Psychotropics and Addiction

Daniel C. Dahl, M.D.

Agenda

- ADHD
- Anxiety
- Sleep
- Chronic Pain

Introduction

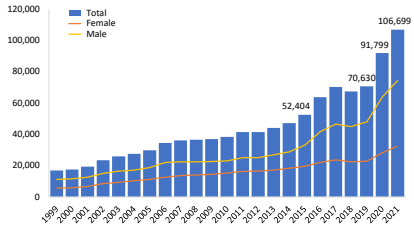
Mental illness is common.

Treatment is effective, especially in terms of Recovery.

Addiction is a risk of some commonly used psychotropics.

Source

Figure 1. National Drug-Involved Overdose Deaths*, Number Among All Ages, by Gender, 1999-2021



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Figure 2. National Drug-Involved Overdose Deaths*, Number Among All Ages, 1999-2021

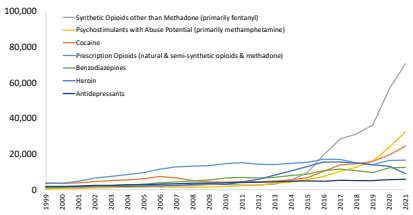


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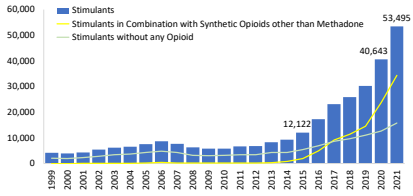
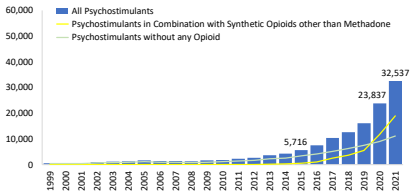
Figure 6. National Overdose Deaths Involving Stimulants (Cocaine and Psychostimulants*), by Opioid Involvement, Number Among All Ages, 1999-2021



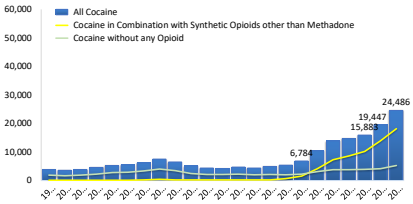
*Among deaths with drug overdose as the underlying cause, the psychostimulants with abuse potential (primarily methamphetamine) category was determined by the T43.6 ICD-10 multiple cause-of-death code. Abbreviated to *psychostimulants* in the bar chart above. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Figure 7. National Overdose Deaths Involving Psychostimulants with Abuse Potential (Primarily Methamphetamine)*, by Opioid Involvement, Number Among All Ages, 1999-2021



*Among deaths with drug overdose as the underlying cause, the psychostimulants with abuse potential (primarily methamphetamine) category was determined by the T43.6 ICD-10 multiple cause-of-death code. Abbreviated to *psychostimulants* in the bar chart above. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Figure 8. National Drug Overdose Deaths Involving Cocaine*, by Opioid Involvement, Number Among All Ages, 1999-2021



*Among deaths with drug overdose as the underlying cause, the cocaine category was determined by the T40.5 ICD-10 multiple cause-of-death code. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Awareness

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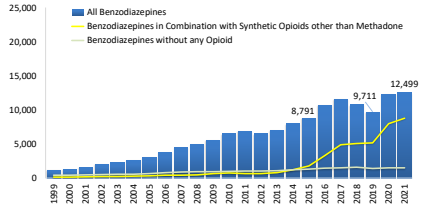
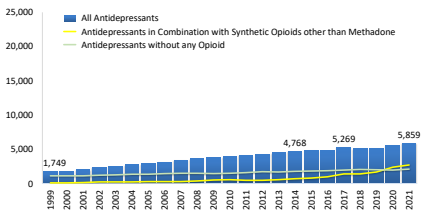
Figure 9. National Drug Overdose Deaths Involving Benzodiazepines*, by Opioid Involvement, Number Among All Ages, 1999-2021



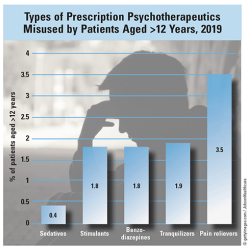
*Among deaths with drug overdose as the underlying cause, the benzodiazepine category was determined by the T42.4 ICD-10 multiple cause-of-death code. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Figure 10. National Drug Overdose Deaths Involving Antidepressants*, by Opioid Involvement, Number Among All Ages, 1999-2021



*Among deaths with drug overdose as the underlying cause, the antidepressant subcategory was determined by the following ICD-10 multiple cause-of-death codes: Tricyclic and tetracyclic antidepressants (T43.0), monoamine-oxidase-inhibitor antidepressants (T43.1), and other unspecified antidepressants (T43.2). Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Misuse of Psychotropics



Misuse of Prescription Psychotropic Drugs (uspharmacist.com)

ADHD

1. Definition
2. Prevalence
3. Diagnosis
4. Treatment

1968 DSM II	• Hyperkinetic Reaction of Childhood Disorder
1980-1987 DSM III	• Revised to include attentional and cognitive aspects (ADHD)
1994 DSM IV	• 3 Subtypes (inattentive, hyperactive-impulsive, combined)
2013 DSM V	• Added examples of manifestations in adult
Today	• Recognized worldwide as a lifespan disorder

DSM-5-TR

DSM-5-TR

A. Inclusion criteria (for adults)
   1. Inattention: need 5 or more of 9
   2. Hyperactivity/Impulsivity: need 5 or more of 9
B. *Some* symptoms present since before age 12 [neurodevelopmental]
C. Several symptoms present in 2 or more settings
D. Interfere with or reduce quality of social, academic, or occupational functioning
E. Not better explained by other disorders

"[cognitive] tests are not sufficiently sensitive or specific to serve as diagnostic indices," (APA, 2022).

