



Early Brain and Biological Development and Addiction, UME

Podcast Series:

INTRODUCTION

- 1 The Neuro-Developmental Pathway Origins of Addiction

CORE CONCEPTS OF EARLY CHILD DEVELOPMENT

- 2 Brain Architecture and Development
- 3 Early Experiences and Gene Expression
- 4 Building Cognitive Emotional and Social Capacities
- 5 Positive, Tolerable and Toxic Stress
- 6 Brain Plasticity and Behavioural Change
- 7 **Intervention and Treatment in Children's Mental Health**

ADDICTION

- 8 Different Kinds of Addiction
- 9 Prevention, Intervention and Treatment of Addiction
- 10 Early Trauma in Addiction
- 11 Chronic Disease Management Model of Addiction Treatment: A Healthcare System Response
- 12 Quality Improvement Strategies and Evaluation for Addiction Treatment Programs
- 13 Process Improvements in Healthcare Programs to Support Addiction Treatment

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on AFMC.ca



PODCAST 7: Intervention and Treatment in Children's Mental Health

STUDY GUIDE | Run time 21:04, Released September 2012

Podcast 7, *Intervention and Treatment in Children's Mental Health*, highlights the importance of level, supportive environments during childhood development; examines the negative consequences of maltreatment (such as post-traumatic stress disorder, depression and addiction), which can continue throughout life; and identifies treatment options involving healthcare professionals, parents and children exposed to toxic stress. The podcast series has been designed to offer a quick introduction to the subject of early brain and biological development and its connection to addiction. Each podcast links specific medical learning objectives with emerging research. Several podcasts also follow the story of Dr. Ray Baker, a physician who has struggled with addiction, to help illustrate the key concepts addressed.

The Association of Faculties of Medicine of Canada (AFMC) created the podcast series based on lectures from the Alberta Family Wellness Initiative, a knowledge mobilization initiative designed to translate scientific research into policy and practice. The lectures have been repurposed, with permission, for undergraduate medical education. Supplementary resources, including virtual patients and a Primer on the Neurobiology of Addiction, are also available on www.afmc.ca.

Learning Objectives:

Once you have listened to this podcast, you should be able to:

- Describe how the foundations of many mental health problems that endure throughout adulthood are established early in life due to a lack of quality and stability in a child's relationships
- Recognize that toxic stress encountered early in life can have an impact on an individual's ability to regulate his or her emotions, and understand how this can lead to severe problems with addiction and depression, and in forming relationships, interacting effectively in social situations, and succeeding at school and in the workplace
- Identify intervention and treatment methods that will foster self-control in individuals who have encountered adverse childhood experiences
- Outline the importance of preventing childhood maltreatment and steps that can be taken toward preventing its recurrence
- Describe the elements of an effective program for maternal and family health e.g., the Nurse-Family Partnership program

Featured Subject Matter Experts:

This podcast features excerpts from the following lectures:

- [Adverse Childhood Experiences: Posttraumatic Stress Disorder and Beyond](#)
Dr. Ruth Lanius, Director of the Posttraumatic Stress Disorder Research Unit, University of Western Ontario
- [Foundations of Social and Emotional Development](#)
Dr. Heather Henderson, Director of the Social Development Lab, University of Miami
- [Child Maltreatment: Implications for Development and Approaches to Prevention](#)
Dr. Harriet MacMillan, Pediatrician and Psychiatrist, McMaster University, Offord Centre for Child Studies

Listeners are encouraged to learn more about the subject matter through their interactions with patients, research and by checking out the AFWI lecture series available at www.albertafamilywellness.org.



Key Learning Points:

- Maltreatment or toxic stress in childhood can lead to severe problems in forming relationships, interacting effectively in social situations, and succeeding at school and in the workplace
- Toxic stress and its impact on an individual's temperament and ability to regulate emotions can result in adolescent failures such as smoking, drinking, using drugs and dropping out of school. It can also lead to serious health problems, such as cardiovascular disease and depression, later in life
- Childhood maltreatment is a predominant form of toxic stress but it can be prevented from occurring and recurring with proper treatment programs
- Successful treatment programs, such as the Nurse–Family Partnership, engage and educate both healthcare professionals and families

Reflective Questions:

1. In your role as a medical student or practising physician, how would you integrate and apply what you have learned about early life experience (especially trauma, toxic stress and quality of attachment) in engaging with and understanding a patient? How would it change your attitude toward and communication with patients?
2. Are you aware of health services that could address childhood maltreatment in your community? In your position, how could you help your patients access these types of services?
3. How would you organize outpatient care for adult victims of toxic stress and/or those with a history of childhood maltreatment?

Acknowledgements

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Preparing for your exams...

Medical Council of Canada (MCC) Objectives for the Qualifying Examination (excerpt):

103 ADDICTIONS/SUBSTANCE ABUSE Rationale: Addiction may be to substances or may be a process (behavioral) addiction. Alcohol and nicotine abuse are such common conditions that virtually every clinician is confronted with their complications. Addiction to prescription drugs and to other substances is prevalent in all communities and is a common cause of medical morbidity and mortality.

Causal conditions: 1. Substance use: a. Stimulants, b. Depressants, c. Other substance; 2. Process (behavioral) addictions (e.g., gambling); 3. Adverse childhood or traumatic experiences; 4. Epigenetic changes **Key objectives:** Given a patient with an addiction or a substance abuse problem, the candidate will be able to identify the issue, potential consequences and the need to provide immediate and continuing support and intervention. (Source: [MCC Objectives for the Qualifying Examination: 103 Addictions/Substance Abuse](#))

Other relevant objectives:

[31-2 FAILURE TO THRIVE \(INFANT, CHILD\)](#)

[71-1 CRYING OR FUSSING CHILD](#)

[74 PERIODIC HEALTH EXAMINATION \(PHE\)](#)

CanMEDS-FMU Undergraduate Competencies from a Family Medicine Perspective

(excerpt):

1. THE FAMILY MEDICINE EXPERT

1.7. The learner will be able to identify what health-promotion and disease-prevention activities are appropriate to particular populations using evidence-based guidelines. (Source:

CanMEDS-FMU Undergraduate Competencies from a Family Medicine Perspective: 1. The Family Medicine Expert)

5. THE FAMILY MEDICINE HEALTH ADVOCATE

5.2. The learner will understand that the patient is part of a network that can be drawn upon (e.g. family, community, workplace) but also recognizes that stressors related to these networks can limit advocacy and care. (Source: *CanMEDS-FMU Undergraduate Competencies from a Family Medicine Perspective: 5. The Family Medicine Health Advocate*)

Childhood Maltreatment, INTERVENTION, healthcare, toxic stress, DEPRESSION, Post-traumatic Stress Disorder, ADDICTION, temperament, ADVERSE CHILDHOOD EXPERIENCES, health