

Orthopedic surgery is the most common category of surgery that children with cerebral palsy undergo. This category of surgeries deals with the muscles and skeleton, helping to minimize the extent of a person's physical limitations, increasing fine and gross motor coordination, and improving ambulation (with or without adaptive equipment), balance and coordination. While the goals of orthopedic surgery can vary, they can help relieve spasticity, tightness or pain, correct spinal curvatures, minimize tremors, and compensate or correct for uneven growth or maladaptive compensatory mechanisms. In other cases, orthopedic surgeries can help address challenges with feeding, bowel and/or bladder function, or ensure joint stability. Because orthopedic surgery is such a broad category of procedure, it is important to speak to your child's physician regarding any concerns you may have about your child's physical function.

Orthopedic surgeries are more commonly performed on the lower body rather than the upper body, as the risk of sensory damage and loss of functional ability is greater in the upper extremities. The relative success of any given surgery depends not only on the quality of the surgical procedure itself, but also postoperative rehabilitation efforts, which can in turn be impacted by a child's existing abilities, home environment, quality of support networks, financial situation and associated factors.



It is important to remember that the objective of orthopedic surgery is to minimize physical impairment, optimize a child's functional abilities, and maintain their ability to complete the activities of daily living. Orthopedic surgery does not cure cerebral palsy; rather, it seeks to ameliorate the health conditions that can stem from it. This type of surgery can seek to:

- Stabilize joints and release fixed joints/contractures



- Improve muscle control, coordination, and balance
- Reduce spasticity and reduce muscle tightness
- Reduce pain
- Prevent fractures and spinal/skeletal deformities
- Correct hip dislocations, uneven legs and scoliosis
- Lengthen muscles and tendons

While the range of surgeries that 'orthopedic surgery' covers as a whole varies significantly, one of the most common procedures (other than selective dorsal rhizotomy, or SDR) is called a 'tendon release procedure,' or tenotomy, where the tendons of the calf or inner thigh are selectively severed in order to improve the patient's range of motion, relieve contractures, and allow joint relaxation. This allows for the alleviation of certain symptoms while preserving the functionality of the surrounding muscles.

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