



Neurosurgery is often considered to be an option of last resort when it comes to the treatment of children with cerebral palsy. The most common neurosurgeries for cerebral palsy include the insertion of a baclofen pump to continuously deliver muscle relaxants to the spine (with the purpose of spasticity reduction) and selective dorsal rhizotomy (SDR), where sensory nerves are cut to decrease spasticity. Physicians should always be consulted to determine whether these interventions are appropriate for the individual with cerebral palsy.

A baclofen pump is a hockey puck-sized device implanted in the abdomen which is connected to the spine via a thin tube. The pump must be refilled at regular intervals, however, and will eventually need replacement in a repeat surgery. To read more about these common neurosurgeries, please see our pages on [SDR](#) and [baclofen](#) pumps.

Brain surgery as a field is undergoing many advancements, and there are several new procedures that are still being tested or are just now becoming accepted for care. These surgeries are not yet common but information about them is becoming more widespread. One such surgery is called 'deep brain stimulation,' or DBS. DBS is now being used as a potential treatment option for dystonic cerebral palsy. In



In this procedure, surgeons target the globus pallidus, a part of the brain implicated in the abnormal muscle tone produced in global dystonia specifically. In DBS, surgeons conduct a stereotaxic procedure under local anesthesia, placing an electrode in the target area of the brain and extensively testing its location to ensure no unwanted side effects. This procedure aims to reduce dystonia in certain populations, though whether or not an individual is a good candidate for the procedure is a question to be discussed with a medical professional. To learn more about the nuts and bolts of DBS, please visit the University of California San Francisco's Department of Neurological Surgery's [deep brain stimulation frequently asked questions page](#).



The advantage of deep brain stimulation is that the technique is adjustable and reversible, unlike prior methods of brain surgery interventions for cerebral palsy. A physician should always be consulted to determine whether deep brain stimulation is appropriate for a particular individual with cerebral palsy.

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Learn More About Neurosurgery for Cerebral Palsy:

- [Neurosurgery: SDR, TES, and Baclofen Pumps](#)
- [Washington University School of Medicine: SDR Surgery](#)
- [Boston Children's Hospital: Neurosurgical Approaches to CP](#)
- [Deep Brain Stimulation for Dystonia: Research](#)
- [Combined DBS and Orthopedic Therapy: Case Study](#)
- [DBS: A Breakdown](#)
- [DBS: Comprehensive Research Summary](#)