SUMMARY PACKAGE 6

Designed by: Kathryn Yu

PsySOM
Psychiatry Society of Monash

Alcohol Related Disorders

- Alcohol use disorder refers to alcohol usage that results in problematic behaviour/psychological changes
- It is recommended that adults drink no more than 2 standard drinks per day

DSM-5 alcohol use disorder

2 or more over 12 months (# = level of severity)

Actions

1. Taken in **larger amounts over a longer period** than was intended
2. Persistent **desire or unsuccessful efforts to cut down** or control alcohol use
3. A great deal of **time is spent in activities necessary to obtain alcohol**, use alcohol or control alcohol use
4. **Craving,** or a strong desire or urge to use alcohol
5. Recurrent alcohol use resulting in a **failure to fulfil major role obligations** at work, school, or home
6. **Continued use despite having persistent or recurrent social or interpersonal problems** caused or exacerbated by the effects of alcohol

Impact on life:

1. Important social, occupational or recreational **activities are given up or reduced** because of alcohol use
2. Recurrent alcohol **use in situations in which it is physically hazardous**
3. Alcohol use is **continued despite knowing of having a persistent or recurrent physical or psychological problem** that is likely to have been caused or exacerbated by alcohol

Tolerance

1. Either:
   a. A need for **markedly increased amounts of alcohol to achieve intoxication** or desired effect
   b. A markedly **diminished effect with continued use of the same amount of alcohol**

Withdrawal

1. Either
   a. **The characteristic withdrawal syndrome** for alcohol
   b. Alcohol (or a closely related substance, such as a benzodiazepine) is **taken to relieve or avoid withdrawal symptoms**

Summary:

- 4xCs = loss of control, compulsions (i.e. spending time/energy to attain the substance), cravings, cognitive dissonance (continued use despite harm)
- 4xRs = relational failure, role failure (home, work, school, etc.), recurrent unsuccessful attempts to cut use, use despite risk of harm
- 1xT, 1xW = tolerance, withdrawal

Investigations

Alcohol use disorder is generally a clinical diagnosis, however investigations can be used to look for complications/monitor the disease

- BAC: determines current concentration
- LFTs: usually seen as very raised GGT, AST:ALT of 2:1
- FBE: generally macrocytic anaemia
- Lipid profile: high cholesterol/LDL/TG, low HDL

Alcohol intoxication + withdrawal (DSM-V)

Intoxication 	Withdrawal (hours-days) 
Definition: syndrome of symptoms that develops with temporal and causative association to the consumption of alcohol **DSM-V** A. Recent ingestion of alcohol B. Behavioural or psychological changes (e.g. inappropriate sexual or aggressive behaviour, mood lability, impaired judgement), during or shortly after alcohol use C. ≥ 1 of the following signs or symptoms ○ Slurred speech ○ Incoordination ○ Unsteady gait ○ Nystagmus ○ Impairment in attention or memory ○ Stupor or coma D. Not attributable / better explained by another condition Mild symptoms ● Increased talkativeness ● Sense of well-being ● Expansive and bright mood Other risks ● Increased risk-taking behaviour ● Increased suicidal behaviours	**Definition:** specific physical or neuropsychiatric symptoms occurring after the cessation or reduction in alcohol use that was heavy and prolonged **DSM-V** A. Cessation of (or reduction in) alcohol use that have been heavy and prolonged B. ≥2 signs / symptoms developing within several hours to a few days after the cessation or reduction in alcohol use ○ Autonomic hyperactivity (e.g., sweating or pulse rate greater than 100bpm) ○ Increased hand tremor ○ Insomnia ○ Nausea or vomiting ○ Transient visual, tactile or auditory, hallucinations or illusions ○ Psychomotor agitation ○ Anxiety ○ Generalized tonic-clonic seizures C. Cause clinically significant distress D. Not attributable/caused by any other condition

Management of toxication

- Supportive
- Check airway / consciousness

Management of withdrawal

Main pharmacological treatment is benzodiazepines

- Diazepam: 20mg oral, every 2 hours until symptoms reside
  - If liver failure/elderly, can also use: oxazepam/lorazepam instead of diazepam
- PLUS: thiamine (B1) – 300mg IM/IV daily for 3-5 days, then 300mg orally for several weeks
- Symptomatic relief
  - Ensure hydration → may need IV fluid therapy
  - If nutritional deficiency → multivitamin
  - If nausea/vomiting present → give anti-emetics
  - If there is any associated psychosis → antipsychotics

