



Hot off the Press!

Results from Studies in our Division

Physical Activity in Canadian Children with Juvenile Idiopathic Arthritis: The LEAP Study

(Linking Exercise, Activity, and Pathophysiology in Canadian Children with Arthritis)

By Dr. Lori Tucker and the LEAP Investigators

The LEAP Study is a Canada-wide study that required collecting clinical information, blood samples, and bone and muscle measurements from children with JIA between 2012 and 2015.



Children from 12 different pediatric rheumatology centres in Canada, including Vancouver, participated in the study. Dr. Lori Tucker who co-led this national study recently presented results at the American College of Rheumatology Meeting in Chicago. Not surprisingly children with JIA have lower physical activity levels than healthy children. Physical activity was lower around diagnosis, and early in the JIA disease course when disease is active. Children with polyarthritis and enthesitis-related arthritis have lower levels compared to children with other subtypes of JIA. However, we found that even children with less active disease, 3-5 years later, still had less physical activity than healthy children. We will now be looking at information collected over the entire 2 years of the study, and hope to be able to show that being physically active is safe and important for children with JIA.

Hellos and Goodbyes from the Rheumatology team!



Our team has welcomed a few new faces over the last few months! Dr. Lovro Lamot, Rheumatologist from Croatia, has joined Dr. Kelly Brown's team as a postdoctoral fellow. He will be involved in developing a new ways to test inflammation in various rheumatic diseases; this will, ideally help physicians' decisions on when to stop and start medicines. Maria Belen and Neall Struwig have joined our team as the newest research co-op students. Maria will be working on the autoinflammatory disease studies while Neall will be working on arthritis studies.

Khaye Rufin, a new research coordinator, has also joined the team to help out while Angelyne Rivera is on maternity leave. We are also happy to share that our occupational therapist Jennifer Brown welcomed a new baby girl in mid-October! Sarah James will be our new occupational therapist while Jennifer is away.



Rheumatology Research Report



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Welcome to the Fall 2018 Research Report! In this edition, we will tell you about two new studies on JIA & uveitis, as well as vasculitis; we will provide you an update on the iThermonitor study and CAPRI JIA Registry. We will also share some results from the LEAP Study, in which some of you may have participated over the past few years. You will also get introduced to some new members of our team at the end of the newsletter. Happy reading!

Are you interested in joining our research studies?

Contact us at RheumResearch@phsa.ca

For more information, visit our website:
<http://tinyurl.com/rheumatologyresearch>





New Kids on the Block: Our Division's Newest Projects

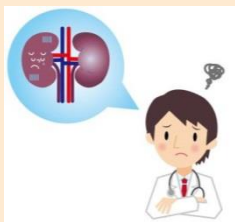
The Biologic Basis of Co-existent Uveitis and Arthritis in Children: Towards Early Detection, Targeted Treatment, and Prevention

Approximately 8 out of every 100 children with chronic arthritis also have associated inflammation in the eye, a condition called uveitis. Currently, we do not know why JIA and uveitis occur together or why being a girl, having a young onset age and having a positive test for a blood test called antinuclear antibody (ANA) are factors that increase the risk for developing uveitis.



Rheumatologists at BC Children's Hospital are teaming up with Dr. Alan Rosenberg from Saskatoon, and other Rheumatologists across Canada to try to understand and explain why children with arthritis can also have inflammation of the eye (uveitis). We will be collecting data, blood, and saliva samples from children with JIA with and without uveitis for this study.

Renal Disease in Children with Childhood Vasculitis



Renal disease is common in children with vasculitis and little is known about the disease course or how the children do over time. Dr. Kimberly Morishita (Pediatric Rheumatologist) recently received funding from the Childhood Arthritis and Rheumatology Research Alliance (CARRA) to find out when a child's renal disease will either improve or worsen over time.

The results of this study will hopefully guide future treatment for children with vasculitis who have early renal disease, in the hopes of preventing long-term damage or worsening of disease.



Updates on Ongoing Studies

60 Days of iThermonitoring in Children with Periodic Fever Syndromes



The iThermonitor study aims to find out if routine home-based monitoring of temperature is feasible, acceptable and useful in early detection of inflammatory flares in children with periodic fever syndromes. We also want to study urine and saliva samples to determine whether there is a change in the proteins right before a fever episode so we can better understand the course of the disease.

Over the course of two fever episodes, or a maximum of 60 days, participants will be asked to test the wireless iThermonitor and app, collect daily saliva and urine samples, and complete a fever diary. Seven children have completed the study so far and we are looking for two more participants to complete the study!

The **Rheumatology team** is also teaming up with a group of **Engineering students from the University of British Columbia** to come up with a prototype of a new wireless thermometer that would be appropriate, easier and better for school-aged children with periodic fever syndromes to use.



National CAPRI – JIA Registry



The CAPRI Registry now has **349 participants** in total since recruitment started in 2017. A little over a third (125) of these participants comes from BCCH. The registry has doubled the number of participating sites since last year, to now include 13 sites across Canada as follows: Vancouver, Edmonton, Calgary, Toronto Community Centres (NYGH, HSN), Quebec City, Montreal, Ottawa, Hamilton, Burnaby, London, Victoria, and Sherbrooke. For newly diagnosed patients included in the registry, the registry includes a calculator for the doctors to see the probability that the child might have a severe disease course that in anticipation warrants discussion about the need for earlier more 'aggressive' treatment.

A recent review of Registry data shows up to 80% of children gain full disease control within one year of diagnosis.