



# Alcohol

- **Common names:** Booze, liquor, drinks, cocktails, nightcaps, moonshine
- **Trade names:** Ethyl alcohol, beer, gin, rum, vodka, bourbon, whiskey, liqueurs, wine, brandy, sherry, champagne<sup>4</sup>
- **Other sources can include:** Mouthwash, hand sanitizer, vanilla extract, Chinese cooking wine, cough syrup, perfumes/ colognes/ aftershave, spray odour neutralizers, disinfectants<sup>11</sup>



## Characteristics (Depressant)

- Alcohol alters the function of several receptors and cellular functions, including GABA<sub>A</sub> receptors, Kir3/GIRK channels, adenosine reuptake, glycine receptor, NMDA receptor, and 5-HT<sub>3</sub><sup>9</sup>
- Effects of alcohol have a close relationship with blood alcohol levels; impaired judgment and impulsivity can occur with levels of 4-6mmol/l (20-30mg/100ml); levels of 17mmol (80mg/100ml) are associated with slurred speech, incoordination, unsteady gait, and inattention. Higher levels can intensify cognitive deficits, aggressiveness, and cause blackouts<sup>7</sup>
- Elimination is about 10g of alcohol per hour (about 30ml/one oz. of whiskey, or one bottle of beer)<sup>7</sup>. Blood alcohol level declines by 3-7mmol/l per hour (approximately 15mg/100ml)<sup>5</sup>
- Men and Women metabolize alcohol at different rates.<sup>12</sup>
- Alcohol metabolism is proportional to body weight (and liver weight)<sup>5</sup>

## Presentation during intoxication

### Common signs and symptoms of intoxication can include<sup>4,5</sup>:

Relaxation	Loss of inhibitions	Slurred speech	Staggering gait
Drowsiness	Slurred speech	Flushed skin	Lack of concentration
Impaired attention	Slowed reflexes	Double or blurred vision	

### Extreme intoxication signs and symptoms may include<sup>4</sup>:

Inability to stand	Vomiting	Stupor	Possible coma
Shallow respirations	Cold clammy skin	Weak and/or rapid pulse	

## Monitoring and support during intoxication

### Goal<sup>13,14</sup>:

- Prevent severe respiratory depression and aspiration of vomitus

### Monitor<sup>9,10,15</sup>

- Assess level of disorientation and if possible time of last ingestion and amount consumed
- Monitor for falls risk
- Monitor vitals every 15 minutes initially and less frequently as acute symptoms subside
- Monitor glucose levels due to risk for hypoglycemia and alcohol ketoacidosis

### Supportive Interventions<sup>9,10,15</sup>:

- Ensure a quiet private space
- Frequently orient client to reality and surroundings
- Promote fluid and food intake as tolerated
- Thiamine / Vitamin B1 may be prescribed to decrease the risk of Wernicke-Korsakoff syndrome

## Withdrawal presentation (appears within 6-24 hours after stopping alcohol, are most severe after 36-72 hours and last for 2-10 days)<sup>4</sup>

### Symptoms may include<sup>1-5</sup>:

Increased anxiety	Agitation	Hypertension	Diarrhea
Insomnia	Hallucinations	Tachycardia	Seizures*
Increased Irritability	Tremor and Psychomotor Agitation	Nausea and Vomiting	Delirium Tremens*

### Delirium Tremens (DTs) Characteristics<sup>8</sup>:

Gross Tremor	Paranoid Ideation	Hyperthermia	Distractibility
Confusion/ Disorientation	Hallucinations	Extreme agitation or restlessness	Autonomic Instability (changes in HR/BP)

- A medical emergency that can lead to cardiovascular collapse
- Autonomic hyperactivity may develop 48-96 hours after last drink<sup>2</sup>