Alcohol withdrawal syndrome		
Progression	**Signs / symptoms**	**Onset since last drink (hours)**
Mild withdrawal	anxiety, insomnia, tremors, diaphoresis, palpitations, GI upset	6 - 24
Seizures	Typically tonic-clonic seizures	12 - 48
Alcoholic hallucinosis	visual, auditory, or tactile; intact orientation; stable vital signs	12 - 48
Delirium tremens	Three main symptoms • Confusion/altered mental state • Psychotic symptoms: paranoia, hallucinations (especially tactile, visual or auditory) • Symptoms of SNS overdrive: anxiety, agitation, tremors, fever, tachycardia, diaphoresis	48 - 96

Major complications of alcohol use disorder

1. Wernicke's encephalopathy
   - Is a reversible neuropsychiatric disorder associated with decreased thiamine
   - Presentation

     TRIAD = cognitive changes + ataxia + oculomotor dysfunction

     - Cognitive changes/encephalopathy: confusion, disinterest/apathy, inattentiveness, etc.
     - Ataxia: often a broad-based gait, truncal ataxia
     - Oculomotor dysfunction: nystagmus, ophthalmoplegia

     Management
     - IV or IM thiamine
     - Abstinence from alcohol

2. Korsakoff syndrome
   - Is an irreversible neuropsychiatric disorder, also caused by decreased thiamine
   - Presentation

     TRIAD = amnesia + apathy + confabulation

     - Amnesia: can be anterograde or retrograde
     - Apathy: lack of emotion
     - Confabulation: fabricated memories
   - Management

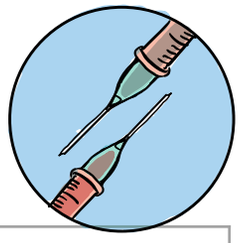
     Not treatable

Treatment of alcohol use disorder

- Biological
  -  Naltrexone
    - Inhibits the opioid based reward pathways of alcohol → can't feel the endorphin/dopamine release that comes with alcohol (makes alcohol less pleasurable)
    - Investigations: must monitor LFTs before starting
    - Contraindications: liver failure, patient is on other opioids for chronic pain (as this medication will reduce the effect of other opioid medications)
  -  Acamprosate
    - Block NMDA pathways involved in reward and therefore → also used to control cravings
  -  Disulfiram
    - Inhibitor of aldehyde dehydrogenase in the liver → won't metabolise alcohol properly → and makes you feel sick when you drink alcohol (flushing, sweating, vomiting, chest pain, "impending doom", HTN/hypotension
    - A form of aversive therapy
- Psychological
  -  Psychoeducation
    Address underlying cause of alcohol use disorder liaise with psychologist, provide CBT, etc.
    Motivational interviewing
- Social
  -  Support groups: e.g. alcoholics anonymous
    Support for family/carers
    Consider admission to a detox/rehab facility
- Long-term
  -  Ongoing follow-up with GP or psychiatrist

 Contributor: Jasleen Grewal
 Reviewer: Amin Hajamohideen

Opioid Related Disorders

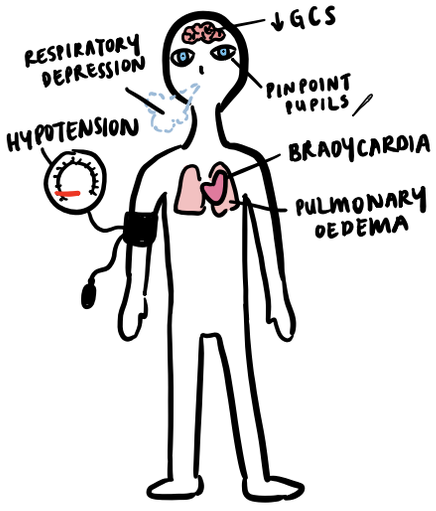
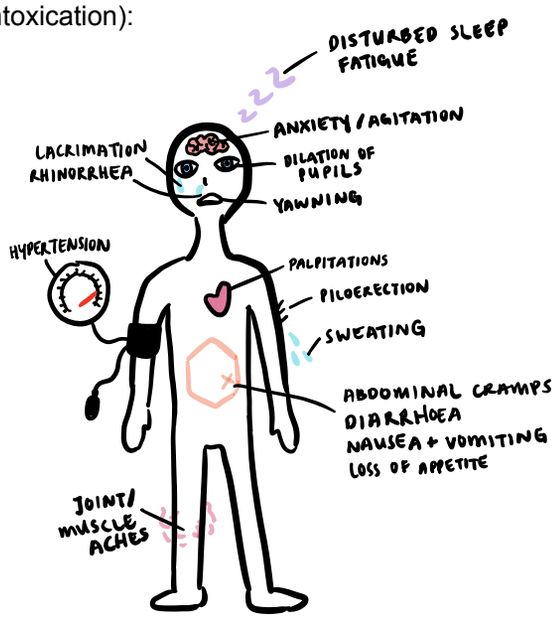


