

# Abnormal muscle co-contraction in the lower limbs: a factor limiting the mobility of patients with Autosomal Recessive Spastic Ataxia of Charlevoix-Saguenay (ARSACS)

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Although Autosomal Recessive Spastic Ataxia of Charlevoix-Saguenay (ARSACS) is considered a rare disease, it is the second most common form of recessive ataxia in Europe and the majority of those affected are in Quebec. This disease is generally defined by 3 main symptoms: incoordination, stiffness in the lower limbs (spasticity) and loss of muscle strength muscle in the hands and feet. In the long term, people with the disease show a loss of their physical capacity, mobility and quality of life. One of the most significant negative consequences of this disease is the loss of ability to walk and transfer. According to the scientific literature, spasticity is one of the main causes limiting mobility in ARSACS. However, recent observations made by our research team show that, despite significant mobility limitations, the level of spasticity in people with ARSACS is rather low. However, we observed the presence of excessive muscle co-contractions (simultaneous activation of muscles that produce an opposite movement) in the lower limbs compared to healthy people. This new observation calls into question the understanding of the impairments that would be responsible for the loss of mobility. Our current research work therefore aims to study and better understand the nature and extent of these co-contractions in ARSACS during movements in the lower limbs. We hope that this new knowledge will allow the development of specific therapeutic interventions aimed at maintaining and improving the autonomy of people with ARSACS. The results of our most recent research and avenues for intervention will be presented at this conference.

## Lecturers



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## Link for the conference:

<https://zoom.us/j/97389856898?pwd=NkR2eEJKZnUzRGp4WlJhTi9SbTBkZz09>

Conference ID: 973 8985 6898 / Code: 326131