## Substance Abuse/Addiction: Overview & Treatment Considerations

### 1) Definitions

**Spectrum of severity:** Use = misuse = abuse = dependence

**Misuse:** sporadic use without apparent adverse consequence; will or unintentional

**Abuse:** frequency of consumption may vary; some adverse consequences or clinical impairments experienced by user (oncines begin to fall)

**Addiction’s 4Cs:** LOSS of control over substance use WITH craving/ & compulsive use which is continued despite harm. (major domain affected)

**Pseudoaddiction:** drug-seeking behaviour mimicking addiction resulting from under-treatment of pain. (But/r/o pain + addiction, e.g. dual diagnosis.)

**Tolerance:** effect of a drug over time, or dose required for same effect

**Dependence, physical:** a state of adaptation resulting in drug-class specific withdrawal symptoms upon abrupt dose reduction, decreasing drug levels or anatomical administration. (Not to be confused with addiction)

**Detoxification-managing acute withdrawal:** treatment intended to remove the physiological effects of the addictive substances (protocols)

- **Social Detox:** managed & engaged in recovery; 3-10 day stay.
- **Brief Detox:** 24-hour observation; not medically managed.

**Harm Reduction:** measures taken to address problems (e.g. social) without necessarily requiring abstinence or cessation of drug use

**Detoxification-managing acute withdrawal:** treatment intended to remove the physiological effects of the addictive substances (protocols)

- **Social Detox:** managed & engaged in recovery; 3-10 day stay.
- **Brief Detox:** 24-hour observation; not medically managed.

**Harm Reduction:** measures taken to address problems (e.g. social) without necessarily requiring abstinence or cessation of drug use

- **Detoxification-managing acute withdrawal:** treatment intended to remove the physiological effects of the addictive substances (protocols)

- **Social Detox:** managed & engaged in recovery; 3-10 day stay.
- **Brief Detox:** 24-hour observation; not medically managed.

- **Harm Reduction:** measures taken to address problems (e.g. social) without necessarily requiring abstinence or cessation of drug use

### 2) Statistics From the Literature (CADUMS 2008)

- The prevalence of past 12 month cocaine (1.6%), ecstasy (1.4%), speed (1.1%), and methamphetamine (0.2%) use in 2008, compared to rates reported in 2004.
- The rate of drug use by youth 15-24 years remains much higher than that reported by adults ≥25 years: 4x higher for cannabis use (32.7% vs 7.3%), & 9x higher for past-year use of any other illicit drug (15.4% vs 1.7%).
- 72% of non-medical opioids used by students were obtained from home.
- The prevalence of harm experienced during the past year due to one drug's use was ~10x higher among youth aged 15-24 years, than among adults aged ≥25 (10.6% vs 1.1%).

### 3) Alcohol (EtOH)

- **EtOH is a leading cause of serious injury, accidental death, birth defects**
- **Misuse:** do you get drunk or pass out on average? 2-5x per week
- **Abuse:** do you drink to feel drunk or pass out on average? 4-10x per week
- **Dependence, physical:** dose required for same effect
- **Tolerance:** effect of a drug over time, or dose required for same effect
- **Questions asked in a non-judgemental fashion**

- **History of FAS with heavy drinking. Pre-conception: limit intake.**
- **Individuals with certain medical conditions** e.g. pancreatitis, cirrhosis, hepatitis.
- **Persons recovering from alcoholism, or having family hx of alcoholism.**
- **Binge drinking:** a consumption pattern that brings the blood EtOH level to >0.08% & ’s short term risk! Corresponds to ≥5 drinks on one occasion for men, or ≥4 for women. For at least 2 weeks per month.

### 4) Addiction Screening: CAGE, AUDIT, Other

- **CAGE**
  - Have you ever felt the need to cut down or change your drinking/drug use?
  - Do you get annoyed when others criticize your drinking/drug use?
  - Have you ever felt guilty about your drinking/drug use for any reason?
  - Have you ever needed a drink in the morning to help get you going?