Definitions	Opioids: • Can be both natural and synthetic • Act at one of the three main opioid receptor systems (i.e., mu, kappa, delta) - mu receptors responsible for reward, withdrawal and analgesia • Possess analgesic and central nervous system depressant effects as well as the potential to cause euphoria Prescribed opioids: • Opiates - occur naturally within opium poppy (e.g. morphine, codeine) • Synthetic opioids - (e.g. fentanyl, tramadol, methadone)

Epidemiology	• Drug Use Disorders: <2.1% in males, <0.8% in females (National Survey of Mental Health and Wellbeing)
	• In 2016–17:
	  ○ 566 ED presentations (1.5/day) for opioid dependence
	  ○ 16,903 hospitalisations (46/day) with opioid dependence
	  ○ 1/5 Australians in treatment for opioid dependence now being treated for pharmaceutical opioid dependence

Risk Factors	• Regional areas/ geographical location • Lower SES • Unemployment • Mental illness (depression, anxiety disorders) and emotional distress • Chronic pain

Features of Opioid dependence	A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by **>/= 2** of the following, occurring within a 12-month period:
	• Opioids taken in larger amounts or over a longer period than intended
	• Persistent desire or unsuccessful efforts to cut down or control opioid use
	• Significant time spent in activities necessary to obtain the opioid, use the opioid or recover from its effects
	• Craving or urge to use opioids
	• Results in failure to fulfil major role obligations at work, school or home
	• Continued opioid use despite persistent or recurrent social or interpersonal problems
	• Important social, occupational, or recreational activities given up or reduced because of opioid use
	• Recurrent opioid use in situations in which it is physically hazardous
	• Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
	• Tolerance:
	  ○ A need for increased amounts of opioids to achieve desired effect or
	  ○ A diminished effect with continued use of the same amount of opioid
	• Withdrawal:
	  ○ Characteristic opioid withdrawal syndrome or
	  ○ Opioids (or a closely related substances) are taken to relieve or avoid withdrawal symptoms

Signs of Opioid Intoxication and Overdose	Signs of opioid intoxication: • Constriction of pupils • Sedation • Hypoventilation • Lowered blood pressure • Slowed pulse • Itching / scratching • Slurred speech Signs of opioid overdose: • Loss of consciousness • **Pinpoint pupils**  • **Respiratory depression** • Hypotension • Bradycardia • Pulmonary oedema 
Signs of Opioid Withdrawal	Signs of opioid withdrawal (think reverse of intoxication): • Lacrimation, rhinorrhoea • Dilation of pupils • Piloerection • Yawning • Sweating • Agitation, irritability • Loss of appetite • Nausea, vomiting • Abdominal cramps, diarrhoea • Palpitations • Increased blood pressure • Anxiety • Disturbed sleep • Fatigue • Joint and muscle aches  Withdrawal • Heroin and morphine: Starts quickly (often within 24 hrs) and peaks quickly (day 3) • Methadone and buprenorphine: Starts slowly (day 3-5) and peaks slowly (less abrupt peak, more protracted withdrawal)
Management	• Principles of Care ○ Promote harm reduction, provide education about safer alcohol and drug use practices ○ Safely achieve a client's goals (whether abstinence, switching in maintenance therapy or reduction in use) ○ Psychosocial factors play a significant part of an individual's withdrawal experience and provide focus for supportive care. ■ E.g. family violence, parenting and child protection issues, geographic isolation, legal and financial issues, homelessness and unstable accommodation, social connectedness ○ Withdrawal services are a gateway to longer-term treatment ○ Link client with social services, social and peer support groups and personal support networks

- Comprehensive biopsychosocial assessment and case formulation
  - Substance use history
    - Types of substances used, duration of use, quantity and frequency of use, route of administration, last use, tolerance
  - Medical comorbidities
  - Psychiatric comorbidities and mental health (dual diagnosis)
  - Polysubstance use/dependence
  - Chronic pain conditions
  - Previous withdrawal history
  - Previous treatment episodes
  - Factors leading to relapse
  - Social function