Clinical Manifestations in Adults

ADHD is characterized by a persistent pattern of attention deficit, hyperactivity, and/or impulsivity that pervades across a variety of settings and results in functional impairment.[1,18,21]

- Although onset occurs in childhood, ADHD is not necessarily diagnosed at that time.[1]
- The clinical manifestation is heterogeneous, with different levels of severity and prevalence of each core symptom.[22,24]
- Symptoms may wax and wane due to changing life circumstances, functional expectations, and/or comorbid conditions.[25]
- Some may experience a reduction or remission of symptoms, particularly hyperactivity, with age.[18,24,26]
- Approximately 30-70% of adults with ADHD have emotional dysregulation (e.g., mood lability, irritability, anger outbursts, low frustration tolerance, motivational deficits).[1,26,27,28]
- Dysfunctional strategies (e.g., drinking alcohol, smoking cannabis) may be used to cope with emotional turmoil, social isolation, and rejection.[29]
- People with ADHD often identify positive aspects such as creativity, enthusiasm, awareness of the multiplicity of things, and the ability to hyper-focus and multitask when interested in a topic.[29]

Focus with ADHD *"feels like a short wave radio that most of the time can't find the right frequency."*[29]

National Academic Detailing Services - ADHD Clinician Guide - GroupbyCampaign (sharepoint.com)

Hyperactivity and Impulsiveness

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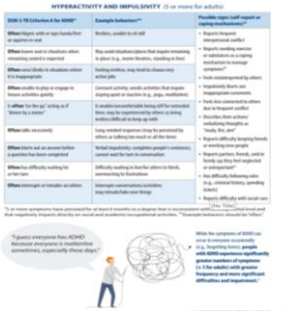

Inattention

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The clinical interview and evaluation continues to be the mainstay of ADHD diagnosis.[1]
Use the DSM-5-TR diagnostic criteria for ADHD to guide your clinical assessment of the patient.[1,10,11]

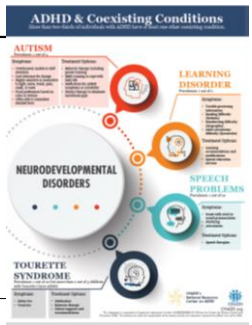
Table 1. Linking diagnostic criteria with adult manifestations of ADHD[1,10]

INATTENTION (5 or more for adults)		
DSM-5-TR Criterion A for ADHD*	Example behaviors**	Possible signs (self-report or coping mechanisms)[10]
Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities	Overlooks or misses details, work is inaccurate	• May use substances (e.g., caffeine, nicotine, alcohol) to mitigate symptoms** • Fatigued from energy required to sustain tasks** • Interpersonal problems • Forgetful • Poor or underdeveloped reading/verbal skills • Problems learning new material** • Relies on others to remind them of tasks • Avoids reading books or activities that require sustained attention for leisure • Put a hard time completing activities that require sustained attention • Works harder than others to perform • Establishes structure/routines to increase capacity to complete tasks
Often has difficulty sustaining attention in tasks or play activities	Has difficulty remaining focused during lectures, conversations, or lengthy reading; has difficulty making decisions	
Often does not seem to listen when spoken to directly	Mind seems elsewhere, even in the absence of any obvious distraction	
Often does not follow through on instructions, does not finish schoolwork, chores, or duties	Starts tasks but quickly loses focus and is easily sidetracked; procrastinates	
Often has difficulty organizing tasks and activities	Difficulty managing sequential tasks; keeping materials/belongings in order; messy, disorganized work; poor time management; misses deadlines	
Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort	Avoids, dislikes, or is reluctant when preparing reports, completing forms, or reviewing lengthy papers	
Often loses things necessary for tasks or activities	Loses tools, wallet, keys, paperwork, eyeglasses, mobile telephones	
Is **often** easily distracted by extraneous stimuli	Easily distracted; has unrelated thoughts	
Is **often** forgetful in daily activities	Forgetful when doing chores/running errands; forgets to return calls, pay bills, attend appointments	

*5 or more symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities. **Example behaviors should be "often."

Comorbidity

ADHD-Coexisting-Conditions-2023.pdf (d393uh8gb46l22.cloudfront.net)



Comorbidity

ADHD-Coexisting-Conditions-2023.pdf (d393uh8gb46l22.cloudfront.net)

Differential

Overview of Possible Causes for Presenting Symptoms Similar to ADHD

Psychiatric Disorders	Non-Psychiatric Disorders	Other
• Mood disorders (depression, bipolar) • Personality disorders (antisocial and borderline) • Generalized anxiety disorder • Substance abuse disorders, dependence, intoxication or withdrawal • Dementia • Asperger's and Autism spectrum disorders	• Medication interactions and adverse effects • Hearing difficulties • Hepatic diseases • Lead toxicity • Obstructive sleep apnea • Head injury • Seizure disorders • Thyroid disorders Vitamin B12 deficiency	• Transient stress, loss or grief • Malingering

adhd19-assessment-table2.pdf (aafp.org)

