Substance use (use of tobacco products, alcohol, illegal drugs; misuse of over-the-counter or prescription medications) is common among adolescents in the United States. After several years of decline, the use of various stimulant drugs did not show any significant further decline among teens in 2009 and most illicit drug use held steady. There has been a gradual increase in marijuana use among adolescents over the past 2 years (3 years among 12th graders) following many years of declining use.

Use of tobacco products often precedes use of other substances. In youth, nicotine dependence may be a marker for mental health problems such as depression and anxiety disorders. Tobacco use may be a means of self-treating symptoms associated with these disorders. Teenagers who smoke cigarettes are 3 times more likely than nonsmokers to use alcohol, 8 times more likely to use marijuana, and 22 times more likely to use cocaine. Cigarette smoking has been associated with other high-risk behaviors including high-risk sexual practices, such as having multiple sexual partners or unprotected sex, and perpetration of youth violence. In fact, tobacco use is an individual risk factor for youth violence.

Because of the prevalence and clinical significance of substance use and abuse; its association with mental health problems and with risky behaviors that result in pregnancy, sexually transmitted infections, injuries, and death; and the effectiveness of primary care interventions, the American Academy of Pediatrics recommends that pediatric primary care clinicians achieve competence in the care of youth who are using and abusing substances.

### Epidemiology

**Trends in Monthly and Annual Prevalence of Use of Various Substances in Grades 8, 10, and 12**

<table>
<thead>
<tr>
<th></th>
<th>8th graders</th>
<th>10th graders</th>
<th>12th graders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Past year</td>
<td>Past 30 days</td>
<td>Past year</td>
</tr>
<tr>
<td>Alcohol: 30.3%</td>
<td>30.3%</td>
<td>14.9%</td>
<td>Alcohol: 52.8%</td>
</tr>
<tr>
<td>Drunk: 12.2%</td>
<td>Drunk: 12.2%</td>
<td>Drunk: 5.4%</td>
<td>Drunk: 15.5%</td>
</tr>
<tr>
<td>Marijuana: 11.8%</td>
<td>11.8%</td>
<td>6.5%</td>
<td>Marijuana: 26.7%</td>
</tr>
<tr>
<td>Inhalants: 8.1%</td>
<td>8.1%</td>
<td>3.8%</td>
<td>Amphetamines: 3.3%</td>
</tr>
<tr>
<td>Amphetamines: 4.1%</td>
<td>Amphetamines: 4.1%</td>
<td>1.9%</td>
<td>Amphetamines: 2.2%</td>
</tr>
<tr>
<td>OTC cough/cold meds: 3.8%</td>
<td>Inhala...</td>
<td>6.1%</td>
<td>Tranquilizers: 2.0%</td>
</tr>
<tr>
<td>Tranquilizers: 2.6%</td>
<td>OTC cough/cold meds: 6.0%</td>
<td>5.9%</td>
<td>Tranquilizers: 2.7%</td>
</tr>
<tr>
<td>Cigarettes: 6.5%</td>
<td>6.5%</td>
<td>3.7%</td>
<td>Cigarettes: 13.1%</td>
</tr>
</tbody>
</table>

OTC, over the counter. Prescription medication.
Screening Results Suggesting Substance Abuse

Lead-in questions to CRAFFT screening tool suggest use of substance(s).

During the past 12 months, did you
1. Drink any alcohol (more than a few sips)?
2. Smoke any marijuana or hashish?
3. Use anything else* to get high?

*“Anything else” includes illegal drugs, over-the-counter and prescription drugs, and things that you sniff or “huff.”

If answers to any of these questions are yes, go to CRAFFT. If no, ask the CAR question.

CRAFFT: “Yes” response to 2 or more of the following questions:

C: Have you ever ridden in a CAR driven by someone (including yourself) who was high or had been using alcohol or drugs?
R: Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?
A: Do you ever use alcohol or other drugs while you are by yourself or ALONE?
F: Do you ever FORGET things you did while using alcohol or drugs?
F: Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use?
T: Have you ever gotten into TROUBLE while you were using alcohol or drugs?