- Baseline Investigations to consider
  - ECG
  - UEC, LFT, Ca2+, Mg2+, Iron studies
  - BBV screen (HBV, HCV, HIV)

- Management of Overdose
  - Naloxone
    - **Temporarily** reverses effects of opioid overdose (lasts between 30-90 minutes) → emergency medical assistance
    - **IM** injection

- Management of Withdrawal
  - Symptomatic
    - N/V: antiemetics
    - Diarrhoea: loperamide
    - Abdo cramps: hyoscine butylbromide
    - Headaches and muscle cramps: paracetamol
  - Supportive care
    - Vitals, conscious state, hydration, manage psychological distress and delirium, maintain calm environment and physical comfort
  - If planned withdrawal
    - Consider setting: residential (inpatient, community) vs non-residential (home-based with GP support)

- Discharge Planning and Long-term care
  - Consider addiction psychiatry referral, multidisciplinary input and social work input where needed
  - Provide education, resources and emergency assistance numbers
  - Consider opioid overdose risk as part of withdrawal care planning (relapse risk after withdrawal high)
    - Naloxone care provision
  - Community AOD services, nurses, counselling and rehabilitation programs
  - Peer Recovery Groups
    - Narcotics Anonymous Meetings
    - SMART Recovery
  - Psychosocial Interventions
    - Motivational interviewing
    - Mindfulness-based relapse prevention
    - CBT

Maintenance Pharmacotherapy

- Substitution/ Opioid Agonist therapy
  - 
    Methadone (Biodone forte oral syrup)
    - MOA: mu-opioid receptor **full agonist**
    - Adverse effects: QTc prolongation, dental caries, constipation, sleep apnoea, nausea, drowsiness, osteoporosis, reduced libido
    - Safe in pregnancy
  - 
    Buprenorphine (Subutex sublingual or Suboxone [+naloxone])
    - MOA: mu-opioid receptor **partial agonist**, competitive antagonist of **concomitantly administered 'full' opioid drugs**
      - Time to administration of first dose: **min 6-12 hrs** between last dose of **short-acting opioid, 24-48 hrs** between last dose of **long-acting opioids**
    - Adverse effects: headaches, disturbed sleep, dental caries, constipation, sleep apnoea, nausea, drowsiness, osteoporosis, reduced libido
    - **Preferred to methadone** due to lower risk of sedation, respiratory depression, or where benzo withdrawal carried out concurrently
    - **Suboxone** has less risk of diversion and misuse due to inclusion of naloxone
  - Methadone to buprenorphine transfers
    - Require high level of supervision + monitoring

- Adjunctive maintenance therapies
  - 
    Clonidine
    - MOA: alpha-adrenergic agonists
    - Reduces agitation and restlessness, excessive sympathetic and nervous system activity (e.g. Sweating)
    - A&Es: hypotension, bradycardia, drowsiness
    - Requires observation!
  - 
    Naltrexone
    - Adjunctive relapse prevention
    - MOA: mu-opioid receptor antagonist
    - Attenuates effects of opioid, limited evidence for effectiveness, ca precipitate withdrawal, only given to those with strong motivation for abstinence (due to potential for overdose after relapse)

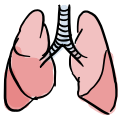
Quiz Time!:

- What are the most common opioids of dependence in Australia?
  - Heroin, oxycodone, morphine, codeine, methadone
- What is the kindling phenomenon?
  - Where the likelihood of certain withdrawal symptoms and complications are increased with repeated withdrawal episodes.
- Why is there a wait-time before commencing buprenorphine for opioid use disorder?
  - Buprenorphine can precipitate withdrawal if it is commenced whilst opioids are still circulating in the blood

Contributor: Uni Han
Reviewer: Simran Bhopal

Tobacco Related Disorders

Definition 	Cigarettes are composed of a mix of harmful chemicals. These can broadly be separated into the addictive substance nicotine and the toxins including acetone, arsenic, carbon monoxide, tar and many more.
Epidemiology 	• ⅛ Australians smoke tobacco daily • 10% of mothers smoke during pregnancy • Accounts for 10% deaths worldwide (1.2 million are non-smokers exposed to second hand tobacco) • 2 packs a day for 20 years= loses around 14 years of life

Pathophysiology of addiction  	How do people get addicted to nicotine?
	• After inhalation of tobacco, nicotine enters the bloodstream through the capillaries in the lungs. It then travels to the brain, where it activates nicotinic receptors in the mesolimbic system which release dopamine (the feel good hormone)
	• Nicotine also activates the parasympathetic nervous system causing relaxation.
	• With chronic smoking the body grows more nicotinic receptors and thus needs more nicotine to release the same amount of dopamine (i.e., tolerance)
	• A chronic smoker needs to smoke every 2 hours to maintain normal blood nicotine levels. Without smoking, the body goes into withdrawal and the sympathetic system is activated, in addition to a decrease in blood dopamine levels.
	
