Understanding Links Between Adolescent Trauma and Substance Abuse

A Toolkit for Providers

NCTSN: The National Child Traumatic Stress Network
The Adolescent Trauma and Substance Abuse Committee of the National Child Traumatic Stress Network has created this toolkit of materials for health care providers, parents, and teenagers, to raise awareness about the needs of youth with traumatic stress and substance abuse problems, and to promote evidence based practices in clinical settings. This product is meant to serve as a training guide for providers working with this population.

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About the National Child Traumatic Stress Network

Established by Congress in 2000, the National Child Traumatic Stress Network (NCTSN) is a unique collaboration of academic and community-based service centers whose mission is to raise the standard of care and increase access to services for traumatized children and their families across the United States. Combining knowledge of child development, expertise in the full range of child traumatic experiences, and attention to cultural perspectives, the NCTSN serves as a national resource for developing and disseminating evidence-based interventions, trauma-informed services, and public and professional education.

The NCTSN Adolescent Trauma and Substance Abuse Committee

The Adolescent Trauma and Substance Abuse Committee aims to improve the standard of care for adolescents with co-occurring traumatic stress and substance use by increasing public awareness about this underserved population through public education, collaboration, and dissemination efforts at the local and national level.

The NCTSN Adolescent Trauma and Substance Abuse Committee would like to extend a special thank you to the staff of the Adolescent Traumatic Stress and Substance Abuse Treatment Center at Boston University for providing much of the foundational and coordination work for this toolkit.

Printing this Toolkit

Please feel free to print this toolkit as necessary. Each toolkit section can be printed independently by clicking on the appropriate icon. Additionally, you may print the entire toolkit by clicking below. If you would like to print the toolkit in black and white only, select the corresponding icon, and you will be directed to a black and white version of these materials.

- Print all 142 Pages in Color.
- Print all 142 Pages in Black and White.

Evaluating this Toolkit

We value your opinion as a professional and would like to hear your comments on this toolkit. Once you have reviewed the information in these pages, we would appreciate it if you let us know your thoughts by filling out a brief survey. To complete the survey, click below.

Take the Survey
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Making the Connection: Trauma and Substance Abuse

Fact Sheet Series for PROVIDERS treating teens with EMOTIONAL & SUBSTANCE USE PROBLEMS

This toolkit offers providers assistance with delivering comprehensive assessment of and treatment for adolescents with both substance use problems and traumatic stress problems. It contains valuable information for understanding the links between substance use and traumatic stress and for adequately identifying, engaging, and treating adolescents suffering from these co-occurring problems.

Adequate care begins with the recognition and accurate identification of the problems these adolescents experience—regardless of whether they present to a mental health professional or substance abuse specialist. Rather than referring a multiproblem teenager to another provider, clinicians willing to address co-occurring disorders can develop the skills necessary for providing such adolescents with hope of recovery.

Therapists and counselors can develop skills to provide a comprehensive and integrated treatment approach. In order to maximize an adolescent’s chances of success, this approach should address the adolescent’s concerns broadly and take into account the functional relationship between traumatic stress and substance abuse problems. When developing an individualized treatment plan, special attention should be given to the signs and symptoms of posttraumatic stress, substance abuse, and the relationship between the two.

This project was funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies, and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.
Providing Care for Raphael*

Adolescents with trauma and substance abuse are often challenging to treat. Consider the case of Raphael below, as told by his therapist:

Raphael was a 15-year-old boy who lived in a group home. I am a clinician in the community mental health clinic that he came to for group and individual psychotherapy. Raphael had been raised by his mother and stepfather, but the courts decided to place him in a group home after Child Protective Service involvement with his family due to his ongoing truancy, being caught several times using marijuana and selling drugs, and being deemed unmanageable by his parents.

During my initial review of Raphael’s case file, I also learned of an informed suspicion of past physical and sexual abuse. Before I met Raphael face-to-face, I was warned by other staff members about his anger, his resistance to cooperate during group activities, and his generally threatening demeanor.

