Automated detection of autonomic dysreflexia via deep learning

Lend a hand. Help find hope for future generations.

PURPOSE OF THIS STUDY

The purpose of this study is to investigate if and how retinal blood vessels change after a spinal cord injury (SCI) and the associations of these changes with cardiovascular diseases. Using images of retinal blood vessels, we will develop a deep learning-based screening tool for autonomic dysreflexia, a cardiovascular complication unique to SCI.

WHO CAN PARTICIPATE

You may be eligible to participate in this study if you are a traumatic SCI patient or a non-SCI individual with a history of hypertension.

You may be ineligible to participate if you:
• have known eye injuries or conditions that could affect retinal vasculature
• are in the control group (i.e. non-SCI individual with history of hypertension) with a disease other than hypertension that can cause retinopathy, such as diabetes);
• are an SCI patient with any disease that causes retinopathy

WHAT IS INVOLVED

• Visit 1: (Week 1) Hand out Questionnaires and receiving the 24 hour Blood Pressure monitor at ICORD
• Visit 2: (24 hours after Visit 1) Retinal fundus imaging at Dr. Yeung's office, return BP-monitor
• Visit 3: (1 year after Visit 2) Repeat fundus imaging at Dr. Yeung's office

CONTACT INFORMATION

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Say yes to research!

vchri.ca/participate

Vancouver CoastalHealth
Research Institute

STUDY TIME/ DURATION

September 2021 to November 2023

STUDY LOCATION

818 West 10th Avenue, Vancouver and
616-2525 Willow Street, Vancouver

PRINCIPAL INVESTIGATOR

Dr. Ipek Oruc
Associate Professor, Department of Ophthalmology & Visual Science, Faculty of Medicine, UBC
Research Investigator with VCH Research Institute

To learn more about this study, visit **vchri.ca/participate**