Millions of US children have been diagnosed with ADHD

- The estimated number of children aged 3–17 years ever diagnosed with ADHD, according to a national survey of parents,[1] is 6 million (9.8%) using data from 2016-2019. This number includes
  - 3–5 years: 265,000 (2%)
  - 6–11 years 2.4 million (10%)
  - 12–17 years: 3.3 million (13%).
- Boys (13%) are more likely to be diagnosed with ADHD than girls (6%).[1]
- Black, non-Hispanic children and White, non-Hispanic children are more often diagnosed with ADHD (12% and 10%, respectively), than Hispanic children (8%) or Asian, non-Hispanic children (3%).[1]

Data and Statistics About ADHD | CDC

Prevalence

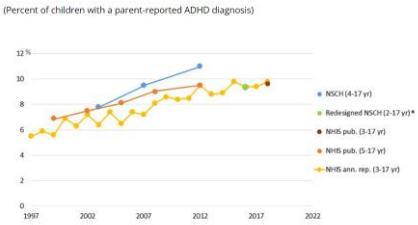
45-70% of childhood cases persist into adulthood.

Estimated prevalence rate is 4.4-5.2% in U.S. adults.

Highly heritable: parents with ADHD have a > 50% chance of having a child with ADHD.

National Academic Detailing Services - ADHD Clinician Guide - GroupbyCampaign (sharepoint.com)

Clinical Manifestations



ADHD Throughout the Years | CDC

Impact

Health problems
- Suicidality (completions, attempts, and ideation)
- Development of comorbidities (e.g., mood, sleep difficulty, anxiety, SUD)
- Obesity and overeating

High-risk behavior consequences
- Delinquency and crime
- Motor vehicle accidents
- Risky driving, more speeding tickets
- Unplanned pregnancies
- Sexually transmitted infections

Relationship and work challenges
- Lower educational and occupational achievement
- Financial problems
- Diminished social functioning
- Divorce

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AAFP

ADHD Risk Reduction Checklist

Diagnosis:

- ☐ Confirm symptoms and impairment meet DSM-5 criteria for ADHD diagnosis
- ☐ Confirm symptoms are not explained by other conditions
- ☐ Treat any co-existing mental health conditions first
- ☐ Confirm patient understands their condition and their role in ADHD management

Treatment considerations:

- ☐ Consider non-pharmacological management
- ☐ Address risk related to driving and other lifestyle risks
- ☐ Determine the importance of pharmacological and non-pharmacological treatment options and patient's readiness to participate in their care
- ☐ Confirm patient has no contraindications to suggested treatment
- ☐ Confirm patient has no suicidal ideations before initiation medication treatment
- ☐ If suicidality detected, address it first
- ☐ Do not prescribe short acting stimulants to patients with active substance use, including alcohol and cannabis

adhd19-risk-safety-checklist.pdf (aafp.org)

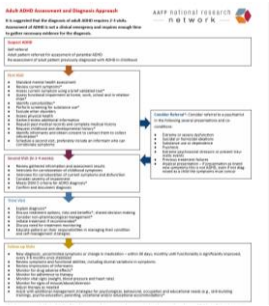
AAFP

Treatment with stimulants:

- ☐ Confirm patient understands risks associated with stimulant treatment (treatment effects, side effects, legal considerations)
- ☐ Measure baseline symptom severity, weight, blood pressure, heart rate and sleeping patterns before initiating stimulant medications
- ☐ Confirm patient has no history of seizures and tics
- ☐ Remember that stimulants are addictive and that they are controlled substance
- ☐ Prescribe stimulants according with the requirements for a Schedule II controlled substance
- ☐ Consider dose titration using the smallest available dose increment over intervals to maximum effective tolerated dose
- ☐ Continually monitor for treatment effects, side effects and outcomes
- ☐ Conduct regular vital signs monitoring (blood pressure, weight, heart rate)
- ☐ Monitor for stimulant misuse including treatment non-adherence and signs of abuse
- ☐ Assess regularly for signs of use of other substances
- ☐ Assess symptom severity and treatment effects at least annually

adhd19-risk-safety-checklist.pdf (aafp.org)

AAFP ADHD Algorithm



adhd19-algorithm.pdf (aafp.org)

Psychological Testing for ADHD

1. IQ Testing (WISC or WAIS)
2. Digit Span, Number-Letter Sequencing
3. Working memory and Processing Speed
4. Rating Scales (Vanderbilt or Brown)
5. Continuous Performance Test (Conners, Integrated Visual and Auditory, Auditory, Tests of Variables of Attend, Gordon Diagnostic)

ADHD: Is Objective Diagnosis Possible? - PMC (nih.gov)

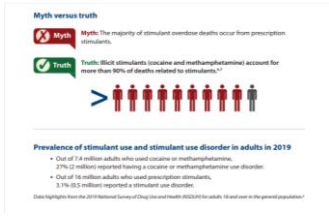
ASRS-6 (Adult Self-Report)

Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an X in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.	Never	Rarely	Sometimes	Often	Very Often
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?					
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?					
3. How often do you have problems remembering appointments or obligations?					
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?					
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?					
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?					