	What are the toxic effects of smoking?
	• The toxins in cigarettes kill the endothelial cells in the lungs, resulting in chronic inflammation
	• Some of these toxins have carcinogenic effects
	• This all leads to system-wide complications:
	  ○ Respiratory: Lung cancer, COPD, infections
	  ○ Cancer: Increased risk of practically all cancers
	  ○ Gastro: Peptic ulceration, worsens crohn's disease, squamous cell esophageal carcinoma
	  ○ Cardiac: Premature coronary artery and peripheral vascular disease
	  ○ Reproductive:
	  ■ Men: Erectile dysfunction
	  ■ Women: placental abruption, miscarriage, preterm birth
	  ○ Drug interactions: increases metabolism of clozapine
	  ○ Children: SIDS, childhood asthma, otitis media

Risk factors 	• Biological: genetics • Psychological: children with ADHD or conduct disorder. Adults with depressive, bipolar, anxiety, personality, psychotic or other substances • Social: low SES
Tobacco use disorder DSM-5 	There is alot to remember in the "Substance use disorder" definition, but thankfully all the definitions are the same, just substitute the problematic substance: • 2/11 of the following for a 12 month period: (Mnemonic: TWICE-T-2ADL) TWICE: 1. Tolerance 2. Withdrawal 3. Intended length of use longer/ intended amount larger than planned 4. Cravings 5. Efforts to cut down but not able to Time 

	6. Spending a lot of time getting, using or recovering from the substance Activities of Daily Living (ADLs) 7. ADLs affected by substance use 8. Giving up important ADLs due to substance use Continued substance use despite 9. Relationship and social issues 10. Mental or physical health affected 11. Substance is putting the patient in danger.
Tobacco withdrawal DSM-5 	Timeline: How long since the cigarette? ● <24 hr: withdrawal symptoms start ● 2-3 days: symptoms peak ● 2-3 weeks: duration of symptoms Tobacco Withdrawal DSM-V Criteria: A. Daily use of tobacco for several weeks B. Abrupt cessation of tobacco use, or reduction in the amount of tobacco used, followed within 24 hours by four or more of the following signs or symptoms: 1. Irritability, frustration, or anger 2. Anxiety 3. Difficulty concentrating 4. Increased appetite 5. Restlessness 6. Depressed mood 7. Insomnia C. Signs or symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning D. Signs or symptoms not attributed to another medical condition and not better explained by another mental disorder, including intoxication or withdrawal from another substance
Managing withdrawal and assisting quitting 5A	Use the 5 A approach to smoking cessation **ASK** ● Document smoking status ● Ask if they are willing to try to quit ○ If yes: continue on ○ If no: consider bringing up at a further appointment **ASSESS:** ● Assess dependence against DSM-5 tobacco use disorder definition ● WWQQAA ○ When do you typically smoke? How long after waking do you first smoke (<30 min is highly predictive of dependence). Do you wake at night to smoke? ○ Where: are there any environmental triggers? ○ Quality of symptoms: Cravings? Withdrawal symptoms? ○ Quantity: how many for how long? (document in pack years) ○ Aggravating: triggers? Barriers to quitting ○ Alleviating: anything that you have tried that has helped you quit? ○ Beliefs: Why do you want to quit? How do you think your life will change if/when you quit? **ADVISE:** ● "The best thing you do for your health is quit smoking" ● See if you can tailor the advice to their current health challenges and motivations

	ASSIST:  ● Agree on a quit plan as a SMART goal  ● Discuss strategies to manage triggers/ stress ● Discuss support services ○ Quitline – 13 78 48 ○ Online programs – QuitCoach (www.quitcoach.org.au) – iCanQuit (www.icanquit.com.au) ○ SMS-based support – QuitTxT (www.quitcoach.org.au/QuitTextInformation.aspx ● Discuss pharmacology **ARRANGE FOLLOW UP:** 🔄 ● Congratulate and arrange follow up to review progress and monitor medication SE

