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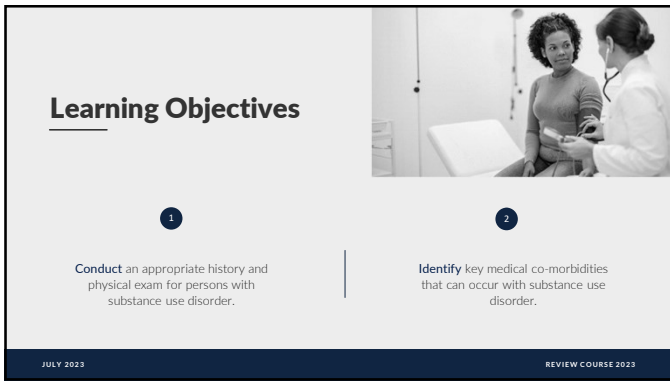
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### Presentation Outline

<p style="text-align: center; margin: 0;"><b>Routine and Preventive Care</b></p> <ul style="list-style-type: none"> <li>• History</li> <li>• Physical examination</li> <li>• Labs</li> <li>• Preventative Care</li> <li>• Preconception Care</li> </ul>	<p style="text-align: center; margin: 0;"><b>Medical Consequences of Alcohol and Drug Use</b></p> <ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Tobacco</li> <li>• Opioids</li> <li>• Stimulants</li> <li>• Injection Drug Use</li> <li>• Cannabis</li> </ul>
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### SUD = Poor Medical Care

- Reasons
- Barriers
- Consequences

*Chan Carusone, S., Guta, A., Robinson, S. et al. "Maybe if I stop the drugs, then maybe they'd care?"—hospital care experiences of people who use drugs. Harm Reduct J 16, 16 (2019).*

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### General Medical Evaluation

- Medical History
- Physical Examination
- Tests
- Preventative Counseling
- Preventative Screening
- Immunizations

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### Alcohol

- Affects every organ system
- Women >> Men
- Is any ETOH safe?
- Physical Exam Findings:
  - Spider angiomas
  - Palmar Erythema
  - Jaundice
  - Ascites

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### Alcohol

- GI-
  - Esophagitis/gastritis, Mallory-Weiss tears, esophageal varices
  - Pancreatitis (dose-related toxic effect)
  - Alcohol-related liver disease
    - AST/ALT > 2
    - Fatty liver
    - Alcohol related hepatitis (ALH)
    - Cirrhosis-10-20%

UCSF, Department of Surgery

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### Alcohol

- Respiratory
  - Aspiration
  - OSA
- Infectious
  - Hepatitis
  - SBP
  - TB
- Nutrition-vitamin and mineral deficiencies
  - B1, B6, riboflavin, niacin, Vit D, Mg2+, Ca2+, folate, PO4, zinc

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### Alcohol

- CV
  - HTN-dose dependent
  - Cardiomyopathy-dilated
  - Atrial Fibrillation "Holiday Heart"
- Heme/Oncology
  - Anemia-macrocytic
  - Thrombocytopenia/pancytopenia
  - Coagulopathy
  - Increase CA: breast, oral, GI, hepatic (no safe threshold)

Zhao J, Stockwell T, Naimi T, Churchill S, Clay J, Sherk A. Association Between Daily Alcohol Intake and Risk of All-Cause Mortality: A Systematic Review and Meta-analysis. JAMA Netw Open. 2023;6(3)

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### Alcohol

- Neurological
  - Neuropathy-peripheral/autonomic
  - Sleep
  - Cognition
  - Cerebellar dysfunction
  - Trauma

Wernicke Encephalopathy	Korsakoff's Syndrome
C-Confusion	R-Retrograde amnesia
O-Ophthalmoplegia	A-Anterograde amnesia
A-Ataxia	C-Confabulation
T-Thiamine Deficiency	K-Korsakoff psychosis

Medical Maestro

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### Alcohol

- Endocrine
  - Hypogonadism
    - Direct testicular effect
    - Hepatic dysfunction → reduction in gonadal hormones
  - Decreased fertility
  - Hyperlipidemia

