


UBC Graduate & Faculty Christian Forum

A Serious Academic Interchange

Expert Panel on Addiction @ UBC

February 11, 2018 March 16, 2018



**EXPERT PANEL ON
ADDICTION**

- JOHN KOEHN: Addiction Medical Practitioner, New Westminster, Royal Columbia Hospital
- JAY WANG: Psychiatry UBC, Providence Health, front-line addiction worker, under Dr. Evan Wood
- JADINE CARINS: Nutritionist, Children's Hospital, Specialist in Eating Disorders
- GABRIEL LOH: Doctor of Pharmacology, Vancouver Coastal Health, Clinical Assistant Professor, Richmond Hospital

**WEDNESDAY, MARCH 14 @ 4:00PM
WOODWARD IRC ROOM 5, GATE
ONE UBC**

**Sponsored by Graduate and Faculty
Christian Forum**

(<https://ubcgfcf.com/2018/02/11/expert-panel-on-addiction-ubc/screen-shot-2018-02-11-at-6-24-10-pm/#main>)

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Audio Recording of Addiction Panel

Dr. Gabriel Loh

Gabriel is currently Clinical Coordinator of Pharmacy Practice at Richmond Hospital and is also a Clinical Assistant Professor with the Faculty of Pharmaceutical Sciences at UBC. Gabriel obtained his undergraduate Pharmacy degree at UBC in 2001, subsequently completed a hospital pharmacy residency at Saint Paul's Hospital in 2002 and then a post-graduate Doctor of Pharmacy degree at UBC in 2007. He has worked as a front-line clinical pharmacist in the Intensive Care Units at both Vancouver General Hospital and Richmond Hospital for the past 10 years and has helped care for patients and families with various addiction issues in his daily work.

"Addiction is a complex medical disorder that not only affects the individual but which can also destroy the lives of entire families and loved ones. While various interventions and treatments are now available to help an individual manage addiction, the Christian community must not neglect the patient's family members and caregivers who desperately need support and healing as well. While there are all sorts of therapeutic interventions and harm reduction strategies being promoted right now, I believe that a holistic approach that incorporates the physical-emotional-spiritual aspects would be most successful in breaking the cycle of addiction."

Dr. John Koehn

John completed his medical education at the University of British Columbia, receiving certification from the Canadian College of Family Physicians. He acquired additional training in addiction medicine through completion of the St. Paul's Goldcorp Addiction Medicine Fellowship and is certified by the American Board of Addiction Medicine. Currently, he is a consulting physician in addiction medicine at the Royal Columbian Hospital in New Westminster, British Columbia, where he also teaches as a member of the UBC Clinical Faculty.

"I tell my patients that addiction is a treatable disease and that people get better when they take steps to address it. I am very hopeful for my patients because I've seen the difference that recovery can make in their lives."

Jadine Cairns, Registered Dietician, MSc. Nutrition

Jadine Cairns has worked as a registered dietitian for over 30 years and completed her masters in Human Nutrition at the University of British Columbia in 2003. She has published and presented at national and international conferences in the area of eating disorders. She was the President of the Eating Disorders Association of Canada and Chaired the National Eating Disorders Conference in 2014. Currently, Jadine works with the BC Children's Hospital Eating Program for almost 30 years. She also has a private practice specializing in weight management, eating disorder and disordered eating issues.

Eating Disorders

"Causes of Eating Disorders, simply put, is multi-factorial. It has been described as a combination of genetics, internal personal factors and external (environmental) factors. Not much can be done with genetics, but the goal of treatment would be to address the internal space of being human and to be aware of the environment where we live. Is an eating disorder the result from our "addiction to health", "perfectionism", performance, or our need to preserve our self-image in the only way we know how? The latest thoughts and research around what is helpful and has good prognostic outcomes include psychoeducation, dialectical behavior therapy, family base therapy, cognitive behavioral therapy and self-compassion."

Jay C. Wang, MD

PGYIII Psychiatry Resident, Doctor of Medicine, University of British Columbia under Dr. Evan Wood, Centre for Excellence in HIV/AIDS St. Paul's Hospital, Vancouver.