Part A

Microsoft Word - ADHD_draft6.doc (harvard.edu)

Myths



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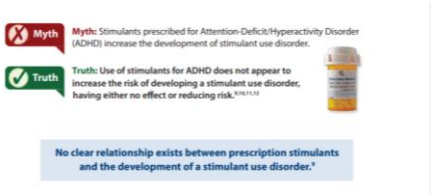
Myths



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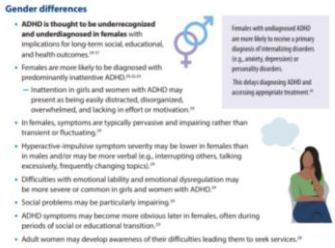
Gender



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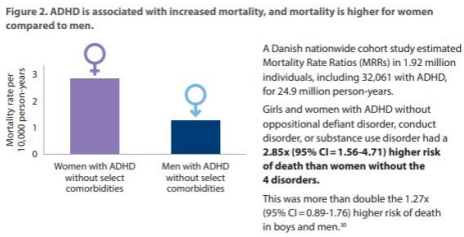
Mortality



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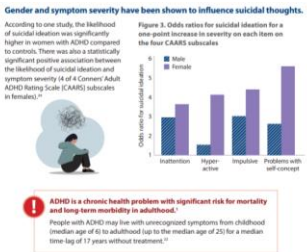
Suicidal Thoughts



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Diagnosis of ADHD

1. 5 of 18 symptoms present for 6 months
2. Establish chronicity (several symptoms before age 12) and contextual stability (2 settings)
3. Clinically significant impairment in functioning
4. Differential diagnosis
5. Finalize diagnosis (document what prevented childhood diagnosis)

Treatment

Treatment

ADHD requires a comprehensive, collaborative, and multimodal treatment approach tailored to meet the unique needs of the person with ADHD.[1] It is important to clearly identify all areas of impairment due to ADHD at the onset of treatment and regularly re-evaluate the impact of the condition.[1]

Pharmacotherapy is first-line treatment for ADHD in adults to target core symptoms causing impairment.[1,9,11,20,21,28,31,44,46-49]

- Psychostimulants: amphetamines, methylphenidate
- Non-stimulants: atomoxetine

Non-pharmacological interventions for adult ADHD can play an important role in helping adults manage and understand their condition.[46,50,51]

DID YOU KNOW

According to a study in a nationally representative sample of adults in the U.S., only 10.9% of respondents with adult ADHD received treatment for ADHD in the 12 months before interview.[17]

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Behavioral Therapy

Psychotherapy may help you:
- Improve your time management and organizational skills
- Learn how to reduce your impulsive behavior
- Develop better problem-solving skills
- Cope with past academic, work or social failures
- Improve your self-esteem
- Learn ways to improve relationships with your family, co-workers and friends
- Develop strategies for controlling your temper

Medication

Type of medication	Brand name	Generic Name	Duration
Short-acting amphetamine stimulants	Adderall	Mixed amphetamine salts	4 to 6 hours
	Dexedrine	Dextroamphetamine	4 to 6 hours
	Dextrostat	Dextroamphetamine	4 to 6 hours
Short-acting methylphenidate stimulants	Focalin	Dexmethylphenidate	4 to 6 hours
	Methylin	Methylphenidate (tablet, liquid, and chewable tablets)	3 to 5 hours
	Ritalin	Methylphenidate	3 to 5 hours
Intermediate-acting methylphenidate stimulants	Metadate CD	Extended-release methylphenidate	6 to 8 hours
	Ritalin LA	Extended-release Methylphenidate	6 to 8 hours
Long-acting amphetamine stimulants	Adderall-XR	Extended-release amphetamine	10 to 12 hours
	Dexedrine Spansule	Extended-release amphetamine	6+ hours
	Vyvanse	Lisdexamfetamine	10 to 12 hours
Long-acting methylphenidate stimulants	Concerta	Extended-release methylphenidate	10 to 12 hours
	Daytrana	Extended-release methylphenidate (skin patch)	11 to 12 hours
	Focalin XR	Extended-release dexmethylphenidate	8 to 12 hours
	Quillivant XR	Extended-release methylphenidate (liquid)	10 to 12 hours
Long-acting non-stimulants	Intuniv	Guanfacine	24 hours
	Kapvay	Clonidine	12 hours
	Strattera	Atomoxetine	24 hours

Red Flags

Escalating Doses/Running out early

- **First Need to Recognize 'Red flags'**
  - Symptoms of intoxication or symptoms associated with heavier use (agitation, psychosis, SOB, palpitations)
  - Demands for a particular, usually fast acting, medication (amphetamine IR)
  - "Extended-release doesn't work for me"
  - Repeated lost prescriptions
  - Discordant pill count
- **Determine why this is happening**
  - Disorganized, losing medication
  - Abusing/Using to get high
    - If bipolar, trying to capture "good feeling," or in early manic episode
  - Dose not enough to achieve therapeutic effect
- **Can always not prescribe if things getting out of control**

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Misuse

Managing Misuse/Abuse/Diversion for Prescribing Stimulants

- **Limit and keep track of pills**
- **Check state prescribing databases**
- **Obtain urine toxicology screens (they should only have the type of stimulants you are prescribing if they report being abstinent)**
- **Initiate frequent patient visits if concerned about NMU**
- **Use of long-acting agents**
- **Emphasize to patient to take medications regularly, not on a PRN basis**
- **Discuss with patient regarding safe storage and not advertising/sharing medications**
- **Provide Limit-setting: compassionate, yet boundaried**