- **AUDIT**
  - 10 questions to assess alcohol use patterns.
  - **Single Question Screen:** How many times in the past year have you had x or more drinks in a day? (where x = 4 drinks for women, & 5 drinks for men)

- **History (Useful questions asked in a non-judgmental fashion):**
  - Ask about socially acceptable drugs, nicotine, caffeine.
  - Ask about alcohol use, especially when using too much.
  - Ask about illegal drug use, especially when using too much.

### 5) Universal Precautions - Opioid Pain Medicine

- Assumes that one cannot always determine who will become a problem opioid user; thus, suggests a minimum level to assess & manage risk.

- **Make a diagnosis** with appropriate differential (pain = sensory & emotional)
- **Psychological Assessment Including Risk of Addictive Disorders**
- **Coping issues.** Include discussion of urine drug testing (UDT)
- **Inform patient screen** for history of addiction
- **Pre/Post-Intervention Assessment of Pain & Function**
- **Appropriate Trial** of Opioid Therapy +/- Adjusts +/- Non-Tx
- Have an **Exit Strategy** for discontinuing opioids if lack benefit.
- **Assessment of Pain & Level of Function**
- **Regularly Assess the “five As”** Analgesia, Activity, Adverse effects, aberrant behaviour & accurate medical records.
- **Periodically review pain diagnosis & comorbidity conditions, including addictive disorders.** Use a Tonomization of Controlled Substance Agreement as needed.

### 6) Red Flags - Aberrant Rx Drug Use

- **Consider Discontinuation / Specialist Referral if...**
  - Prescriptions from multiple physicians (check profile when available)
  - Frequent visits to emergency room requesting drugs of abuse
  - Requests from patients from outside local area! Check picture ID!
  - Prescription filling or tampering of prescriptions
  - Polypharmacy with CNS depressants, habituating substances
  - Forgeries, selling, stealing, or using other person’s medications
  - Missed follow-up visits.

- **Reassess Regimen & Treatment Agreement if...**
  - Rapid ↑ in dosing in chronic on-pace err. if ≥20mg equine methylphenidate
  - Frequent early refills, or excuses for running out of or losing Rx’s
  - Aversion to concurrent recommended non-opioid treatment or UDT
  - Request for brand-name vs generic & short vs long-acting formulations

### 7) Principles of Addiction Treatment

- **No single treatment is appropriate for all; concomitant medications are useful for many; treatment needs to be readily available**

- **Supporting individuals through the treatment process**
- **Provide medical care**
- **Prescribe medications**
- **Provide psychological support**
- **Medication-assisted treatment**

- **Life worth living, without using!**

### Links

- **WHO:** http://www.who.int/substance_abuse/dts/mono9702en.pdf
- **NIDA:** http://www.nida.nih.gov/DrugInfo/Opioid/etoh/safety/FAQ.html
- **Opioid & Stimulant Identification Pic:**
- **Links-CID:**
  - Canadian Centre on Substance Abuse (CCSA): http://www.ccsa.ca/English/Pages/Treatment/OMEN.aspx
  - CADUMS: http://www.ryanfoundation.ca/cadums/cadums_home.html
  - CAMH: http://www.camh.net
- **Tips for Legitimate Rx’s:**
  - Of drugs causing physical/psychological dependence:
  - 1) Interval dispensing (e.g. the “pill-hold”)
  - 2) Determine if special support needed

- **Responding to aberrant behaviour:**
  - Do not debate the motive, rather gel agreement that such behaviour is problematic. Then delve into the root cause of the problem.
SUBSTANCE ABUSE/ADDICTION: Overview & Treatment Considerations

**Drugs/Substances of Abuse & slang terms**

**Cannabinoids**
- THC = delta-9-tetrahydrocannabinol
- Hashish = dried hemp flower
- Marijuana = dried hemp - dope, grass, joints, pot, weed