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**Tobacco**

- Leading cause of preventable death
- CV
  - HTN
  - CAD (multifactorial)
  - Peripheral vascular disease
- GI
  - GERD/PUD
  - Pancreatitis
  - Inflammatory Bowel Disease
  - Malignancy



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**Tobacco**

- Respiratory
  - COPD
  - Malignancy
  - Asthma
  - PTX
  - Pulmonary HTN
  - Pneumonia/bronchitis



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**Tobacco**

- Heme/Onc
  - 49% of cancer deaths related to tobacco use
  - Oral, gastric, lung, breast, cervical, bladder, kidney
  - DVT/PE
- Neurological
- Infectious Disease
- Reproductive/Endocrinology
  - Grave's Disease/hypothyroidism
  - Erectile Dysfunction/infertility



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### Tobacco Cessation and Recovery?

- Continued tobacco use predicted return to all substance use
- Should residential treatment programs allow nicotine use?
- Will patients leave prematurely?
- Philadelphia and NY experiences

Weinberger AH, Platt J, Esan H, Galea S, Erlich D, Goodwin RD. Cigarette Smoking Is Associated With Increased Risk of Substance Use Disorder Relapse: A Nationally Representative, Prospective Longitudinal Investigation. *J Clin Psychiatry*. 2017 Feb;78(2):e152-e160.

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### Opioids

- ID
  - IVDA-endocarditis, osteomyelitis, Hep C and HIV
  - STD
- Respiratory-overdose, chest wall rigidity with FENT, pulmonary edema
- Endocrine-reduction in steroid hormones
- Trauma-rhabdomyolysis, compartment syndrome
- Respiratory-OSA,
- GI-constipation

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### Opioid Induced Hypogonadism

- Low libido
- Muscle wasting
- Increased adiposity
- Depression
- Osteoporosis
- Treatment: Testosterone replacement

Mayo Clinic Proceedings: Innovations, Quality & Outcomes, ISSN: 2542-4548, Vol. 3, Issue: 3, Page: 276-284

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### QT Prolongation

- Normal: <430 ms-men, <450 ms-women
- Medications: methadone, quinolones, ondansetron, macrolides, hydroxyzine, citalopram
- ↓ Mg<sup>2+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>
- Screening:
  - Good family and medical history-look at all medicines
  - EKG at higher doses of methadone?
- Flockhart Table/APP-IUSOM

Trecece JM, Al Madani M, El Khoury G, Khraisha O, Martin JE, Baumrucker SJ, et al. Comprehensive review on methadone induced QT prolongation and torsades. J Pharmacol Pharmacother. 2018;9:66-7511-12-2017 R

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### Risk Factors for TdP

A CARLAT PSYCHIATRY REFERENCE TABLE

Risk Factors for Torsades de Pointes	
Nonmodifiable	Modifiable
Female sex	Multiple QT-prolonging medications
Older age	Drug toxicity
Structural or functional heart disease	Drug-drug interactions
Congenital long-QT syndrome	Severe acute illness
Personal history of drug-induced QT prolongation	Bradycardia
Family history of sudden (or aborted) cardiac death	Hyokalemia, hypomagnesemia, hypocalcemia
Poor metabolizer of CYP enzymes	Hepatic or renal impairment

44999 | J Fam Pract 2021; 70(11):753-759

From the Article:  
 "Cardiovascular Psychiatry Part 1"  
 with Sergio C. Frank, MD, MS, FACAP  
 The Cardiac Psychiatry Report, Volume 21, Number 483, April/May 2023  
[www.psychiatryonline.org](http://www.psychiatryonline.org)

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### LFT's and Naltrexone

- Indication OUD/AUD-baseline higher risk of hepatic disease
- No need to check LFT's prior to initiating treatment
- HCV, HBV not a contraindication
- Elevated LFT's no greater than placebo

Springer, Sandra A., "Monitoring of Liver Function Tests in Patients Receiving Naltrexone or Extended-Release Naltrexone," PCSS clinical guidelines, Update 2022