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Conundrums

Clinical Conundrums for the Experienced Clinician

- **Difficulty determining whether stimulant treatment is yielding a benefit in a patient with co-occurring ADHD and SUD**
  - Carry out structured assessments of ADHD symptoms.
  - Determine the severity of the SUD. Often in severe cases, don't see improvement in ADHD symptoms unless SUD severity is reduced/alcohol-drug use diminishes
  - It is critical to target treatment of both ADHD symptoms and drug use
  - If don't see an effect on ADHD symptoms, may need to use higher doses. If you are afraid to use medications in active substance users, under-dosing may increase risks without benefit
  - Look for functional improvements. If there is no improvement in social, occupational, academic settings and still actively using drugs, then no reason to keep prescribing

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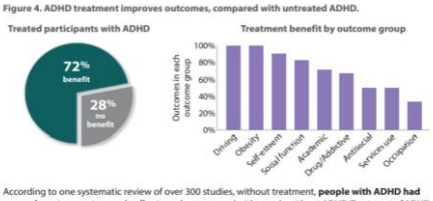
Treatment Outcomes

- Reduced suicidal ideation and attempts
- Reduced likelihood of MVA
- Reduced criminal behavior
- Higher self-esteem and social functioning

Outcomes

Figure 4. ADHD treatment improves outcomes, compared with untreated ADHD.



According to one systematic review of over 300 studies, without treatment, **people with ADHD had poorer long-term outcomes in all categories** compared with people without ADHD. Treatment of ADHD (versus untreated) resulted in favorable outcomes for 72% of outcomes reported (55 of 76 outcome results from 48 studies) (shown on left). Treatment benefits varied by outcome group (shown on right).[33]

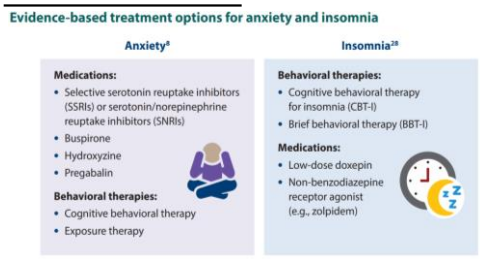
- Agoraphobia
- Panic Disorder
- Anxiety Due to Medical Condition
- Social Anxiety
- Generalized Anxiety Disorder
- Specific Phobia
- Substance-Induced
- Separation Anxiety

Prevalence of Anxiety

- Based on diagnostic interview data from the National Comorbidity Study Replication (NCS-R), Figure 1 shows past year prevalence of any anxiety disorder among U.S. adults aged 18 or older.[1]
  - An estimated **19.1%** of U.S. adults had any anxiety disorder in the past year.
  - Past year prevalence of any anxiety disorder was higher for **females (23.4%)** than for **males (14.3%).**
- An estimated **31.1%** of U.S. adults experience any anxiety disorder at some time in their lives.[2]

Any Anxiety Disorder - National Institute of Mental Health (NIMH) (nih.gov)

Treatment



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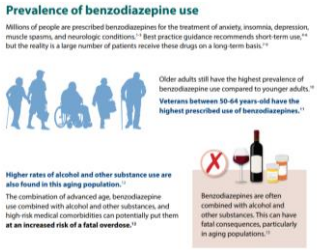
Prevalence of Benzodiazepine Use



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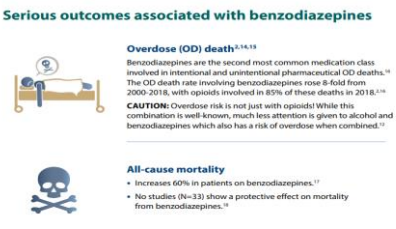
Outcomes On Benzodiazepines



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Outcomes On Benzodiazepines

Motor vehicle accident

Risk increases by 60%.[19]

Dependence and withdrawal

Dependence occurs in nearly all patients taking chronic benzodiazepines within as little as 4-6 weeks of continued therapy. In some, it can cause addiction.[20,21]

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Outcomes on Benzodiazepines

Cognitive impairment

- Short- and long-term use of benzodiazepines may lead to impairment across many cognitive domains.[22-25]
- Long-term use impacts the spectrum of domains of cognitive function, especially verbal memory.[22]

Falls risk

The risk of falls increases in older adults who use benzodiazepines and can double in those age 80 and over.[26] The risk of hip fractures also rises with benzodiazepine use.[27]

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Outcomes on Benzodiazepines

Respiratory outcomes with benzodiazepine use

- **General population:** Use has been associated with a 50% risk of community acquired pneumonia.[28]
- **Patients with COPD:** Use increases the risk of outpatient respiratory exacerbations, emergency room visits, and mortality.[29-32]
- **Patients with sleep apnea:** Use worsens respiratory outcomes and oxygen levels overnight.[33,34]

Pregnancy related outcomes

- A 2-fold increased risk of preterm birth in women using benzodiazepines during pregnancy.[35]
- Advanced levels of care may be required when benzodiazepines are prescribed, such as cesarean delivery and neonatal intensive care admission.[36,37]