**Psychoactive substances**

- **Cannabinoids** (e.g. marijuana, cannabis, weed, pot, grass)
- **Ketamine**
- **LSD**
- **Mescaline**
- **Ecstasy**
- **Hallucinogens**

**Harm Reduction**

- **Hallucinogens**
- **Psychedelics**
- **Prescription drugs**
- **Opioids**

**Signs/Symptoms, Overuse & Health Concerns**

- Acute intoxication
- Long-term Withdrawal

**Cannabinoids**

- **Cannabis**
- **Hash**
- **Marijuana**

**Psychiatric effects**

- delusions, paranoia, thought disorders

**Effects**

- euphoria, impaired learning & retention time; confusion, panic, balance, coordination; ↑HR, ↑BP, ↑T, ↑appetite; hyperactivity

**Impacts**

- pulmonary disease/cancer; unformed minds; psychosis risk; renal synthetic; assoc. problems: physical, psych, legal & social (e.g. failure to achieve; ↑testosterone; gynecomastia; hypersexuality; rage)

**Hashish**

- dry, crumbly, lower grade

**Effects**

- analgesia, euphoria, drowsiness, nausea, constipation, confusion, ↑lactate/ED; sleeping, sleep apnea. On overdose: resp depression

**Hallucinations**

- hallucination, impulsive behavior; paranoia;↓immuno,↓coag; ↑cortisol, ↑adrenochrome

**Acute intoxication**

- 1-3 hour; similar to alcohol; changes in mood, perception &↑risk of accidents!

**Withdrawal syndrome**

- uncontrollable

**Legal “medicinal” cannabinoids alternative?

- consider if indicated: see RxFiles Cannabinoids Chart

**Acute toxicity**

- reversed by naloxone NARCIC, a narcotic antagonist

**Respiratory Depression & Compensatory ↑ CV function;↑ arterial pressure

**Hallucinogen**

-堂皇, 洛丽, 聚会, 酒会, 杂志

**Impairments & Addictions**

- hallucinations, memory loss, decreased motor function, altered cognition

**Addiction symptoms**

- euphoria, increased energy, decreased appetite; tolerance & physical dependence

**Management & Treatment Options**

- provide medical treatment & counseling

**Management & Treatment Options**

- provide medical treatment & counseling

**Opiate/Opioid**

- Acute: benzodiazepines for tremor (diazepam, lorazepam), clonidine

**Hallucinogen**

- LSD, psilocybin, mescaline, peyote

**Prescription drugs**

- Codeine
- Opium

**Nonopioid drugs**

- haloperidol, diazepam, lorazepam

**Psychedelics**

- LSD, mescaline, psilocybin

**Effects**

- nausea, vomiting; ↓appetite, ↓sleep

**Acute intake**

- 1-3 hour; similar to alcohol; changes in mood, perception &↑risk of accidents!

**Withdrawal syndrome**

- uncontrollable

**Legal “medicinal” cannabinoids alternative?

- consider if indicated: see RxFiles Cannabinoids Chart
Management Of Substance Abuse In Emergency

(Access the poison centre in your Canadian province: http://capcc.ca/provcentres/centres.html)

**Aim:**
- morbidity & mortality,
- risk of relapse,
- consider plan short & long term

**Assessment & Management Issues:**

- **Infections:** soft tissue; other (endocarditis, HIV, hepatitis, etc.)
- **Overdose vs Intoxication vs Withdrawal vs Other**
  - (Other e.g. subdural hematoma from fight, infectious component)
- **Consider detailed assessment if:**
  - Acknowledgment of drug use
  - Physical signs e.g. track marks, nasal septum atrophy
  - Urine drug screen +ve (Note: emergency drug screen is unlikely to significantly affect impact upon management in the ER.)

