

Botox is commonly used to assess muscle spasticity in children with cerebral palsy (CP), but the effect of Botox on muscle and bone development and on physical activity is poorly studied. It is well-established that children with CP have weaker muscles and bones and participate in less physical activity. One promising treatment for poor muscle and bone development is **vibration**. Low-level vibration has been shown to improve muscle and bone mass. A few studies have included children with CP. In this study we want to determine the effect of Botox and vibration treatment on muscle, bone and physical activity in children with spastic CP.

The total duration of the study is 6 months. The child will be tested at the baseline (0 month), 1 month, and 6 months. The testing at baseline (0 month) and 6 months is spread over 2 days and the testing at 1 month can be done on a single day. The schedule is very flexible and we try to work per the schedule of the family. Most of our participants prefer being tested over a weekend. The tests are done at the AlduPont Hospital for Children in Wilmington, DE and the University of Delaware, in Newark, DE.

Ages Eligible for Study: 2 Years to 12 Years

Genders Eligible for Study: Both

Inclusion Criteria:

1. Have spastic CP.
2. Between 2-12 years of age.
3. Recommended for Botox treatment by their physician as part of their clinical care. Those who accept Botox treatment and those who do not accept Botox treatment are both eligible for the study.
4. Have not had Botox treatment in the lower extremities within the last 1 year.
5. A score of 1-4 on the gross motor function scale (GMFC).
6. Do not have metal rods in both legs.

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Although families from any part of the country are welcome to participate, participation would be most convenient for families living in Delaware, surrounding states like NJ, PA, NY, MD, or Washington DC.