Raphael was very disruptive during his group therapy sessions and initially did not say much during his individual treatment sessions with me. But as I developed enough patience, openness, and willingness to explore Raphael’s interest in developing spontaneous rhymes or rap-style lyrics, Raphael started to engage increasingly in treatment. The road to recovery for Raphael was not an easy one, and I knew that I needed to be better prepared to help him with his multiple areas of difficulty and his aggressive interpersonal style. Eventually, Raphael spoke during our sessions about his difficult relationship with his mother, being frequently locked in a dark closet by his stepfather, and his conflictual relationship with his younger sister. He also began to speak about his frequent, almost daily, use of marijuana and alcohol.

After learning more about his patterns of use, I began to understand how his substance use was a tool with which he numbed his feelings and which enabled him to be more dominant in social situations. Once Raphael began to actively use therapy to address his trauma and substance abuse histories, he began to work on developing better tools for coping with the intense feelings and impulses that contributed to his most pressing problems.

As you read the pages that follow, think about cases like Raphael’s and consider the following questions:

- What are the challenges involved in engaging an adolescent in treatment who has a history of both trauma and substance abuse?
- What are the challenges associated with being able to accurately identify histories of trauma and/or substance use among adolescents?
- Do you feel proficient in assessing and treating youth with the different types of problems associated with trauma and substance abuse among adolescents?
- How can treatment and counseling centers promote and support an increase in providers’ ability to assess and treat this population?
- How might therapists be supported in dealing with their own reactions to the often-difficult work with traumatized and substance-abusing adolescents?

*Raphael’s story* was created by the authors as a composite representation of stories heard from real teenage clients struggling with these issues and provides examples of the challenges that clinicians face in providing care for youth with trauma and substance abuse problems. Models portrayed are not representative of cases described.
Numerous studies have documented a strong link between trauma exposure and substance abuse in adolescents. This overlap is a result of high rates of substance abuse among youth who have experienced trauma as well as high rates of trauma or PTSD among substance-abusing youth. Multiple pathways have been identified in the connection between trauma and substance abuse including:

- Experiencing a traumatic event increases the risk of developing a substance abuse problem. Trauma—in the form of physical or sexual abuse, domestic violence, natural disasters, car accidents, traumatic loss, war, or other calamity—may lead to substance abuse and addiction. Adolescents experiencing posttraumatic stress may drink or take drugs in an attempt to manage or self-medicate their feelings of anxiety, physiological arousal, depression, hopelessness, and/or grief. Teens may abuse substances to fit in with peers, to combat feelings of isolation, or to try to become numb when they face triggers and trauma reminders.

- Adolescents who abuse substances are more likely to experience traumatic events, presumably because they are more likely to engage in risky activities. Traumas such as physical and sexual assaults, domestic violence, accidents, and serious injuries are more common in substance-abusing teens than in their nonsubstance-abusing peers.

- Youth who are already abusing substances may be less able to cope with a traumatic event as a result of the functional impairments associated with problematic use.
Teenagers may find that alcohol and/or drugs initially seem to alleviate distress, either through the increased pleasurable sensations or through the avoidance of intense emotions that may follow stressful experiences. In the long run, however, substance use perpetuates a cycle of problem behaviors that can make it more difficult to recover after a traumatic event. When teenagers are struggling with both substance abuse and traumatic stress, the effects and negative consequences of one compounds the problems of the other.

Although such teenagers need help, often desperately, they frequently have difficulty entering or staying involved in treatment services. Usually teenagers attend such facilities against their will—either mandated to attend treatment (i.e., by the courts), referred by teachers, or brought by their parents.

Because the service systems targeting substance abuse and mental health problems have traditionally been fragmented, few teenagers with both traumatic stress and substance abuse problems receive integrated treatment services. Compounding the problem is that there are few facilities offering integrated services, primarily because few professional training programs in substance abuse or mental health provide clinicians the education necessary to develop expertise in both trauma and substance abuse treatment; and few professionals often have training and experience across both fields.

Given the strong link between trauma and substance abuse among adolescents, however, most substance abuse and mental health professionals have encountered this population.