<p style="text-align: center;"><b>Monitoring and support during withdrawal</b></p>	<p><b>Goal<sup>1,2</sup>:</b></p> <ul style="list-style-type: none"> <li>• Short term: <ul style="list-style-type: none"> <li>○ Preserve respiratory and cardiovascular function</li> <li>○ Reduce the risk of DTs</li> </ul> </li> <li>• Long term<sup>15</sup>: <ul style="list-style-type: none"> <li>○ Client will not experience injury</li> </ul> </li> </ul> <p><b>Assessing for Withdrawal Severity<sup>1,2</sup>:</b></p> <ul style="list-style-type: none"> <li>• Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)</li> </ul> <p><b>Monitor<sup>1,2</sup>:</b></p> <ul style="list-style-type: none"> <li>• Mental Status (include risk of self-harm and suicide, presence of hallucinations including tactile, agitation, anxiety)</li> <li>• Physical status (including perspiration, headaches, vital signs, electrolytes)</li> <li>• Risk for falls</li> <li>• Hydration/Nutrition</li> <li>• Sleep patterns</li> </ul> <p><b>Supportive interventions</b></p> <ul style="list-style-type: none"> <li>• Encourage fluids and nutrition as tolerated</li> <li>• Provide a calm and quiet environment</li> <li>• Administer medications to treat acute symptoms of withdrawal and reduce the risk of DTs</li> </ul> <p><b>Medications Suggested Include<sup>1,2</sup>:</b></p> <ul style="list-style-type: none"> <li>• Benzodiazepines (i.e. diazepam, lorazepam, chlordiazepoxide) → taper dose down as CIWA-Ar score lowers<sup>1,2</sup></li> <li>• For individuals with liver disease, accumulation of longer-acting benzodiazepines (i.e. chlordiazepoxide/Librium) may be problematic – therefore use of more shorter-acting benzodiazepines is recommended<sup>15</sup></li> <li>• Thiamine / Vitamin B1 to decrease the risk of Wernicke-Korsakoff syndrome<sup>1,3</sup></li> <li>• In cases of severe dehydration IV fluids with potassium and magnesium have been provided<sup>4</sup></li> </ul>		
<p style="text-align: center;"><b>Potential Complications</b></p>	<p><b>May include:</b></p> <ul style="list-style-type: none"> <li>• <b>Korsakoff Syndrome/Wernicke Encephalopathy</b> (lack of thiamine/vitamin B1 as a result of alcohol use)<sup>1,3</sup> <ul style="list-style-type: none"> <li>○ Wernicke encephalopathy: confusion, loss of muscle coordination</li> <li>○ Korsakoff syndrome: memory loss, confabulation, hallucinations</li> </ul> </li> <li>• <b>Hallucinations</b><sup>1,2</sup> <ul style="list-style-type: none"> <li>○ Visual/auditory/tactile → 12-48 hours after last drink<sup>2</sup></li> </ul> </li> <li>• <b>Seizures</b><sup>1,2</sup> <ul style="list-style-type: none"> <li>○ Can occur 6-36 hours after last drink<sup>2</sup></li> </ul> </li> <li>• <b>Delirium Tremens (DTs)</b><sup>1,2 (see above)</sup></li> </ul>		
<p style="text-align: center;"><b>Notable Drug Interactions<sup>7</sup></b></p>	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <p><b>With Antidepressants<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Alcohol may exacerbate the CNS effects (i.e. drowsiness, confusion, gait disturbance, dizziness, and impaired motor coordination) of tricyclic antidepressants, and cause impairment in psychomotor performance</li> <li>• Alcohol may disrupt antidepressant metabolism</li> <li>• Alcohol and MAOIs increase the risk of a hypertensive crisis due to tyramine content.</li> </ul> <p><b>With Antipsychotics<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Alcohol may increase CNS effects of the antipsychotics used and worsen extrapyramidal effects.</li> </ul> <p><b>With Benzodiazepines<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• CNS effects of benzodiazepines will be potentiated → Increased risk of respiratory depression</li> </ul> <p><b>With Mood Stabilizers<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• With Lithium, increased tremors may occur with chronic alcohol use</li> </ul> </td> <td style="vertical-align: top; width: 50%;"> <p><b>With Opioids<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Additional CNS effects</li> <li>• Caution with excessive doses to risk of respiratory depression</li> <li>• Speeds the release of some opioids into the bloodstream by dissolving the slow-release system</li> </ul> <p><b>With Cannabis<sup>10</sup></b></p> <ul style="list-style-type: none"> <li>• Increased impairment of judgement</li> <li>• Additive effects</li> </ul> <p><b>With Stimulants</b></p> <ul style="list-style-type: none"> <li>• Additive effects of stimulant</li> <li>• Increased heart rate</li> <li>• Variable effect on blood pressure</li> </ul> <p><b>With GHB<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Synergistic CNS depressant effects can occur, with high doses of GHB causing respiratory depression</li> </ul> </td> </tr> </table>	<p><b>With Antidepressants<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Alcohol may exacerbate the CNS effects (i.e. drowsiness, confusion, gait disturbance, dizziness, and impaired motor coordination) of tricyclic antidepressants, and cause impairment in psychomotor performance</li> <li>• Alcohol may disrupt antidepressant metabolism</li> <li>• Alcohol and MAOIs increase the risk of a hypertensive crisis due to tyramine content.</li> </ul> <p><b>With Antipsychotics<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Alcohol may increase CNS effects of the antipsychotics used and worsen extrapyramidal effects.</li> </ul> <p><b>With Benzodiazepines<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• CNS effects of benzodiazepines will be potentiated → Increased risk of respiratory depression</li> </ul> <p><b>With Mood Stabilizers<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• With Lithium, increased tremors may occur with chronic alcohol use</li> </ul>	<p><b>With Opioids<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Additional CNS effects</li> <li>• Caution with excessive doses to risk of respiratory depression</li> <li>• Speeds the release of some opioids into the bloodstream by dissolving the slow-release system</li> </ul> <p><b>With Cannabis<sup>10</sup></b></p> <ul style="list-style-type: none"> <li>• Increased impairment of judgement</li> <li>• Additive effects</li> </ul> <p><b>With Stimulants</b></p> <ul style="list-style-type: none"> <li>• Additive effects of stimulant</li> <li>• Increased heart rate</li> <li>• Variable effect on blood pressure</li> </ul> <p><b>With GHB<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• Synergistic CNS depressant effects can occur, with high doses of GHB causing respiratory depression</li> </ul>
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### Psychiatric effects

- Chronic use of alcohol induces depression and increases the risk of suicide due to alcohol-induced depression, impulsivity and lack of judgment associated with acute intoxication
- Chronic use of alcohol can also induce or exacerbate anxiety disorders and psychosis<sup>6</sup>
- Alcohol can induce memory blackouts, nightmares, insomnia, hallucinations, paranoia, intellectual impairment, dementia, and Wernicke-Korsakoff syndrome<sup>7</sup>
- Chronic alcohol use by clients with schizophrenia has been associated with more florid symptoms, more re-hospitalizations, poorer long term outcomes, and increased risk of tardive dyskinesia<sup>7</sup>



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