**Approach for engagement**

- Accept patient autonomy
- Non-judgemental approach
- Collaborative approach with patient
- Confidentiality
- Proactive discussion on meds and behaviours

**Managing Potentially Violent Patient**

- Have a staff & public safety plan!
- Perform a detailed assessment if:
  - Unresponsive
  - Hypothermia: ethanol, narcotics, sedatives/hypnotics, TCAs, barbiturates, carbon monoxide.
- If mixed presentation consider possibility of mixed ingestion!

**Intoxication: Common Presentations – Possible Causes**

- **Unresponsive:** hypoglycemics, narcotics, alcohol, cyanide, carbon monoxide, tranquillizers, hydrocarbons, barbiturates
- **Seizures:** hypoglycemics, amphetamines, cocaine, hallucinogens, anticonvulsants, TCAs, PCP, mescaline; benzodiazepine withdrawal especially high dose; alcohol withdrawal tremors/seizures
- **Hyperthermia:** salicylates, Ecstasy, atropine, amoxicillin B, phentoin
- **Hypothermia:** ethanol, narcotics, sedatives/hypnotics, TCAs, barbiturates, carbon monoxide.

**If mixed presentation consider possibility of mixed ingestion!**

| Intoxication Management - [Primary assessment ABCs: airway, breathing, circulation] |
|---------------------------------|--|
| **Opoids** BP: | **Intoxication (coma, lethargy, stupor; constellation, N/V, flushing, pruritis; hypotension, miosis; resp depression)** |
| HR: | supportive tx; regular assessment of cardio/respiratory safety |
| RR: | airway protection; correction of hypoxia |
| Temp: | naloxone option: short term duration; balance reversal of resp depression with opioid withdrawal |
| Pupil: | (naloxone can be considered if opioid toxicity suspected.) |
| Dilatation of pupils: | consider type of opioid for duration of risk & naloxone effect |
| Depressed: | consider N-acetyl-para-aminocephalin level if overdose cause unknown (to acetylampheno as possible agent). |
| **Stimulant** BP: | **Supportive tx (agitation, diaphoresis, hypertension, mydriasis, psychosis, seizures, ↑HR)** |
| HR: | oral diazepam for agitation & hypertension e.g. cocaine/mixed |
| RR: | IV diazepam or midazolam short acting if severe agitation/anxiety |
| Temp: | Optional: sedating antipsychotic |
| Pupil: | Monitor: hypothermia, hypertension, cardiac, electrolytes |
| Diaphoresis: | HTN: benzodiazepines; alternatively nitroprusside, NTG |
| Agitated/Confused: | - α-blockers. (Generally avoid β-blockers as will result in unopposed α constriction) |
| **Alcohol** Supportive tx (immediate life-threatening complications in kids are respiratory depression & hypoglycaemia) |
- airway; IV access (fluid management); correct hypoglycaemia with dextrans & electrolytes; thiamine

**When to Discharge?**

- Consider time from last ingestion.
- Can they walk unaided?

**Acute Alcohol Intoxication**

- **Blood Alcohol Levels (BAL):** <50 mg/dl (< 10.9mmol/l): impairment in skills, talkativeness, relax; >100 mg/dl = impaired judgement, ↓ coordination & reactions, mood/personality change; 200 mg/dl: amnesia, diplopia, N/V; >300-500 mg/dl: ↑ risk of respiratory depression, coma & death
- **DSM-IV:** A) recent EtOH, B) clinically significant behavioural/psychological change e.g. aggression, mood, impairment C) one or more signs of l. slurred speech, 2. coordination problem, risk of injury, ↑ risk of life losses, ↑ violent crimes.
- **Tox:** 1) Stabilize patient: airway, resp fx, prevent aspiration, mechanical ventilation pm, IV access & correction of hypoglycaemia, electrolytes (dextrans, Mg, folate, thiamine, multivitamins); 2) Sedate patient (droperidol, haloperidol); 3) evaluate for chronic EIOH abuse; Ref: Ostachek M et al. Impact of substance use disorders on recovery from episodes of depression in bipolar disorder patients; Prospective data from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). Am J Psychiatry 2009 Dec 15; [e-pub ahead of print].
- **When to let them leave the emergency?** Consider holding till they can walk out unassisted.