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### Stimulants

- CNS
  - CVA-5X increased risk hemorrhagic (METH), also ischemic (COC)
  - No evidence cocaine associated with seizures
- CV
  - MI
  - HTN
  - Aortic dissection
  - Ventricular arrhythmia
  - Supportive treatment:  $\beta$ 1blocker not associated with unopposed  $\alpha$  activity
- GI
  - Ischemic bowel
  - Colitis

Arenas DJ, Beltran S, Zhou S, Goldberg LR. Cocaine, cardiomyopathy, and heart failure: a systematic review and meta-analysis. *Sci Rep.* 2020 Nov 13;10(1):19795

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### Do I get an EKG prior to starting a prescribed stimulant?

- Kids, young adults-no
  - Low pretest probability
  - Look at EKG if one is available
- Older Adults-poor data
  - Risk of RX stimulants is hypertension, tachycardia, vasospasm
  - BP and HR every 6 months
  - EKG annually? Look for QRS widening, ventricular conduction delay, arrhythmia

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### Stimulants

Toxicity	Emergency Presentation	Cause of Death
VASCULAR	Cardiac, stroke	Cardio/cerebrovascular
PSYCHIATRIC	Trauma, psychosis	Traumatic

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### Medical Complications of IVDU

- HIV
  - PWID=10% of new HIV cases since 2012
  - Reduction:
    - SSP-reduction in HIV by 50%
    - PrEP, overdose prevention sites
- Hepatitis
  - 65% PWID-->anti HCV +
  - SSP, MOUD-reduction in HCV
  - DAA regardless of stage of recovery
  - IVDU most common risk factor for new HBV

Levitt A, Mermin J, Jones CM, See I, Butler JC. Infectious Diseases and Injection Drug Use: Public Health Burden and Response. J Infect Dis. 2020 Sep 2;222(Suppl 5)

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### PrEP

- Public Health Goal: reduce new HIV infections by 75% by 2025 and 90% by 2030
- CDC, FDA endorse PrEP as effective strategy to reduce new HIV infections among PWID
- Fewer than 1/500 PWID filled RX for PrEP
- LAI forms of PrEP on horizon?

Streed CG, Morgan JR, Gai MJ, Larochelle MR, Paasche-Orlow MK, Taylor JL. Prevalence of HIV Preexposure Prophylaxis Prescribing Among Persons With Commercial Insurance and Likely Injection Drug Use. JAMA Netw Open. 2022;5(7):e2221346

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### Medical Complications of IVDU

- SBI
- Osteomyelitis
- Endocarditis
  - S. aureus (often methicillin resistant)
- Osler nodes, Roth spots, splinter hemorrhages

Seminars in Thoracic and Cardiovascular Surgery, ISSN: 1043-0679, Vol: 33, Issue: 3, Page: 703-709 2021

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### Medical Complications of Inhaling Drugs

- Inhalation and insufflation
- Shared equipment-->risks of ID
- Poor adherence to barriers during SI
- Trauma-burns, cuts
- Harm reduction

Best Practices Recommendations for Canadian Harm Reduction Programs-CATIE, 2020

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### Cannabis

- Hyperemesis Syndrome
  - Downregulation of CNS CBD R and upregulation of gut CBD R
  - Chronic cannabis use
  - Relieved with hot showers
  - Resolved with cessation
- Medical Cannabis
  - Medical condition with RCT suggests responds to THC
  - Symptoms refractory to pharmacotherapy
  - No SUD/psychological morbidity

Hill KP. Medical Marijuana for Treatment of Chronic Pain and Other Medical and Psychiatric Problems: A Clinical Review. JAMA. 2015;313(24):2474-2483.

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**Conclusion**

- Targeted history and physical exam
- Physical health
- Teach patients to advocate for themselves
- Tobacco and alcohol most toxic substances
- Partnership with primary care colleagues



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**Get in Touch**

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JULY 2023 REVIEW COURSE 2023

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