

# Screening and Diagnosis of Alcohol Use Disorder (AUD) in Primary Care

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Featuring Q&A with Ryan Jackman, MD, FASAM



Department of  
Family Medicine

# Objectives

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By the end of the presentation, participants should be able to:

- Understand the neurobiology and physiology basics of alcohol dependence
- Discuss screening tools for unhealthy alcohol use and define SBIRT
- Report and understand how to apply the diagnostic criteria for AUD

# Alcohol Use in the United States

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- Alcohol is the 3<sup>rd</sup> leading preventable cause of death in the US
- More than 93,000 deaths/year directly attributed to alcohol use
  - 28% of all traffic fatalities
- Nearly 3 in 10 adults use alcohol in an unhealthy manner
  - Prevalence has increased in last decade
  - Up to 14% of adults meet criteria for alcohol use disorder
- Evidence that alcohol use has increased during COVID-19 pandemic

# Mechanism of Alcohol

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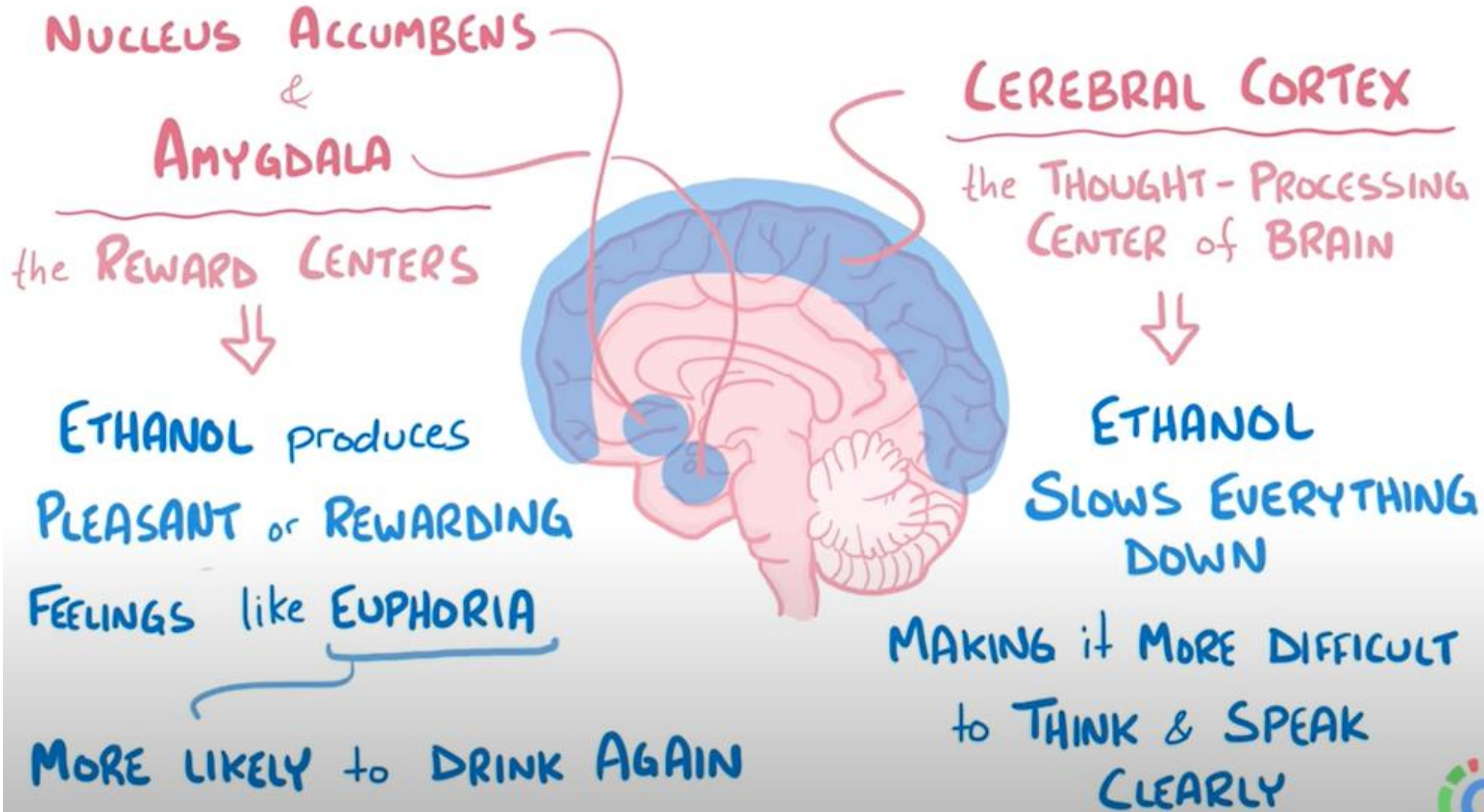
- Alcohol crosses the blood-brain barrier
- Interacts with a variety of neurotransmitters
  - GABA, glutamate, dopamine, opioid, epinephrine, etc.
- GABA inhibitory pathway: Activated
  - Alcohol increases GABA release
  - GABA acts as an “off” switch to reduce brain activity