**Outpatient Treatment Options**

- **Management of Cocaine Body Packers:**
  - Hist. & type of packets; other agents; GI symptoms; investigations: ECG, CBC/Scr, etc., chest & abdomen x-rays; Management if asymptomatic: admit, oral gastric lavage till all packets passed; 4 hr observations of vitals after packets passed; light/norm diet, IV access, daily evaluation for intoxication/bowel obstruction.

**When to let them leave the emergency?** Consider holding till they can walk out unassisted.

**LifeSpan Spectrum of Complications:**

- Pregnancy - obstetrical complications, fetal distress, stillbirth, low birth weight; adolescent & young adult - self inflicted injuries, homicides, premature morbidity; Later life - ↑ decline.
- **Alcohol dependence:**
- **Signs:** headache, cognitive/memory impairment, unique features:
- **Metabolism** of other drugs, QT interval, RR = respiratory rate.
“it takes more than 2½ minutes to assess a patient for a possible opioid prescription”; a challenge, especially for busy walk-in and minor emergency types of practice. • “It’s OK to say ‘No’”
• “I didn’t realize how big a problem Rx opioids were on the street”

**UK Study Ranking - most harmful drugs: overall, to individual and to society.**


**BACKGROUND:** Proper assessment of the harms caused by the misuse of drugs can inform policy makers in health, policing, and social care. We aimed to apply multicriteria decision analysis (MCDA) modelling to a range of drug harms in the UK. METHODS: Members of the Independent Scientific Committee on Drugs, including two invited specialists, met in a 1-day interactive workshop to score 20 drugs on 16 criteria: nine related to the harms that a drug produces in the individual and seven to the harms to others. Drugs were scored out of 100 points, and the criteria were weighted to indicate their relative importance. FINDINGS: MCDA modelling showed that heroin, crack cocaine, and methamphetamine were the most harmful drugs to individuals (part scores 34, 37, and 32, respectively), whereas alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) in second and third places. INTERPRETATION: These findings lend support to previous work assessing drug harms, and show how the improved scoring and weighting approach of MCDA increases the differentiation between the most and least harmful drugs. However, the findings correlate poorly with present UK drug classification, which is not based simply on considerations of harm. FUNDING: Centre for Crime and Justice Studies (UK).

**Background:** Proper assessment of the harms caused by the misuse of drugs can inform policy makers in health, policing, and social care. We aimed to apply multicriteria decision analysis (MCDA) modelling to a range of drug harms in the UK. METHODS: Members of the Independent Scientific Committee on Drugs, including two invited specialists, met in a 1-day interactive workshop to score 20 drugs on 16 criteria: nine related to the harms that a drug produces in the individual and seven to the harms to others. Drugs were scored out of 100 points, and the criteria were weighted to indicate their relative importance.

**FINDINGS:** MCDA modelling showed that heroin, crack cocaine, and methamphetamine were the most harmful drugs to individuals (part scores 34, 37, and 32, respectively), whereas alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) in second and third places. INTERPRETATION: These findings lend support to previous work assessing drug harms, and show how the improved scoring and weighting approach of MCDA increases the differentiation between the most and least harmful drugs. However, the findings correlate poorly with present UK drug classification, which is not based simply on considerations of harm.

**FUNDING:** Centre for Crime and Justice Studies (UK).

**Salvia leaves**: (magic mint, diviner’s sage, Sally D, purple sticky)
- Member of mint family, smoked or chewed. Contains salvinorin A, a selective kappa opioid receptor antagonist; does not bind to 5HT2A receptors like other hallucinogens. Halucinogen effects rapid & last <30min. SE: dysphoria, diuresis, chills, headache, insomnia, exhaustion, loss of control, impaired coordination & judgement ( = DANGEROUS!!). Sensinlization in SK by Saktinaionist def SCW on SMOCed live broadcast in Dec 2010.