Dr. Jay Wang is a graduate of the University of British Columbia School of Medicine. Currently, he is completing his specialty training in psychiatry. Having seen the effects of drugs and addiction on psychiatric patients, he is interested in the interface between psychiatry and addiction, and will be completing subspecialty training in addiction psychiatry in the following academic year. In his opinion, the treatment of addiction emphasizes the biopsychosocial approach, where medications, therapy, and social factors all have a role to play in helping a patient recover.

Live Recording of Panel <https://ubcgcu.org/2018/03/05/expert-panel-on-addiction-march-14-ubc/>
<https://www.youtube.com/watch?v=66cYcSak6nE&app=desktop> (<https://www.youtube.com/watch?v=66cYcSak6nE&app=desktop>). Gabriel Maté

Some Questions to Ponder

Is addiction a brain disease or a chosen habit or something in between? If we call addiction a disease does that absolve individuals from moral responsibility?

Do you think decriminalization (rather than legalization) of opioids would increase or decrease the present addiction crisis?

Is there a danger that widespread use of opioid antagonists might merely encourage greater use of opioids?

Nicotine is far deadlier and more addictive than cannabis. Should the government be taking greater steps to prevent nicotine addiction?



Thoughts on Addiction by Dr. Judith Toronchuk, Neuropsychologist

In order for organisms to learn and successfully repeat behaviours that result in survival of the individual and the social encounters necessary for survival of the species, certain brain mechanisms for motivation, emotion and executive control must be activated. Addiction occurs when these normal mechanisms become hijacked by particular substances. The common mechanism for this hijacking involves increased sensitivity to the neurotransmitter dopamine. Pleasurable behaviors including eating, drinking, music, video games, social and sexual interactions are all accompanied by dopamine release in an area deep in the frontal brain called the *nucleus accumbens*. Substances that are abused also directly or indirectly activate this area, but psychostimulants, opiates, ethanol, cannabinoids and nicotine all result in bursts of dopamine release 3 to 5 times greater than that provided by normal reinforcers.

Dopamine release in this brain area flags whatever produced this dopamine spike as worth attending to, and any cues associated with it as worth learning. This is the normal brain mechanism which promotes learning of the behaviours necessary for survival. Initial bursts of dopamine during successful behaviours causes positive reinforcement and results in the longterm structural changes in synapses and dendritic spines which underlie learning. The mechanism works as it should if the organism learns, for example, where food is available. The problem arises with the supra-physiological amounts of dopamine produced by addictive substances. This learning of drug associated cues and pleasurable feelings leads to addiction.

Sensitization of the nucleus accumbens occurs during this addiction process. Drugs, alcohol and nicotine can restructure the synaptic pathways so they stimulate more dendrites than previously, but other normal reinforcers stimulate fewer dendrites. This action hijacks motivational processes and the person becomes focused only on the drug. Now the brain is sensitized to the drug cues and any reminder of the drug can cause craving and drug seeking even in abstinent former users. Cues associated with the drug such as paraphernalia or even specific places and people increase anticipatory activity in the sensitized nucleus accumbens and related areas and bring back the craving.

Now we have set the stage for long-term changes in motivation, emotion and executive control of behavior that occur in addiction. Due to physiological adaptation to the high levels of dopamine, chronic use leads to a decrease in the subjective feeling of pleasure provided by the drug by a mechanism referred to as tolerance. Tolerance means an increasingly greater amount of the drug is necessary to produce the same "high". Eventually drug users seek to avoid the distress, irritability and restlessness of the withdrawal symptoms produced when dopamine release in the accumbens is decreased if they do not continue to take the drug regularly. To prevent withdrawal with its resulting negative sensations and feelings, individuals become focussed on compulsively seeking more of the drug. Thus, in addition to changes in motivation, there are changes in emotional mechanisms. The memory of reinforcement also decreases the activity in the cortical executive circuits which normally provide inhibitory control over all adult behaviour and allow us to make wise decisions. Thus ability to regulate behaviour thus becomes impaired due to altered cortical control circuits.

~ Dr. Judith Toronchuk, Neuropsychologist

<https://www.youtube.com/watch?v=EKkUtrL6B18> (<https://www.youtube.com/watch?v=EKkUtrL6B18>)
Hacking of the American Mind, Dr. Robert Lustig, His book: *The Hacking of the American Mind: the science behind the corporate takeover of our minds and bodies.*

Kent Dunnington: Addiction - The Perilous Gift (Part 1) [Talbot Cha...



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