Strengths and Difficulties Questionnaire (SDQ): Impact scale (back of form) indicates some degree of impairment with a score of 1 to 15 AND further discussion confirms a concern about substance use.
SUBSTANCE USE AND ABUSE

Symptoms and Clinical Findings Suggesting Risk for or Use of Substance(s)

History from youth or parent suggests

• One or more family members use tobacco products, alcohol, or other substances.
• Youth is using tobacco products, alcohol, or other substances, especially if use began at a young age.
• Youth’s friends use tobacco products, alcohol, or other substances.
• Youth’s functioning is impaired.
• Youth’s substance use has progressed beyond experimentation in the following scheme:

<table>
<thead>
<tr>
<th>Stages of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstinence</strong> = child or adolescent has never used tobacco, drugs, or alcohol.</td>
</tr>
<tr>
<td><strong>Experimentation</strong> = has used once or twice only in social circumstances. Adolescent is using out of curiosity or to fit in with peers. (A youth using tobacco, even briefly or occasionally, can suffer physical and psychological symptoms when deprived of nicotine(^{10}); thus the youth should be considered a regular user rather than experimenter and can potentially benefit from help to overcome withdrawal symptoms.)</td>
</tr>
<tr>
<td><strong>Regular Use</strong> = has used more than once or twice or uses on a regular basis in a social circumstance. Might have done binge drinking. Learning about the euphoric effects of drugs. Use not interfering with psychosocial development.</td>
</tr>
<tr>
<td><strong>Problem Use</strong> = has experienced adverse consequences of regular use, like problems with grades, disciplinary procedures, motor vehicle crashes or moving violations, legal problems, or conflict with parents. May use alone. Actively seeking the euphoric effect of drugs. Friends tend to be users.</td>
</tr>
<tr>
<td><strong>Abuse</strong> = 1 or more of following:</td>
</tr>
<tr>
<td>• Failure to fulfill obligations at home, school, or work</td>
</tr>
<tr>
<td>• Use in physically hazardous situations</td>
</tr>
<tr>
<td>• Substance-use–related legal problems</td>
</tr>
<tr>
<td>• Continued use despite social or interpersonal problems related to substance use</td>
</tr>
<tr>
<td><strong>Dependence</strong> = 3 or more of the following:</td>
</tr>
<tr>
<td>• Tolerance</td>
</tr>
<tr>
<td>• Withdrawal</td>
</tr>
<tr>
<td>• Substance taken in larger amounts or for longer period than intended</td>
</tr>
<tr>
<td>• Persistent desire or unsuccessful efforts to cut down or control use</td>
</tr>
<tr>
<td>• Great deal of time spent obtaining, using, or recovering from effects of substance</td>
</tr>
<tr>
<td>• Important activities given up or reduced because of use</td>
</tr>
<tr>
<td>• Continued use despite physical or psychological harm from substance</td>
</tr>
</tbody>
</table>

**Secondary Abstinence** = goal of abstinence-based treatment approaches.

\(^{9}\)Note these are general categories; individuals might exhibit characteristics of more than one stage.
Risk factors increase susceptibility.

- Onset of tobacco use before age 12
- Family history of substance abuse
- Coexisting mental health disorder

**Conditions That May Mimic or Co-Occur With Substance Use**

*Learning problems or disabilities.* Unidentified learning difficulties can contribute to frustration and stress. If substance abuse is associated with problems of school performance, the child may have a learning disability. See Learning Difficulties guidance to explore this possibility.

*Depression or bipolar disorder.* Marked sleep disturbance, disturbed appetite, low mood, or tearfulness could indicate that a child is depressed. Symptoms of depression rapidly alternating with cycles of agitation may suggest bipolar mood disorder.

*Exposure to adverse childhood experiences (ACE).* Children who have experienced or witnessed trauma, violence, a natural disaster, separation from a parent, parental divorce or separation, parental substance use, neglect, or physical, emotional, or sexual abuse are at high risk of developing emotional difficulties such as adjustment disorder or post-traumatic stress disorder (PTSD) and use or abuse of substances. Consider PTSD if the onset or acceleration of substance use was preceded by an extremely distressing experience. Clinicians should speak separately and confidentially with the youth and parents to explore this possibility. Parents are frequently unaware of exposures that children may have had at school or in the community. There may be major traumas in the family (eg, serious illness in a parent, maltreatment of the child, death or incarceration of a loved one) that are similarly not discussed or disclosed. The 3 hallmark symptom clusters in PTSD are reexperiencing, avoidance of memories or situations that recall the trauma, and hypervigilance (ie, increased worry about safety, startling or anxiousness at unexpected sounds or events). See also Anxiety guidance.

*Other anxiety disorders.* Anxious children may self-medicate with substances. Conversely, children using or withdrawing from substances may be anxious.

*Physical illness.* Drug or alcohol withdrawal may present as a physical illness and is potentially a medical emergency.