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Misperceptions

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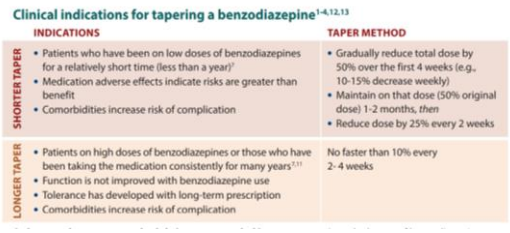
Taper



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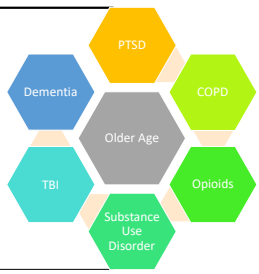
Benzodiazepine High Risk Groups



Benzodiazepine Taper

Discussing benzodiazepine withdrawal[1-5]

1 Assess patient's willingness to discontinue or reduce the dose of benzodiazepine.

- Explore and acknowledge perceived benefits and harms and allow Veteran to express his/her concerns.
- Explain the risks of continued use (disinhibition, ineffectiveness, loss of mental acuity) and the benefits of stopping.
- If previous attempts have been made without success, explain that it is worth trying again.

ADVISE	ASSESS	ASSIST
• Provide medical advice about the risks of long-term benzodiazepine use.	• Understand patient's readiness to discontinue benzodiazepines.	• Provide written taper schedule. • Discuss alternative therapies and/or referral for behavioral services.

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Benzodiazepine Taper

2 Agree on timing and discuss the symptoms likely to occur from withdrawal.[3]

- Patients may experience withdrawal after just 4 weeks of benzodiazepine use.
- Timeline of withdrawal occurs within 1-7 days and can last 4-14 days (short vs. long half-life, respectively) after the discontinuation of benzodiazepines.
- Withdrawal symptoms are generally more severe with short half-life benzodiazepines (e.g., alprazolam) and shorter in duration than longer half-life benzodiazepines (e.g., diazepam).

Benzodiazepine withdrawal symptoms[6]

MILD	MODERATE		SEVERE
• Anxiety • Insomnia	• Diaphoresis • Headache • Irritability • Muscle pain/stiffness • Nausea/vomiting • Palpitations	• Panic attacks • Poor concentration • Sleep disturbance • Tremor • Weight loss	• Seizure • Psychosis

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Benzodiazepine Taper

3 Provide written instructions for a structured medication taper and clearly document in the medical record. Be prepared to slow the taper if the patient reports significant withdrawal symptoms.

TIPS FOR TAPERING

- Begin the taper with the benzodiazepine prescribed.
- If a patient is unable to tolerate tapering a shorter-acting medication, switch to a long-acting option (e.g., diazepam for younger adults, lorazepam for adults age 65 and over).[9,10]
  - Patients on short- or intermediate-acting benzodiazepines have been associated with higher drop-out rates due to withdrawal symptoms compared to long-acting benzodiazepines.[11]
- The benzodiazepine used for the taper should have many strengths available (e.g., lorazepam, diazepam).[12]
- The rate of benzodiazepine taper should ultimately be determined by the patient's symptoms.

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Protracted Withdrawal

Common protracted benzodiazepine withdrawal symptoms[7,8]

Symptoms	Usual course
Anxiety	Gradually diminishing over a year
Insomnia	Gradually diminishing over 6-12 months
Depression	A few months: responds to antidepressants, if needed
Cognitive impairment	Gradually improving but may last a year or more and occasionally incomplete resolution
Perceptual symptoms (e.g., tinnitus, paresthesia—tingling, numbness, pain usually in limbs, extremities)	Gradually receding, but may last at least a year and occasionally persist indefinitely
Motor symptoms (e.g., muscle pain, weakness, tension, painful tremor, shaking attacks, jerks, blepharospasm)	Gradually receding, but may last at least a year and occasionally persist indefinitely
Gastrointestinal symptoms	Gradually receding, but may last at least a year and occasionally persist indefinitely

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Non-drug Treatment

Benzodiazepine withdrawal symptoms and non-drug ways to address[7,14-18]

Insomnia, nightmares, sleep disturbances

- Reviewing sleep hygiene (e.g., avoiding tea, coffee, stimulants or alcohol around bedtime)
- Relaxation tapes, anxiety management techniques
- Exercise
- Schedule most of the benzodiazepine dose at night during the taper period

Anxiety symptoms and panic attacks

- Psychological techniques
  - Individual or group behavior therapy
  - Cognitive behavioral therapy
- Physical activity (e.g., aerobics, walking, swimming)
- Yoga
- Meditation
- Acupuncture

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Urine Drug Testing

Benzodiazepine urine drug test[8,19,20,25]

Text and expected result	Detection period after last dose	Considerations
Benzodiazepine immunoassay – Unconjugated oxazepam	• 1-3 days for short-acting • 30 days for long-acting* *Long-term use of lipid-soluble drugs (e.g., diazepam) can be detected for a longer period of time.	• Immunoassays not sensitive to therapeutic doses, confirmatory testing recommended • Alprazolam, clonazepam, and lorazepam not often detected by immunoassay • False positives may be caused by sertraline, efavirenz, or oxaprozin

Additional monitoring could include gamma-glutamyl transferase (GGT) for alcohol use.

Metabolic pathway of benzodiazepines that can be detected with immunoassy[26,27]

Boxes with bold outline are detectable with assay.

