

Orthopedic health revolves around the function of the musculoskeletal system, including the bones, joints, tendons, ligaments, muscles and supportive tissues. Orthopedic health concerns for children with hypoxic-ischemic encephalopathy (HIE) generally revolve around cerebral palsy, as HIE can cause cerebral palsy. This disability can necessitate intensive [physical therapy](#), [orthotics](#), [early intervention](#), and other preventative and health maintenance services in order to maintain range of motion, walking ability, and physical capabilities.

While [more than 40%](#) of individuals with cerebral palsy have some form of cognitive disability, orthopedics focuses on an individual's *physical* ability to move, walk, and carry out the tasks of daily living on their own. Orthopedic impairments can reduce a person's independence, prompting an emphasis on early intervention to reduce complications such as contractures, pain, foot drop and tissue shortening.

Orthopedic Health Concerns Related to HIE

The orthopedic concerns of HIE overlap with the orthopedic health concerns of [cerebral palsy](#). With cerebral palsy, a person's balance, fine and gross motor skills, muscle tone, coordination and muscle control, oral-motor function, posture and reflexes are all impacted. This brain injury can cause nerves to erroneously fire signals to the muscles, causing tightening and other complications. In severe cases, this can result in bone and joint deformities, contractures, severe pain, hip dislocations, and spinal curvatures. There are numerous types of cerebral palsy, which can manifest as too much muscle tone, not enough muscle tone, uncontrolled motions, writhing or tremors.





Treating Orthopedic Health Concerns

A child's orthopedic health can be safeguarded in multiple ways, each of which is unique to the child's medical history and circumstances. [Physical](#) and [occupational](#) therapy are designed to help children gain or improve their physical function, which certain [medications](#) (such as [baclofen](#) or [Botox](#)) can help control spasticity. [Assistive devices](#) can help children walk and complete the Activities of Daily Living (ADLs), and [orthotic devices](#) can help keep the joints in alignment, support the trunk, feet, knees and joints, and help prevent maladaptive habits such as [toe-walking](#). Children can be taken to their primary care physician or pediatrician for evaluation when very young, in order to maximize the benefits of therapy and formalized Early Intervention (EI) programs, along known as Zero Through Three Programs in some states. In some cases, primary care providers will provide referrals to orthopedic surgeons who specialize in helping children with musculoskeletal conditions.

Learn More About Orthopedic Health and HIE

- [Orthopedic Concerns in Cerebral Palsy](#)
- [Common Orthopedic Concerns in CP](#)