**Angel’s Trumpet (Angel’s tears, Apple of Peru, Green Dragon, Devil’s trumpet)**
- Alkaloid (atropine, scopolamine) containing flowers & stem. Each flower contains 0.2mg atropine & 0.65mg scopolamine; 3-6 flowers causes hallucinations: 9+ flowers can be life-threatening. Commonly ingested by making a tea. Effects in 1-4hrs; duration 24hrs.
- SE: mydriasis, dry mouth, tachycardia, fever, erythema, constipation, ↑ thirst, retrograde amnesia & anxiety; arrhythmias & CV collapse / respiratory failure in high doses. ( = DANGEROUS!!)

**‘Bath Salts’**
- PABS for abuse: are actually designer stimulants (e.g. mephedron/MDPV, NRG-1, methylenedioxyamphetamine, 4-MMC, Bubbles, methylone/methanol/MDMA, MJD, MJA, ME, M, NMDA, M1, Explosion) being sold in shops & online. Cloud 9, Ivoys Velleo, Vanilla Vape, Purple Values, Blaztoid, Blue Silk, etc.

**Common in UK, now USA via New York, China.**
- Similar effects (THR, paranoia, psychosis) & bx as stimulants. May/11 CDC: MMWR- Emergency Department Visits After Use of a Drug Sold as “Bath Salts” — Michigan, November 13, 2010—March 31, 2011 http://www.cdc.gov/mmwr/pdf/wk/mm60e0518.pdf

**Findings**
- Alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) in second and third places.

**Interpretation:** These findings lend support to previous work assessing drug harms, and show how the improved scoring and weighting approach of MCDA increases the differentiation between the most and least harmful drugs. However, the findings correlate poorly with present UK drug classification, which is not based simply on considerations of harm.

**Funding:** Centre for Crime and Justice Studies (UK).

**Salvinorin (magic mint, diviner’s sage, Sally D, purple sticky)**
- Member of mint family, smoked or chewed. Contains salvinorin A, a selective kappa opioid receptor antagonist; does not bind to 5HT2A receptors like other hallucinogens. Halucinogen effects rapid & last <30min. SE: dysphoria, diuresis, chills, headache, insomnia, exhaustion, loss of control, impaired coordination & judgement ( = DANGEROUS!!). Sensinlization in SK by Saktinaionist def SCW on SMOCed live broadcast in Dec 2010.

**Angel’s Trumpet (Angel’s tears, Apple of Peru, Green Dragon, Devil’s trumpet)**
- Alkaloid (atropine, scopolamine) containing flowers & stem. Each flower contains 0.2mg atropine & 0.65mg scopolamine; 3-6 flowers causes hallucinations: 9+ flowers can be life-threatening. Commonly ingested by making a tea. Effects in 1-4hrs; duration 24hrs.
- SE: mydriasis, dry mouth, tachycardia, fever, erythema, constipation, ↑ thirst, retrograde amnesia & anxiety; arrhythmias & CV collapse / respiratory failure in high doses. ( = DANGEROUS!!)

**Bath Salts**
- PABS for abuse: are actually designer stimulants (e.g. mephedron/MDPV, NRG-1, methylenedioxyamphetamine, 4-MMC, Bubbles, methylone/methanol/MDMA, MJD, MJA, ME, M, NMDA, M1, Explosion) being sold in shops & online. Cloud 9, Ivoys Velleo, Vanilla Vape, Purple Values, Blaztoid, Blue Silk, etc.

**Common in UK, now USA via New York, China.**
- Similar effects (THR, paranoia, psychosis) & bx as stimulants. May/11 CDC: MMWR- Emergency Department Visits After Use of a Drug Sold as “Bath Salts” — Michigan, November 13, 2010—March 31, 2011 http://www.cdc.gov/mmwr/pdf/wk/mm60e0518.pdf

**Findings**
- Alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) in second and third places.

**Interpretation:** These findings lend support to previous work assessing drug harms, and show how the improved scoring and weighting approach of MCDA increases the differentiation between the most and least harmful drugs. However, the findings correlate poorly with present UK drug classification, which is not based simply on considerations of harm.

