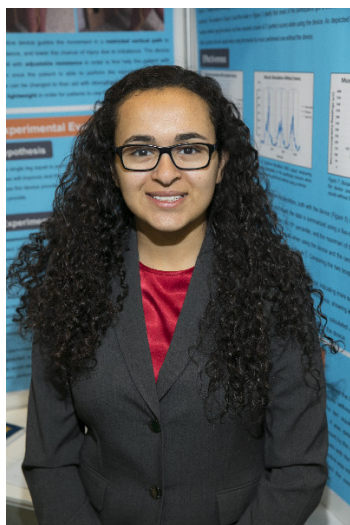


# CWSF 2017 - Regina, Saskatchewan



## Marina Ilyas

### Phixing Physio

**Challenge:** Innovation

**Category:** Junior

**Region:** Waterloo-Wellington

**City:** Waterloo, ON

**School:** Centennial P.S.

**Abstract:** In my project, I created an assistive device to improve the form in the single leg squat, (a difficult exercise in physiotherapy). A MyoWare, which is a device that detects muscle stimulation through electromyography, was used to ensure that the intended muscle usage was not compromised when using the device. The impact of explaining the general benefits of the exercise on regularity was also evaluated.

### Biography

My name is Marina Ilyas, I am a grade 8 student, and I am a part of the Waterloo-Wellington delegation. I am very excited to be part of CWSF for the first time. Because of the many injuries I got playing sports, and the number of times I needed physiotherapy, my project aims at overcoming incorrectness and irregularity in the single leg squat. I created an assistive device to improve the form in this exercise and measured muscle stimulation to ensure the device did not compromise muscle usage. Besides my love for science and Math, I play piano, violin, cello and bass clarinet. I also play soccer and squash, and I will be representing my city in the International Children's Games in Lithuania this summer playing table tennis. I enjoy travelling and learning new languages. I have always loved engineering and building things, and I hope that I will become a mechatronic engineer.

### Awards

### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000

