Dystonic cerebral palsy is a condition that can cause whole body extensor spasms, resulting in increased pain, discomfort and postural displacement. Symptoms can be reduced if the person is permitted to extend during a spasm, reducing the forces experienced by the user. Present static and dynamic foot supports do not allow sufficient movement for significant force reduction to occur.

A previous physical simulation of this dynamic foot support resulted in self-reported reductions in pain and tone, with an increase in head control. The proposed new support, based on the simulation, permits extension of the knees, and plantar-flexion of the feet during a spasm.

The aim of this research project is to investigate whether an anatomically hinged dynamic foot support could improve function and comfort in people with whole body extensor spasms. The project will involve evaluating the novel dynamic foot support prototypes with adults and children; and assess functional outcomes and mechanical performance.