# Mechanism of Alcohol

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- Glutamate excitatory system: Blocked
  - Alcohol reduces glutamate levels
  - Decreases brain activity and energy levels
- Dopaminergic reward pathway: Activated
  - Involved in reinforcement behaviors
  - There is a dose-response relationship
- Opioid receptors: Activated
  - Induces release of endogenous endorphins

# Mechanism of Alcohol



# Mechanism of Alcohol

**ETHANOL SLOWS**  
BEHAVIORAL INHIBITION  
CENTERS

like the

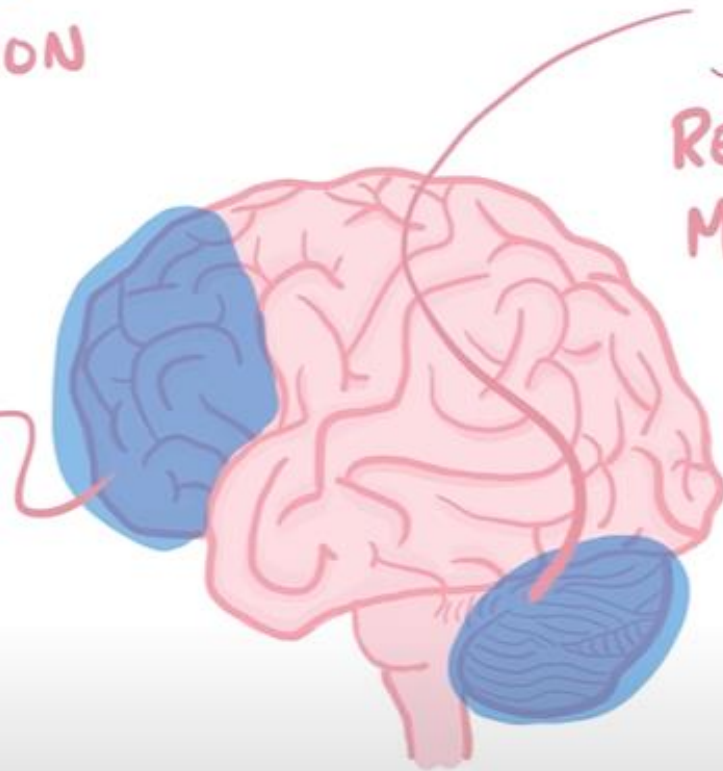
PREFRONTAL CORTEX

making people

**MORE RELAXED**

&

**LESS SELF-CONSCIOUS**



CEREBELLUM

RESPONSIBLE for  
MOVEMENT & BALANCE

ETHANOL causes  
INDIVIDUALS to LOSE  
COORDINATION

MAKING it HARD  
to WALK  
to DRIVE

# Pathogenesis of Alcohol Dependence

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- Complex interplay of biologic, psychological, and socio-environmental factors
- Genetics
  - Accounts for up to 50% of vulnerabilities related to AUD
- Environment
- Personality
- Cognitive and mood disorders



# Pathogenesis of Alcohol Dependence

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- With repeated use, there is a decreased response to the same dose
  - Tolerance develops
- Likely because GABA, glutamate, dopamine receptors become less sensitive to Etoh
  - Receptors may also be down-regulated (fewer receptors available for binding)
- These changes impact the development of dependence

# Definitions: Unhealthy Alcohol Use

- Spectrum ranging from *risky use* to *AUD*

Risky Alcohol Use:



One drink

12 oz beer

5 oz wine

1.5 oz spirits

~ 14 g Etoh



Men under  
age 65



Woman (all ages)  
Men age 65+



Pregnant  
women

# Definitions: DSM-5 Criteria for AUD

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- Recurrent drinking resulting in failure to fulfill role obligations
- Recurrent drinking in hazardous situations
- Continued drinking despite alcohol-related social or interpersonal problems
- Tolerance
- Withdrawal
- Drinking more/more often than intended
- Unable to quit/cut back drinking
- Spent a lot of time drinking or recovering
- Given up or reduced important activities due to drinking
- Continued drinking despite knowledge of consequences
- Cravings

## To diagnose AUD:

- Patient must meet at least 2 criteria in past year
- Mild: 2-3 criteria present
- Moderate: 4-5 criteria
- Severe: 6 or more criteria

# Alcohol SBIRT

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- Identifies unhealthy alcohol use AND provides an intervention
- **S**= Screening
- **BI**= Brief Intervention
- **R**= Referral
- **T**= Treatment

# S= Screening

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- All adult primary care patients should be screened for unhealthy alcohol use (USPSTF Grade B)
  - “... good evidence that screening can accurately identify patients whose levels of alcohol consumption... place them at risk for morbidity and mortality”
- Less than half of problem drinkers are asked by their PCP about their alcohol consumption or advised to cut back
- Workflow is flexible
  - Self-administered whenever possible
  - At least annually

# S= Screening

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*“I am going to ask you a few questions related to your drinking habits. I ask all my patients these questions so I can provide the most appropriate counseling or care.”*

- Start with brief screening
  - Single Item
  - AUDIT 1-3 (Alcohol Use Disorders Identification Test)
  - AUDIT-C
- Then consider further assessment if positive
  - AUDIT
  - Symptom checklist to assess DSM-5 criteria

# S= Screening

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- Screening captures unhealthy alcohol use
  - Does not necessarily diagnose AUD
- Providers need to be aware of AUD diagnostic criteria
  - If someone screens positive, think about asking further questions to differentiate if AUD is present
  - Use AUDIT or DSM-5 criteria for AUD

**Single Question  
or  
AUDIT 1-3 (US)**

assess alcohol consumption

screen negative

screen positive

**AUDIT (US)**

assess harm and  
dependence

not likely  
dependent

likely  
dependent

**Conversation and/or  
brochure on  
drinking limits**

**Brief intervention only**

**Brief intervention  
and referral**



# Single Alcohol Screening Question (SASQ)

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- *“How many times in the past year have you had X or more drinks in a day?”*
  - X= 5 for men
  - X= 4 for women
- Positive if 1+ times
- Identifies heavy drinking
  - Reliable marker for unhealthy alcohol use

# AUDIT 1-3

QUESTIONS	0	1	2	3	4	5	6
1. How often do you have a drink containing alcohol?	Never	Less than Monthly	Monthly	Weekly	2-3 times a week	4-6 times a week	Daily
2. How many drinks containing alcohol do you have on a typical day you are drinking?	1 drink	2 drinks	3 drinks	4 drinks	5-6 drinks	7-9 drinks	10 or more drinks
3. How often do you have X (5 for men; 4 for women & men over age 65) or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	2-3 times a week	4-6 times a week	Daily

Positive:

- 7 or more for women and men 65+
- 8 or more for men < 65 years

Identifies excessive regular drinking and excessive occasional drinking

**Total**

# AUDIT C

<b>AUDIT-C</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Score</b>
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	_____
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	_____
3. How often do you have five or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	_____

Positive: 3+ for women, 4+ for men

# AUDIT

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- 10 question tool
  - Use if AUDIT 1-3, AUDIT C, or Single Item screening is positive
  - Can be answered in 2-3 minutes using paper or computer
  - Think about using print-outs
- Measures alcohol consumption *and* symptoms of dependence
  - 1-3: Frequency questions
  - 4-6: Signs of dependency
  - 7-10: Alcohol-related problems

# AUDIT

<p>1. How often do you have a drink containing alcohol?</p> <p>(0) Never [Skip to Qs 9-10] (1) Monthly or less (2) 2 to 4 times a month (3) 2 to 3 times a week (4) 4 or more times a week</p> <input type="checkbox"/>	<p>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="checkbox"/>
<p>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</p> <p>(0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7, 8, or 9 (4) 10 or more</p> <input type="checkbox"/>	<p>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="checkbox"/>
<p>3. How often do you have six or more drinks on one occasion?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <p><i>Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0</i></p> <input type="checkbox"/>	<p>8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="checkbox"/>
<p>4. How often during the last year have you found that you were not able to stop drinking once you had started?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="checkbox"/>	<p>9. Have you or someone else been injured as a result of your drinking?</p> <p>(0) No (2) Yes, but not in the last year (4) Yes, during the last year</p> <input type="checkbox"/>
<p>5. How often during the last year have you failed to do what was normally expected from you because of drinking?</p> <p>(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily</p> <input type="checkbox"/>	<p>10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?</p> <p>(0) No (2) Yes, but not in the last year (4) Yes, during the last year</p> <input type="checkbox"/>

