



Depending on the severity of a child's cerebral palsy, surgical interventions may be warranted to help improve the child's quality of life and/or health. Surgical interventions are usually major medical decisions, and the relative risks and benefits must be weighed carefully with the assistance of a medical professional. Surgery is not typically the first kind of treatment considered for cerebral palsy, as surgery is by definition fairly invasive. Usually, parents are encouraged to try combinations of other interventions first, including therapies, medication regimens, orthotic devices and adaptive equipment. For certain cerebral palsy-related health conditions, however, surgery can be warranted. It is important to note that surgical interventions can require significant post-operative aftercare and rehabilitation care, and, depending on a family's unique circumstances, routines will need to be adapted to ensure the child makes a full recovery.

### Scheduling Surgical Interventions

As a child develops, there are certain optimal periods for surgical intervention. Historically, medical professionals advised performing multiple surgeries at the same time between the ages of 7 and 10 to minimize long recovery times. Now, advances in surgical technologies have made many procedures less invasive with faster recover times. This means that many health care professionals now



recommend spacing out certain surgical interventions on a case-by-case basis as the child grows and develops, though some earlier recommendations regarding simultaneous surgeries still stand (in order to minimize disruption to a child's daily life and maximize post-surgical rehabilitative benefits). The decision to undergo surgery requires a careful calculation of the potential risks and benefits of the surgical procedure. Surgeries are performed only when the potential benefits outweigh the potential risks.



With cerebral palsy, the body will often develop compensatory mechanisms for dealing with certain neurological limitations (such as spasticity). Spasticity is usually caused by damage to the portion of the brain or spinal cord that controls voluntary movement. Some surgeries are timed when a child is younger before these compensatory mechanisms develop. This is because it is harder to 're-teach' the body to move a certain way than to correct the problem before (problematic) compensatory mechanisms develop. However, this must be timed in such a way that the surgery is not *too* early, or it may require repeat surgery later in life.

Example: Surgery for correcting spasticity in the upper legs is optimally done 3-6 years before surgery for lengthening hamstring and/or Achilles tendon. Historically, these were done at the same time; now, they are staggered to help prevent abnormal gait patterns from being established in the first place.

In certain cases, however, physical therapy, drug therapy or adaptive techniques and equipment can help delay or reduce the need for cerebral palsy-related surgeries.

Surgical interventions for cerebral palsy can include:

- SDR (Selective Dorsal Rhizotomy) for reducing spasticity in the lower limbs
- Gastroenterology Surgery for correcting CP-related digestive difficulties
- Hearing Correction Surgery and Vision Correction Surgery for CP-associated hearing and vision deficits
- Orthopedic Surgery to correct musculoskeletal malformations and reduce pain
- Neurosurgery