*Psychosis.* Though rare, the onset of bipolar disorder or schizophrenia in late adolescence may be subtle and marked only by frightening hallucinations or delusions that the adolescent does not disclose. These symptoms may precipitate or accelerate the use of substances.

*Attention-deficit/hyperactivity disorder.* This is a common co-morbidity. See Inattention and Impulsivity guidance.

*Peer pressure to use substances.* The social context of the youth’s substance use is an important factor in assessment and treatment of substance abuse.

**Tools for Further Assessment Of Substance Use**

Alcohol Use Disorders Identification Test (AUDIT):

General psychosocial screen such as
- Pediatric Symptom Checklist (PSC)-35
- PSC-17
- Strengths and Difficulties Questionnaire (SDQ)

**Evidence-Based and Evidence-Informed Interventions for Substance Use and Abuse (as of April 2010)**

Updates are available at www.aap.org/mentalhealth.

**Psychosocial Interventions for Tobacco Use**

- Public Health Service clinical practice guideline (2008): cognitive behavior therapy (CBT)

**Psychopharmacologic Interventions for Nicotine Addiction**

- People 18 years and older: nicotine replacement therapy, antidepressant (bupropion), nicotine receptor partial agonist (varenicline)
- People younger than 18 years: none Food and Drug Administration (FDA)-approved
Psychosocial Interventions for Substance Abuse

- Level 1 (best support): family therapy
- Level 2 (good support): CBT, contingency management, family systems therapy, goal setting and monitoring, motivational interviewing/engagement, Purdue Brief Family Therapy

Selected Informational Links

- American Academy of Pediatrics Children’s Mental Health in Primary Care Web site (www.aap.org/mentalhealth)
- US FDA Web site (www.fda.gov)
- American Academy of Child & Adolescent Psychiatry (www.aacap.org)
- Julius B. Richmond Center of Excellence (www.aap.org/richmondcenter)

Referral Options for Substance Use Disorders

1. Outpatient treatment
   - Includes community and school resources, 12-step groups, peer-support groups, and individual counseling.
   - May be used for children and adolescents who are motivated to change behaviors or whose caregivers and family feel that it will benefit them, and who are not physiologically addicted to substances.
   - May also be used as a transition from more intensive treatment settings.

2. Partial or day hospital
   - May be considered for children and adolescents who need more intensive structure and support to break the cycle of substance use.
   - May also be used as a transition from more intensive treatments.

3. Residential treatment
   - For children and adolescents who are unlikely to be able to stop drug or alcohol use if they remain in their home environment.
   - For those with a history of treatment failures in less-restrictive settings.

4. Inpatient treatment
   - For children or adolescents who are at significant risk for withdrawal symptoms.
   - For those who have serious psychiatric disorders or symptoms (eg, suicidal, homicidal, psychotic, acutely dangerous behaviors).
   - For those who have failed in other treatment settings.
Plan of Care for Children Who Are Using Substances

Engage child and family in care.

**Engaging Children and Families in Mental Health Care: A Process for Pediatric Primary Care Clinicians**

Reinforce strengths of child and family. Follow the mnemonic HELP to

- Build trust and optimism.
- Reach agreement on incremental next steps and, ultimately, therapeutic goals.
- Develop plan of care (see the following clinical guidance).
- Collaboratively determine role of primary care clinician, eg, provide intervention(s); provide initial intervention while awaiting family’s readiness for or access to specialty care; coordinate with specialist(s), child care, school, or agencies; monitor progress; encourage child and family’s positive view of treatment.

*Without engagement, most families will not seek or persist in care. Process may require multiple primary care visits.*

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**Encourage healthy habits.**

Encourage exercise, outdoor play, a healthy and consistent diet, sleep (critically important to mental health), limited screen time, special time with parents, healthy social and recreational activities, praise for positive behavior changes, acknowledgment of child or teen’s strengths, and acknowledgment of the challenges faced by teens with transitions including new schools, new friends, new social circles, and new academic demands.

**Reduce stress: consider the environment**

(eg, family social history, parental depression screening, results of any family assessment tools administered, reports from child care or school).

Is an external problem (adverse experience such as abuse, bullying, family socioeconomic stress) adding to the adolescent’s stress? Take steps to address stressors, as feasible.

Is a parent or other family member abusing substances? Explore this individual’s readiness to seek and accept care.

**Are the youth’s peers using substances?** Explore options to increase healthy social and recreational activities (see interventions that follow) and reduce contact with peers who are using substances.