**Funding:** Centre for Crime and Justice Studies (UK).
The use of dopamine agonists for treating cocaine dependence.


Abiata L, Minozzi S, Vecchi S, Davidi. Benzodiazepines for alcohol withdrawal. Cochrane Database Syst Rev 2010 Mar 17;CD005632. Benzodiazepines showed a protective benefit against alcohol withdrawal seizures, in particular when compared to placebo and potentially beneficial for many outcomes. Nevertheless, no definitive conclusions about the effectiveness and safety of benzodiazepines was possible, because of the heterogeneity of the trials both in interventions and the assessment of outcomes.

Abiata L, Minozzi S, Vecchi S, Davidi. Methadone at tapered doses for the management of opioid withdrawal. Cochrane Database Syst Rev 2013 Feb 28;CD003349. Data from literature are hardly comparable; programs vary widely with regard to the assessment of outcome measures, impairing the application of meta-analysis. The studies included in this review confirm that slow tapering with temporary substitution of long-acting opioids can reduce withdrawal severity. Nevertheless, the majority of children relapsed to heroin use.


Part A Executive summary & background: http://nationalpaincentre.mcmaster.ca/documents/opioid_guideline_part_a_v4_5.pdf


Gowling L, Farrell MF, Ali R, White JM. Alcohol-adherent agonists for the management of opioid withdrawal. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD00224. DOI: 10.1002/14651858.CD00224.pub4. Cilindone and lobexifone are more effective than placebo for the management of withdrawal from opioid. No significant difference in efficacy was detected for treatment regimens based on clonidine or lobexifone, and those based on reducing doses of methadone over a period of around 10 days but methadone is associated with fewer adverse effects than clonidine, and lobexifone has a better safety profile than clonidine.


Grant BF, Goldstein RS, Baida TA, et al. Epidemiology of DSM-5 Opiate Abuse Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions III. JAMA Psychiatry. 2015 Jun 3.


Pehoe GA, Lazaro JM, Quisius L. "Alcohol Consumption and Risk of Death in Male Physicians With Heart Failure." Am J Cardiol. 2014 Jul 15.


38 Kish SJ. Pharmacologic mechanisms of crystal meth. CMAJ. 2008;179(13):1679-82.


42 Raskin K, Fox SB, Reilly LM. Health Canada: Safe Use of Energy Drinks. Accessed online at http://www.hc-sc.gc.ca/fn-an/health-products/energy-drinks-eng.php. (Excessive drinking of energy drinks mixed with alcohol can have serious health effects. Energy drinks are meant to supply mental and physical stimulation for a short period of time. They usually contain caffeine, taurine (an amino acid, one of the building blocks of protein), vitamins and glucuronolactone, a carbohydrate. Energy drinks should not be confused with sports drinks such as Gatorade® or Powerade®. Sports drinks re-hydrate the body and provide sugars, which the body burns to create energy and replenish electrolytes.)


43 Pharmacist's Letter/Prescriber's Letter. Quetiapine (Seroquel) Abuse. 2007;23(23):Number 231008.


45 Health Canada: Safe Use of Energy Drinks. Accessed online at http://www.hc-sc.gc.ca/fn-an/health-products/energy-drinks-eng.php. (Excessive drinking of energy drinks mixed with alcohol can have serious health effects. Energy drinks are meant to supply mental and physical stimulation for a short period of time. They usually contain caffeine, taurine (an amino acid, one of the building blocks of protein), vitamins and glucuronolactone, a carbohydrate. Energy drinks should not be confused with sports drinks such as Gatorade® or Powerade®. Sports drinks re-hydrate the body and provide sugars, which the body burns to create energy and replenish electrolytes.)