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Sleep History

CC:
HPI: (location, quality, quantity timing, setting, aggravating/relief, associated0
OSA (snoring, witnessed, morning headache, daytime sleepiness, awaken choked, diaphoresis)
Epworth Sleepiness Scale
Stanford Sleepiness Scale
PLMs (leg cramps, crawly/achy feeling in legs, bedcovers in disarray)
Parasomnias (nightmares, fight in sleep, sleepwalk, seizures, uncontrolled urination)
Insomnia (unable to fall asleep less than 15 minutes, wake up and can't get back to sleep, wake up 1-2 hours early, watch clock, anxiety about sleep, muscle tension)
Bruxism
Shift work
Caffeine/Alcohol/Smoking

ScreeningQuestions-SleepHistoryandExam.qxd (aasm.org)

Insomnia Differential

1. Insomnia associated with other sleep disorders most commonly includes sleep related breathing disorders (e.g., obstructive sleep apnea), movement disorders (e.g., restless legs or periodic limb movements during sleep) or circadian rhythm sleep disorders

2. Insomnia due to medical or psychiatric disorders or to drug/substance (comorbid insomnia)

3. Primary insomnias including psychophysiological, idiopathic, and paradoxical insomnias

040515.pdf (aasm.org)

Behavioral Techniques for Insomnia

1. Stimulus Control (20 minutes)
2. Relaxation Training (muscle, breathing, guided imagery)
3. CBT-I
4. Sleep Restriction (limit time in bed to sleep time)
5. Paradoxical Intention (confront fear of staying awake)
6. Biofeedback
7. Sleep Hygiene

Pharmaceutical Therapy Insomnia

040515.pdf (aasm.org)

S Schutte-Rodin, L Broch, D Buysse et al

Table 12—Pharmaceutical Therapy Options

Drug	Dosage Form	Recommended Dosage	Indications/Specific Comments
Benzodiazepine Receptor Agonistic Modulators (Schedule IV Controlled Substances)			
Non-benzodiazepines			
cyclopyrrolones			
eszopiclone	1, 2, 3 mg tablets	2-3 mg hs 1 mg hs in elderly or debilitated; max 2 mg 1 mg hs in severe hepatic impairment; max 2 mg	❖ Primarily used for sleep-onset and maintenance insomnia; ❖ Intermediate-acting; ❖ No short-term usage restriction
imidazopyridines			
zolpidem	5, 10 mg tablets	10 mg hs; max 10 mg 5 mg hs in elderly, debilitated, or hepatic impairment	❖ Primarily used for sleep-onset insomnia ❖ Short-to intermediate-acting
zolpidem (controlled release)	6.25, 12.5 mg tablets	12.5 mg hs 6.25 mg hs in elderly, debilitated, or hepatic impairment	❖ Primarily used for sleep-onset and maintenance insomnia; ❖ Controlled release; swallow whole, not divided, crushed or chewed
pyrazolopyrimidines			
zaleplon	5, 10 mg capsules	10 mg hs; max 20 mg 5 mg hs in elderly, debilitated, mild to moderate hepatic impairment, or concomitant cimetidine	❖ Primarily used for sleep onset insomnia ❖ Maintenance insomnia as long as 4 hours is available for further sleep ❖ Short-acting
Benzodiazepines			
estazolam	1, 2 mg tablets	1-2 mg hs 0.5 mg hs in elderly or debilitated	❖ Short- to intermediate-acting
temazepam	7.5, 15, 30 mg capsules	15-30 mg hs 7.5 mg hs in elderly or debilitated	❖ Short- to intermediate-acting
triazolam	0.125, 0.25 mg tablets	0.25 mg hs; max 0.5 mg 0.125 mg hs in elderly or debilitated; max 0.25 mg	❖ Short-acting
flurazepam	15, 30 mg capsules	15-30 mg hs 15 mg hs in elderly or debilitated	❖ Long-acting ❖ Risk of residual daytime drowsiness
Melatonin Receptor Agonists (Non-Scheduled)			
ramelteon	8 mg tablet	8 mg hs	❖ Primarily used for sleep-onset insomnia ❖ Short-acting ❖ No short-term usage restriction

Overview of Misuse

1. Of patients misusing prescription psychotropics, **92.4% did so to aid sleep**, 70.7% to relax/relieve tension, 26.3% to feel good/get high, and 23.8% to handle feelings/emotions.
2. To relieve tension, **41.1% of patients misused tranquilizers**, and reasons for misusing pain relievers included getting high (11.3%), relieving tension (10%), and dealing with emotions/feelings (3.8%).
3. Although from 2018 to 2019 overall misuse of prescription psychotropics **dropped by 6%,** the rate of decline varied from 0% to 10% depending on the drug's therapeutic category. Misuse of sedatives remained unchanged at 0.4%, whereas misuse of stimulants declined by 5% and misuse of benzodiazepines and pain relievers each decreased by 10%.

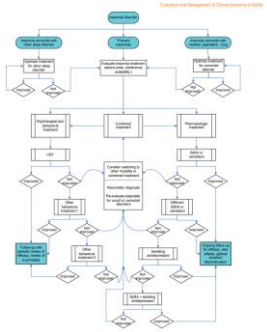
Misuse of Prescription Psychotropic Drugs (uspharmacist.com)

Benzodiazepine Commentary Rosenbaum

This commentary is not meant to be a call for a **benzodiazepine renaissance** but rather an attempt to offer a perspective. Beyond their established efficacy in anxiety distress and insomnia and fueling the debate between "**pharmacological Calvinism and psychotropic hedonism**" (8), these medications can also offer transient relief and comfort from stress; in a world replete with distress, it may be difficult for people to refrain from seeking a comforting remedy.

