Teen Misuse and Abuse of Alcohol and Prescription Drugs

Information for Parents
Terminology

• **Misuse:** Using a drug in a way in which it was not intended
  – Example: Using a higher dose of medication than was prescribed to get high

• **Abuse:** Substance use which results in negative consequences
  – Example: Missing school due to hangover

• **Addiction:** Loss of control over use despite negative consequences (legal, medical, or social)
  – Example: Continuing to drink alcohol despite a DUI arrest

• **Dependence:** Medical term for addiction
Alcohol
Scope of the Problem

- 37% of WI high school seniors report binge drinking (5 or more drinks at one time) in past month
- 1/3 of Oneida County high school students report drinking at least one drink in past month
- 31% of teen traffic fatalities involve alcohol
- WI fatalities due to underage drinkers and drivers in 2010: 24
Why and How Teens Use

- Relaxation, increased sociability at low to moderate doses
- 2/3 teens obtain alcohol via parents or other adult
  - 2/3 of these said it was “easy”
  - Most often by stealing or sneaking
  - Legal for teens to drink if accompanied by own parent – \textit{not} other adults
- Other sources of alcohol
  - Cooking wine, mouthwash, hand sanitizers
  - More commonly accidentally ingested by toddlers than deliberately abused by teens
Risk Factors & Warning Signs

• Presence of alcohol in home
  – Most commonly obtained illicitly from parent or other adult
• Comorbid mood disorder
  – Depression, social anxiety
• Signs of use or addiction
  – Bloodshot eyes, unexplained bruising, weight loss, vomiting
  – Decreased school grades, many absences
  – Decreased self-care, hygiene
• Effects generally weight-based
  – Smaller teens more affected by less
• Withdrawal can be lethal
  – Seizures, cardiac arrhythmias, hallucinations, sweating
Long-term risks

• Brain development continues throughout teenage years into 20s
• Adults who admit to heavy drinking as teens demonstrate decreased attention, memory, and overall intelligence compared to peers
• Those who drink before age 14 have 41% chance of alcoholism throughout lifetime
  – Over half of Wisconsin teens report trying alcohol before age 14
Rate of brain development. Critical developmental processes continue well into or even past teenage years.
Persistent effects of alcohol on adolescent brain. Memory testing was performed after three weeks of abstinence.
Prescription Drugs: Narcotics
Scope of the Problem

• Class of prescription medication most commonly misused by adolescents
• 1 in 7 high school seniors report non-medical use of Vicodin
  – No difference between boys and girls
  – Higher use among white students
• ER visits for opioid overdose by people <21 years old doubled between 2004 and 2008
After Marijuana, Prescription and Over-the-Counter Medications* Account for Most of the Commonly Abused Drugs

Prevalence of Past-Year Drug Use Among 12th Graders

Categories are not mutually exclusive

SOURCE: University of Michigan, 2010 Monitoring the Future Study

* Nonmedical Use
Why and How Teens Use

- Opioid medications work by reducing perception of pain
- Same mechanism of action as heroin
- When abused, drugs can produce feelings of extreme calm or euphoria
- Effect often intensified by alternative methods of drug delivery
  - Injecting or snorting crushed pills

Various opioid drugs
Source of Prescription Narcotics among Those Who Used in the Past-Year, 12th Grade*

*Categories are not mutually exclusive

SOURCE: University of Michigan, 2010 Monitoring the Future Study
Risk Factors & Warning Signs

• Prior medical use
  – Between 1/3 and 2/3 of teen users use leftovers from own prior prescription

• Other substance abuse
  – Teen smokers 8.6 times likelier to have used opioids to get high

• Signs of use: pinpoint pupils, constipation, flushed skin, slow or shallow breathing

• Withdrawal symptoms: sweating, diarrhea, tremors, enlarged pupils

Pinpoint pupils
Figure. Meta-analysis summary estimates for age-specific risk of newly incident extramedical use of prescription pain relievers. Data are from the 2004 through 2008 National Survey on Drug Use and Health (n=119,877).
Long-term risks

- Continued use of opioid medications results in tolerance—requiring more drug to achieve same effect
- Subsequent medical use of drug (i.e. for pain control) may be less effective
- Teens may be more at risk for addiction after fewer uses
  - Parts of brain involved in impulse control are immature
- Long-term risks may include blunted social and emotional perception; full range of effects not yet studied
Prescription Drugs: Stimulants
Scope of the Problem

• 4.9% of teens 13-18 have a prescription for ADHD medication (2008 data)
• 23% of middle- and high-schoolers report being approached to sell their ADHD medications; 11% admit to doing so
  – Additional teenagers report having given medications away (15%) or having had them stolen (4%)
• 22% of teenagers admit misusing their own prescribed stimulants
• Up to 9% of high school students admit using stimulants not prescribed to them; up to 35% of college students admit to doing so
• Data specific to Wisconsin teens’ abuse of stimulants not available
Why & How Teens Abuse

• Increased alertness and focus
  – Desired side effect; why these medicines work in the first place
  – Teens may seek academic “edge”
• Rapid-onset euphoria in high doses
• Weight loss
  – Many stimulants decrease appetite
• Most teens who use illicitly obtain medications from other students
Risk Factors & Warning Signs

• Use of immediate-release drug; results in faster drug delivery when misused
• White males more likely to report illicit use vs. females, Latinos, or African-Americans
• Unlike with opioids, risk for stimulant abuse increases with age (especially in college)
• Warning signs
  – Missing medication (if teen has own prescription)
  – Erratic or manic behavior
  – Weight loss, loss of appetite

Things are unlikely to be this transparent.
Long-term effects

• At doses used for ADHD treatment, no long-term effects shown
  – Long-term abuse of drugs not well-studied

• Short-term effects can be dangerous, especially at high doses
  – Mania, psychosis
  – Heart damage, including heart attack
  – Dangerously high blood pressure
  – Sudden cardiac death
Prescription Drugs: Benzodiazepines
Scope of the Problem

- Nationally, use had been decreasing through 1990s; steady increases since early 2000s
- 7.2% of 12th graders have tried sedatives not prescribed to them in last year
- 3% of Wisconsin high school students report having tried alprazolam (Xanax) without a prescription
Why and How Teens Use

• Benzodiazepines are used to relieve anxiety
  – Produce feeling of calm, sense of well-being
• Not typically prescribed as “sleeping pills,” but may be used by teens as such
• Like with other prescription drugs, most teens get them from home, relative, or friend
  – Internet or street dealers uncommon sources
Risk Factors & Warning Signs

- Higher risk with comorbid mood disorder, especially depression with anxiety
- Short-acting drug (Xanax) more likely to be abused
- Combined with alcohol, benzodiazepines may cause fatal respiratory depression
- Can paradoxically cause irritability, jitteriness, aggression (especially in high doses)
- Abrupt discontinuation can cause life-threatening withdrawal
  - Seizures
  - Tremors
  - Hallucinations
Long-term effects

- Long-term effects in adolescents have not been studied.
- Some adult studies have shown impaired cognitive performance across several domains ("brain fog")
  - Memory
  - Reaction time
  - Fine motor skills
  - Deficits generally seen after >10 years of consistent use, can be seen as early as 1 year.
References & Further Reading