosis (FO):** This brace keeps the foot from turning downward, keeps the arch of the foot from flattening, and prevents the ankles from rolling inward.
- **Supramalleolar orthosis (SMO):** This brace extends above the ankle bones to provide increased support to the ankle while allowing the ankle to move.
- **Ankle-Foot Orthosis (AFO):** This brace gives maximum support to the foot and ankle and extends up the calf

to just below the knee. The brace can be solid at the ankle, which doesn't allow ankle motion, or hinged at the ankle, which allows some motion.

- **Floor Reaction or Solteil Brace:** This is an ankle-foot brace that help the child not to crouch while walking.
- **Knee-Ankle-Foot Orthosis (KAFO):** This brace supports the knee. It has thigh cuffs and jointed metal supports that extend from the ankle and foot portion of the brace to the thigh cuff. The knee joints are locked or unlocked to allow sitting in the brace.
- **Hip-Knee-Ankle-Foot Orthosis (HKAFO):** Also called long leg braces. This brace comes with a pelvic band to support the hips, or with both a pelvic band and a chest strap if more support is needed. Otherwise, it is identical to the KAFO.
- **Reciprocating Gait Orthosis (RGO):** This is an HKAFO-type brace with a chest support, where the two braces work together through a series of cables. This allows for better walking.
- **Dynamic Ankle-Foot Orthosis (DAFO):** This is a molded foot, ankle, and lower leg brace that helps with walking.

What are some of the assistive devices to help my child walk?

Different assistive devices are available to provide proper body alignment, help with balance, and decrease effort during walking. Your child may use the following aides, depending on how much support he needs during walking.

- **Walkers:** There are two different types of walkers available, reverse walkers and forward walkers. Reverse walkers allow your child to stand within the support

base while pulling the walker as he walks. Children usually prefer this walker because they can stand more upright and it provides a broader base of support. With forward walkers, the base of support is in front of the child. The child pushes the walker. This walker is helpful if a child is afraid of falling forward while walking.

- **Forearm Crutches:** These crutches have a cuff, which fits around the forearm, and a hand piece for your child to lean on while walking. Forearm crutches provide balance and can be used to go up and down stairs. A child may start out with two crutches and progress to using one crutch, depending on how much help he needs with balance.

What about a wheelchair?

Wheelchairs help with proper body alignment and mobility. Your child can be checked for a wheelchair around age 2 to 3, even if he is able to walk. Your child may use walking to get around most of the time but may need a wheelchair for long distances. Walking with an assistive device can be tiring to use all day. A wheelchair will decrease effort, and your child will have more energy to do other things.

The decision to get a wheelchair may be emotional for your child and family. Having a wheelchair does not mean that your child needs to stop walking. That decision needs to be made by your child and family. The wheelchair can help your child keep up with his walking peers. It can also help him take part in sport and exercise programs that may not be possible with crutches or walkers. A wheelchair is an alternative form of mobility and, as with walking, your child's well-being and independence is of the utmost concern.