Benzodiazepines: A Perspective | American Journal of Psychiatry (psychiatryonline.org)

Algorithm



040515.pdf (aasm.org)

Management Plan

Start with offering evidence-based behavioral therapies

- Cognitive behavioral therapy for insomnia (CBT-I) is recommended as first-line treatment for chronic insomnia.
- Brief behavioral therapy for insomnia (BBT-I) can also be encouraged but is not as effective as CBT-I.

If patient still suffers from insomnia, or if CBT-I is not a good option

Consider medication for chronic insomnia

- Intermittent (e.g., 3 or 5 days/week) dosing for a period of < 2 weeks may help.
- Preferred options include low-dose doxepin (3 or 6 mg) and non-benzodiazepine receptor agonist (e.g., zolpidem).
- Continue to offer CBT-I, if not already completed.

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Management Plan

Avoid benzodiazepines

- In most cases the harm of benzodiazepines (e.g., triazolam, temazepam) outweigh the benefits.
- Benzodiazepines may negatively affect sleep architecture, and have significant interactions with alcohol and other medications (e.g., opioids).n
- Tolerance quickly develops to the ability to induce and prolong sleep. Rebound insomnia can occur 1-2 weeks after treatment discontinuation.

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Benzodiazepine Discontinuation Strategy

Strategies for successful benzodiazepine discontinuation

Minimal educational interventions are effective strategies to assist patients with decreasing or stopping benzodiazepines, such as:[61-63]

- **Brief educational intervention:** medication review, consultation (risk/benefits), assessment of patient readiness, provision of a withdrawal schedule, and education about benzodiazepine use
- **Direct to consumer education:** letters designed to promote cognitive dissonance (e.g., EMPOWER trial), which increased success of discontinuation by 8-fold
- **Augmentation:** psychotherapy and/or pharmacotherapy aimed at addressing underlying condition

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Benzodiazepine Discontinuation Strategy

Framework of a brief educational intervention[64]

Provide information on benzodiazepine dependence, abstinence, and withdrawal symptoms; risks of long-term use, memory and cognitive impairment, accidents, falls, and reassurance about reducing medication.

Patients receiving a brief intervention were 3 times more likely to discontinue benzodiazepine use after 12 months vs. controls.[65]

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Success

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Taper

- Go slow!
- Provide written instructions for the taper schedule.
- Document taper schedule in electronic medical record.
- Schedule follow-up with the Veteran to assess tolerability of the taper. This can be done by various health care team members (e.g., nurse, clinical pharmacy practitioner) and provided via clinic visit, telehealth, and/or telephone.
- Be flexible! Adjust schedule to accommodate issues that may arise.
- If withdrawal is experienced, hold or slow down the taper schedule.
- Substitute a longer-acting benzodiazepine if the patient is on a short-acting form and experiencing withdrawal.

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Summary

Summary of strategies to discontinue benzodiazepines

1. **Determine benefit vs. harm of benzodiazepine therapy.**
   - Is there still an indication for the benzodiazepine?
   - What specific risk factors does the Veteran have?
   - Does the benefit of the benzodiazepine outweigh the risk?
2. **Employ strategies that help with long-term benzodiazepine discontinuation.[73]**
   - Recommend gradual dose reduction and discontinuation.
   - Use educational interventions to achieve better discontinuation outcomes.
   - Offer psychotherapy interventions (e.g., cognitive behavioral therapy for insomnia).
3. **Perform slow taper over months.**
   - Provide written instructions and document taper recommendations in the medical record.
   - Educate patient on signs and symptoms of withdrawal.

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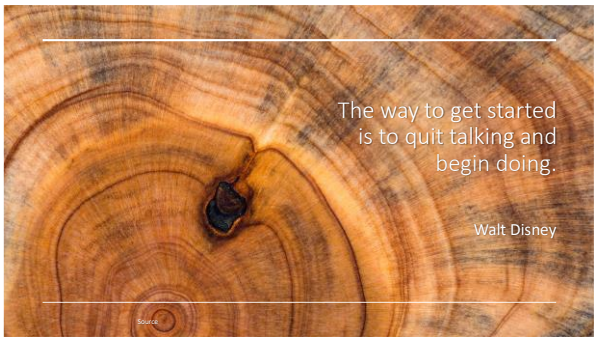
Chronic Pain

1. Antidepressants
2. Suboxone

Myths About Suboxone

1. You aren't really in recovery if you're on Suboxone (medical model)
2. People frequently misuse Suboxone (partial agonist of mu receptor, self-treatment)
3. It's as easy to overdose on Suboxone as it is to overdose on other opiates. (partial agonist with ceiling effect, problems probably combining with other sedatives)
4. Suboxone isn't treatment for addiction if you aren't getting therapy along with it. (combination with therapy is great but Suboxone alone effective)
5. Suboxone should only be taken for a short period of time (chronic medical illness, patient preference)

5 myths about using Suboxone to treat opiate addiction - Harvard Health


The way to get started
is to quit talking and
begin doing.
Walt Disney