 Contributor: Tess Ryan

 Reviewer: Simran Bhopal

Medications for treating Tobacco use disorder

	Nicotine replacement therapy (NRT)	Varenicline/ champix	Bupropion hydrochloride
Mechanism of action	Provides nicotine without the other harmful chemicals found in cigarettes Different forms: • Patch: 16hr or 24hr dose (can cause nightmares so stick to 16hr patch unless patient wakes at night to smoke) • Inhalator • Chewing gum • Oral spray • Lozenge: take <30 min of waking • Sublingual tablet (last line) Note: • In highly dependent people you can try two together (gum and patch) • Usually 12 week course	Nicotine receptor partial agonist Reduces cravings and withdrawal symptoms Can be used in combination with NRT **Two approaches:** **Fixed:** the patient sets a date to stop smoking and starts varenicline 1-2 weeks before. **Flexible:** start varenicline dosing, then quits smoking between days 8-35 of tx **Dose** • 3 days of 0.5mg orally • 4 days of 0.4mg 2x daily orally • Remainder 12w= 1mg 2x daily orally	Started when they are still smoking Quit date set 2 weeks into therapy **DOSE** • 3 day: 150mg orally • 9 weeks: 150mg 3x day
Access	Over the counter PBS subsidised	PBS subsidised Initial 4 week script, then return for total 12 week script	PBS subsidised Initial 2 week script then represent for remainder of script
Indication	Smoking reduction in those still smoking or who have recently quit. ~~Can be used if pregnant, breastfeeding or adolescent~~	MOST EFFECTIVE! Less drug interactions	
Contra-indications	Less then 6 weeks after CVD event Children under the age of 12 years	Pregnancy/ breastfeeding Childhood Renal impairment (reduce dose) **Suicidal ideation**	Seizures or meds that lower the threshold (e.g., MAOi, antidepressants, hypoglycemics, antimalarials, antipsychotics) Pregnancy Eating disorders (as the electrolyte disturbance can cause seizures)
Adverse events	Vivid dreams Local skin irritation	Nausea 30% Neuropsychiatric AE Insomnia	Allergy insomnia

Contributor: Tess Ryan
Reviewer: Simran Bhopal

References

Alcohol & Related Disorders

- 2013. *Diagnostic and statistical manual of mental disorders*. Washingdon: American Psychiatric Publishing.
- Vojvodik, M. and Young, A., 2014. *Toronto Notes*. 30th ed. Toronto.
- eTG: Alcohol and other drug problems
- UptoDate: Alcohol use disorder
- *Monash psychiatry 4C moodle resources*

Opioid Related Disorders

- Black, D.W., Jon E. Grant, M.D.M.P.H., 2014. DSM-5 guidebook: The essential companion to the diagnostic and statistical manual of mental disorders, fifth edition, DSM-5. American Psychiatric Publishing.
- Frei, M., 2010. Opioid dependence Management in general practice. Australian Family Physician 39, 548–552.
- Gowing, L., Ali, R., Dunlop, A., Farrell, M., Lintzeris, N., 2014. National guidelines for medication-assisted treatment of opioid dependence. Department of Health, Canberra ACT.
- McDonough, M., 2013. Opioid treatment of opioid addiction. Aust Prescr 36, 83–87. https://doi.org/10/gmmg34
- National Institute on Drug Abuse, 2018. Questions for Identification of Opioid Use Disorder based on DSM-5 [WWW Document]. National Institute on Drug Abuse. URL https://www.drugabuse.gov/nidamed-medical-health-professionals/your-discipline/emergency-physicians-first-responders/questions-identification-opioid-use-disorder-based-dsm-5 (accessed 8.28.21).
- Wodak, A., 2001. Drug treatment for opioid dependence. Aust Prescr 24, 4–6. https://doi.org/10/gmmnpc

Tobacco Related Disorders

- https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/supporting-smoking-cessation/pharmacotherapy-for-smoking-cessation
- DSM-5
- https://www.lung.org/quit-smoking/smoking-facts/whats-in-a-cigarette
- https://www.quit.org.au/articles/nicotine-addiction-explained/
- https://tgldcdp-tg-org-au.ezproxy.lib.monash.edu.au/viewTopic?topicfile=smoking-cessation&guidelineName=Psychotropic&topicNavigation=navigateTopic#toc_d1e383