**Are substances readily available in the youth’s home or environment?** Explore options for reducing exposure.

Acknowledge and reinforce protective factors, eg, good relationships with at least one parent or important adult, pro-social peers, concerned or caring family, help-seeking, connection to positive organization(s).

**Offer initial intervention(s).**

Applying motivational interviewing techniques, explore youth’s readiness to change and identify achievable next steps; if a family member is smoking or using other substances, apply techniques to engage this person in changing behavior as well.

**Motivational Interviewing Techniques**

- Share concerns non-judgmentally, using youth’s terminology if possible.
  - Vulnerability of adolescent’s still-developing brain to effects of drugs and tobacco
  - Safety risks associated with alcohol and drug use (eg, motor vehicle injuries, fighting, sexual assault)
  - Genetic vulnerability (for teenagers with a family history of substance abuse)
  - Potential for drug use to interfere with achieving one’s goals (eg, athletic, academic, social, career)
  - Lethality
- Reinforce strengths.
- Express empathy.
- Help youth reflect on discrepancy between goals and current behaviors.
- Roll with resistance.
- Support self-efficacy.
- Seek agreement on a manageable first step.

**Encourage involvement in pro-social activities** such as youth development, leadership, volunteer, and after-school activities; sports teams, clubs, and mentoring; and faith-based programs.
Tailor intervention to stage of use.

√ Interventions for Each Stage of Use

Abstinence
- Provide prevention message.
- Reinforce positive behavior.
- Encourage activities that build on strengths.

Experimentation
- Provide brief office-based intervention using motivation interviewing techniques.
- Provide accurate information about risks.
- Personalize the message.
- Emphasize risk reduction and develop a rescue plan.

Regular Use
- As previously mentioned, use motivational interviewing techniques to decrease use and harm.
- Consider interventions for problem use.
- Consider involving parents, depending on the circumstances.

Problem Use
As previously described and
- Consider an abstinence challenge for a resistant adolescent’s belief that he or she can control his or her drug use.
- Consider involving parents, depending on the circumstances and state confidentiality laws.
- Inform and encourage use of community resources.
- Schedule follow-up visits to assess ongoing use.
- Consider sharing management with mental health or substance abuse professional.
- Monitor progress toward behavioral goals. (Second page of SDQ may be used to measure effect of substance abuse on functioning over time. Repeating CRAFFT, prefaced with “Since I saw you last,” may provide additional information.)

Abuse
- Refer for specialty substance use treatment.
- Continue to work with patient, as previously described, until family is ready to engage in substance use treatment.
- Use motivational interviewing methods with parents or caregivers to help with denial or reluctance for treatment.
- Sustain primary care interventions until specialty treatment is taking place.
- Monitor progress as previously described.

Dependence
- Refer immediately to substance use treatment program that includes withdrawal.

Secondary Abstinence
- Evaluate patient posttreatment.
- Continue to follow closely with goal of ensuring treatments are maintained.
- Monitor for relapse and help to bring back into treatment if required.

Offer child and parents resources to educate and assist them with self-management.

Brochures
- *Inhalant Abuse: Your Child and Drugs: Guidelines for Parents*
- *Substance Abuse Prevention*
- *Tobacco: Straight Talk for Teens*
- *Your Child’s Mental Health: When to Seek Help and Where to Get Help*

Web Sites
1-800-QUIT-NOW is the toll-free national telephone counseling service to help people stop smoking or quit other forms of tobacco use.

Become an EX (www.becomeanex.org). Accessed April 28, 2010
This free quit plan sponsored by the American Legacy Foundation uses a systematic program to help prepare a customized quitting plan for each person.

The Campaign for Tobacco-Free Kids is a leader in the fight to reduce tobacco use and its devastating consequences in the United States and around the world. By changing public attitudes and public policies on tobacco, it strives to prevent kids from smoking, help smokers quit, and protect everyone from secondhand smoke.

This Web site provides anonymous, accurate information on drugs for various locations in California, Colorado, and Massachusetts.


HBO offers supplements to the documentary *Addiction* addressing adolescent addiction. Resources for parents and
adolescents are provided, including real-life accounts of adolescents who are addicted.

Julius B. Richmond Center of Excellence (www.aap.org/richmondcenter). Accessed April 28, 2010


Freevibe is a resource for youth that provides interesting news stories from around the country, featuring tales of teen heroism and courage as well as hard-hitting true-life accounts of abuse and addiction. Also included on this Web site is the latest scientific research about illegal drugs and the effects they have so that teens can better understand the real consequences of using illegal substances.


