

Let's Talk About...

Spina Bifida and Physical Therapy

It's important to help your child with spina bifida become independent and mobile. Your child's physical therapist can teach them exercises that improve function. They can also show them how to use wheelchairs, braces, crutches, and other devices. However, you can begin teaching your child mobility at home as well.

How can I help my child become more mobile?

Encourage your child to be mobile by teaching them to:

- Roll, army-crawl (on their belly), or crawl on their hands and knees
- Pull themselves up to a standing position and move around using furniture for support
- Walk without help
- Walk using ankle braces
- Walk with an assistive device like forearm crutches or a walker (often along with braces)
- Use a manual wheelchair they can push around home and the community on their own
- Use a power wheelchair in situations where they can't use a manual wheelchair



What are the different types of braces?

The most common types of leg and foot braces (usually named for the joints and location on the body) include:

- **Footplate orthosis (FO).** This brace keeps the foot from turning downward and the arch of the foot from flattening.
- **Supramalleolar [SOO-pruh-mal-ee-OH-lar] orthosis (SMO).** This brace extends above the ankle bones to provide increased support to the ankle while helping prevent flat feet. It still allows the ankle to move up and down.
- **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. One type of AFO, called a **floor reaction brace**, helps your child prevent crouching while walking.
- **Knee-ankle-foot orthosis (KAFO).** This brace has thigh cuffs and jointed metal supports that extend from the ankle and foot portion to the cuffs to support the knee. The knee joints are locked or unlocked to allow sitting in the brace.
- **Hip-knee-ankle-foot orthosis (HKAFO).** Also called a long-leg brace, the HKAFO comes with a pelvic band to support the hips and sometimes a chest strap if your child needs more support. Otherwise, it is identical to the KAFO. One type of HKAFO, called a **reciprocating gait orthosis (RGO)**, also includes chest support. The two braces work together through a series of cables. This allows for better reciprocal walking but requires substantial strength and motivation.

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

Different assistive devices can provide proper body alignment, help with balance, and decrease effort while walking. Your child may use the following aides for support while walking:

- **Walkers.** Reverse walkers, which let your child stand within the support base while pulling the walker as they walk, are the most popular walkers for children with spina bifida. Children usually prefer this walker because it provides more support and they can stand more upright. Reverse walkers are often used with foot braces, and many children progress from reverse walkers to forearm crutches.
- **Forearm crutches.** These crutches have a cuff that fits around the forearm and a handpiece support your child can press into while walking. They provide balance and can be used to go up and down stairs. Forearm crutches are often used with foot braces as well. Your child may start out with two crutches and progress to using one crutch.

What about wheelchairs?

A wheelchair is an incredibly useful and versatile piece of equipment. Children with spina bifida regularly use both manual and power wheelchairs, even if they walk on their own or use braces, walkers, or crutches.

The decision to get a wheelchair may be emotional for your child and family. However, having a wheelchair does not mean that your child needs to stop walking. The wheelchair can help your child:

- Keep up with other children who can walk
- Take part in sports and exercises that may not be possible with crutches or walkers
- Go longer distances or access places that would be harder to walk to

A wheelchair is an alternative form of mobility. As with walking, you should consider your child's health, abilities, and independence when deciding whether a wheelchair is right for them.



Questions for my child's doctor

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