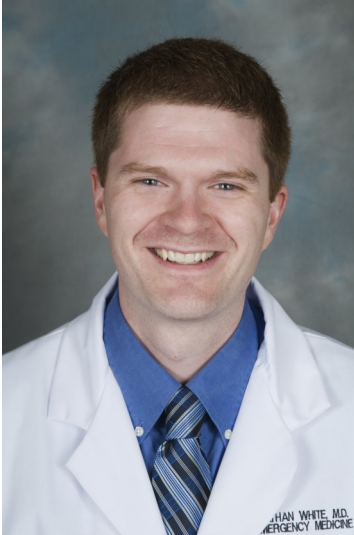


Wednesday, February 25th, 2015

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

12-1pm



Dr. Nathan White

Assistant Professor, Division of Emergency Medicine

Adjunct Assistant Professor, Bioengineering and Mechanical Engineering, University of Washington

“Biomechanics of Bleeding”

For some, the immediate reaction to the sight of bleeding is to grasp and compress the wound. Others react internally by slowing the heart rate and dropping their blood pressure, often followed by fainting. What appear to be puzzling reactions were more likely programmed into our physiology thousands of years ago to improve survival after injury. Fundamentally, bleeding is the balance between the outward forces of blood leaving the wound balanced against the resistive forces of the incipient hemostatic clot. We study these fundamental relationships focusing on platelet and fibrin interactions. We will present data from models of massive hemorrhage, peer into wounds to image clot formation in real time, and present new designs for hemostatic bandages. By understanding the fundamental relationships between clot formation, wound geometry, and blood flow, we can better design rationale therapies to stop bleeding. With this understanding, it is apparent that our puzzling reactions to bleeding actually make perfect sense.

Please contact Dr. Christian Kastrup (ckastrup@mssl.ubc.ca)
to network with the guest speaker.