This Web site provides resources for parents, scientists, and communication professionals to help families raise healthy children. The online resource center features interactive tools that translate the latest science and research on teen behavior, addiction, and treatment into easy-to-understand tips and tools.

**Monitor child’s progress toward therapeutic goals.**

- See report “Enhancing Pediatric Mental Health Care: Strategies for Preparing a Primary Care Practice” for monitoring methods.
- School reports can be helpful in monitoring progress.
- SDQ (parent, teacher) and PSC can be helpful in monitoring progress with symptoms and functioning.
- Provide contact numbers and resources in case of emergency.

**Involving specialist(s) if child does not respond to initial interventions or if indicated by the following clinical circumstances:**

- Drug use is endangering child or others.
- Drug use is threatening the achievement of developmentally important goals, eg, school attendance and performance, relationships.
- There are mental health comorbidities.
- Substance use was preceded by serious trauma.
- Adolescent is using multiple drugs.
- Parents are not supportive, do not acknowledge concerns, or are abusing substances.

What if the adolescent refuses to go to a referral source?

- Clarify laws and protections for minors.
- Provide education and motivational counseling to patient and family to reduce harm and improve functioning at home.
- Encourage patient and family to attend self-help groups like Al-Anon, Alateen, or others.
- Explore school-based services, such as counselor or school-based health center.
- Be ready to assist in the referral process if family requests, if function decreases, or if use escalates and harm increases.

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<table>
<thead>
<tr>
<th>✓ Primary care tasks may include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Engaging and encouraging child’s positive view of treatment</td>
</tr>
<tr>
<td>❑ Monitoring progress in care and observing for co-morbidities</td>
</tr>
<tr>
<td>❑ Coordinating care provided by parents, school, medical home, and specialists</td>
</tr>
<tr>
<td>❑ Encouraging parents to seek treatment for tobacco use and other dependencies</td>
</tr>
</tbody>
</table>
Resources for Clinicians

Reports and Articles


Web Sites


This Web site provides clinicians with information and resources related to the harmful effects of tobacco and secondhand smoke.


The APA 800/374-2721 number can be accessed to help direct professionals to state-specific services and to psychologists who specifically work with teen substance use problems.


This Web site provides anonymous, accurate information on drugs for various locations in California, Colorado, and Massachusetts.


This Web site is a companion to the Drug Strategies publication *Treating Teens: A Guide to Adolescent Drug Programs*, which was supported by a grant from the Robert Wood Johnson Foundation. The guide is designed to help parents, teachers, judges, counselors, and other concerned adults make better choices about teen substance abuse treatment.


This Web site provides data on the behaviors, attitudes, and values of American secondary school students, college students, and young adults. Each year, a total of approximately 50,000 8th-, 10th-, and 12th-grade students are surveyed (12th graders since 1975; 8th and 10th graders since 1991). Annual follow-up questionnaires also are mailed to a sample of each graduating class for a number of years after their initial participation.
The National Institute on Drug Abuse mission is to lead the nation in bringing the power of science to bear on drug abuse and addiction. This Web site provides materials to inform teens, students, young adults, parents, and teachers about the health effects and consequences of drug abuse and addiction.


Substance Abuse & Mental Health Services Administration (SAMHSA) (www.samhsa.gov). Accessed April 29, 2010 SAMHSA is a public health agency within the US Department of Health and Human Services. It is responsible for improving accountability, capacity, and effectiveness of the nation’s substance abuse prevention, addictions treatment, and mental health delivery system.

Substance Abuse Treatment Facility Locator (http://dasis3.samhsa.gov). Accessed April 29, 2010 This SAMHSA Web site provides an online resource for locating drug and alcohol abuse treatment programs. The Substance Abuse Treatment Facility Locator lists private and public facilities that are licensed, certified, or otherwise approved for inclusion by their state substance abuse agency and treatment facilities administered by the US Department of Veterans Affairs, the Indian Health Service, and the Department of Defense. All information in the locator is updated every year.

The Community Anti-Drug Coalitions of America (www.cadca.org/tl-treatment.asp). Accessed April 29, 2010 This organization works on behalf of more than 5,000 community coalitions from across the country to help connect multiple sectors of the community, including businesses, parents, media, law enforcement, schools, faith organizations, health providers, social service agencies, and government. By acting in concert through the coalition, all of the partners gain a more complete understanding of the community’s problems. Together, the partners organize and develop plans and programs to coordinate their antidrug efforts. The result is a comprehensive, community-wide approach to substance abuse and its related problems.

References