# AUDIT Scoring Interpretation

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- 0-7: Drinking below low-risk guidelines
  - Reinforce behaviors and guidelines
- 8-15: Drinking in excess of screening guidelines
  - Merits brief intervention
- 16-19: Drinking above guidelines PLUS experience of alcohol-related harm
  - May be dependent
  - Brief intervention and follow-up (minimum)
- 20 or more: Suggests dependence/AUD
  - BI + offer treatment and referrals

# AUDIT Scoring Interpretation

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- 16-19: Drinking above guidelines PLUS experience of alcohol-related harm
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To assess dependence...

Look for score  $\geq 4$  on “dependence” questions (Q4-6)

# BI= Brief Intervention

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- Counseling interventions can reduce alcohol consumption by 10-30% at 12 months
  - Can also improve adherence to recommended drinking limits
  - More than 34 randomized trials!
- Implement if positive on any screener
  - Usually takes 5-15 minutes
- Main target population is nondependent, risky drinkers
  - Brief intervention may not be enough for someone who has AUD
  - Think about treatment (MAT), referrals



# BI= Brief Intervention

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## Potential elements:

- Ask for permission to discuss screening
- Provide feedback on screening results
- Express concern that drinking adversely impacts health
- Use motivational interviewing to assess change desire
- Educate on recommended drinking limits
- Explicitly advise to drink below recommended limits (or abstain)
- Collaborate with patient in setting goals and planning next steps

# BI= Brief Intervention

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- Step 1: Ask for permission to discuss screening

*“I appreciate you answering our health questionnaire.  
Could we take a minute to discuss your results?”*

# BI= Brief Intervention

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Step 2: Provide feedback on screening results

- Provide AUDIT score
- Express concern that drinking adversely impacts health

*“Drinking at this level can be harmful to your health and possibly responsible for the health problem for which you came in today.”*

# BI= Brief Intervention

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## Step 3: Enhance motivation

*“What are some of the good and not-so-good things about your alcohol use?”*

Summarize both sides of thinking

*“So on the one hand... and on the other hand...”*

# BI= Brief Intervention

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## Step 3: Enhance motivation

*“On a scale of 1 to 10, how important is it for you to cut back or quit your alcohol use?”*

*“Why that number and not a lower one?”*

## Summarize information

# BI= Brief Intervention

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## Step 4: Provide Advice

- Educate on recommended drinking limits
- Explicit advice to drink below recommended limits (or abstain)



Men under  
age 65



Woman (all ages)  
Men age 65+



Pregnant  
women

Source: NIAAA, 2018

# BI= Brief Intervention

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## Step 5: Discuss Next Steps

*“If you were to make a change, what would be your first step?”*

# BI= Brief Intervention

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- BI may be altered if you are worried about AUD
  - AUDIT score  $\geq 16$
- Provide advice that encourages abstinence
- Assess for withdrawal symptoms
- With permission, discuss treatment
  - And referral if necessary



# RT= Referral and Treatment

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- For those with evidence of dependence
  - Based on AUDIT screener or DSM-5 criteria for AUD
- Potential referrals to:
  - Behavioral Health
  - Local addiction providers
  - Support group (AA, etc)
  - Treatment program
- Treatment:
  - Medication Assisted Treatment (MAT)

More to come next webinar!

# Coding Options

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- Z71.41- Alcohol abuse counseling and surveillance
- F10- Alcohol use codes
  - F10.1 Alcohol abuse
  - F10.2 Alcohol dependence
  - F10.9 Alcohol use

# Upcoming Webinars

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- 10/28 at 12 pm: Medication Assisted Treatment (MAT) for Alcohol Use Disorder
- 11/11 at 12 pm: Alcohol Use Disorder (AUD) Treatment Monitoring and Follow-up in Primary Care

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**Thank you!**

**Questions?**

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