**Addressing traumatic stress in substance abuse treatment settings**

Certain commonalities exist between the ways in which youth respond to substance abuse triggers and the ways in which they respond to reminders of loss and trauma. When compiling a list of triggers that may lead to emotional dysregulation and substance use, incorporating possible reminders of previous trauma and loss can be helpful. This requires substance use providers to look beyond the circumstances of the youth’s use and pay attention to his/her past distressing events and present emotional difficulties surrounding problematic coping patterns (including substance use).

**Addressing substance abuse problems in mental health settings**

Mental health providers are often unfamiliar with the patterns of addiction associated with substances of abuse. It is important to recognize that there are similar processes at work in emotional and behavioral dysregulation, which are expressed in multiple types of symptoms and behaviors including classic posttraumatic stress symptoms, substance abuse, and other risky behaviors.
Exploring the Myths about Providing Treatment for Youth with Trauma and Substance Abuse Problems

There are several myths associated with the treatment of adolescent trauma and substance abuse. Below are some of the myths commonly held by substance use and mental health clinicians and other healthcare administrators and providers.

Myth: Almost every adolescent who uses drugs and/or alcohol has experienced some kind of trauma. Therefore, the effects of traumatic experiences do not need to be addressed by clinicians any differently from the ways they treat other problems that such adolescents experience.

Fact: Trauma, as defined in psychological terms, involves experiencing or witnessing a situation that poses a threat to one’s own or another person’s life or bodily integrity—often resulting in posttraumatic stress symptoms. These symptoms can be alleviated by using specialized treatment approaches and interventions. Although not all youth who experience traumatic events develop posttraumatic stress symptoms, it is important to be prepared to attend to the multiple ways in which youth respond to distressing situations.

Myth: By assuming that adolescents use substances of abuse to cope with emotional distress, we relieve them from taking responsibility for their actions.

Fact: Being aware of this self-medication hypothesis can be extremely helpful to both clinicians and youth while they attempt to make sense of the origins and perpetuation of a youth’s substance use. Given that many adolescents are reluctant to acknowledge that their substance use is a “problem,” maintaining a neutral stance in trying to understand the functional relationship between emotional problems and substance use can promote a youth’s ability to take responsibility for his/her actions.

Myth: When dealing with an adolescent who has problems with substance abuse as well as a traumatic event history, it is imperative to: treat the substance abuse symptoms first before attempting to address trauma-related symptoms.

Fact: Some adolescents with co-occurring traumatic stress and substance abuse problems are denied entry into substance abuse treatment programs until their emotional distress is sufficiently addressed; others are denied entry into mental health treatment centers until they gain sobriety. As the research suggests, symptoms associated with traumatic stress and substance abuse are strongly linked. The decision about which symptoms and behaviors to address first depends on many factors including the relative threat to a youth’s safety, health, and immediate well-being that those particular symptoms and behaviors pose.

Myth: Most evidence-based assessment tools for trauma or substance abuse are too long and complicated to be implemented in real clinical practice settings.

Fact: Many of the older evidence-based assessment instruments do have a reputation for being long and complicated, as well as expensive. However, the assessment field has, over the past decade, produced many more assessment tools that are accessible and clinician-friendly in terms of both degree of complexity and length.

Myth: Manualized interventions are too rigid and simplistic to accommodate the complex needs of adolescents who have co-occurring posttraumatic stress and substance abuse problems.

Fact: Today’s evidence-based interventions are often manual-guided rather than manualized. This distinction reflects a movement away from promoting scripted and inflexible session content and structure and toward adherence to a clear therapeutic model with increasingly flexible session content and structure.
Clinicians, administrators, and other healthcare providers in the substance abuse and mental health fields often face major challenges in providing care to youth with traumatic stress and substance abuse problems. For example, the fragmentation that has traditionally existed between mental health and substance abuse systems often limits the types of services that youth are eligible to receive. Additionally, service centers may lack the resources or support necessary to provide comprehensive services. Although it may not be possible to find solutions to many of these challenges, below are some solutions to common treatment problems.

**Challenge:** Lack of institutional awareness and prioritization of adolescent trauma and substance use assessment and treatment.

**Suggested Solution:** The materials in this toolkit can serve as resources to aid in raising institutional awareness of the need for sound substance abuse and trauma assessment and treatment. Presenting case material that highlights the relationships between trauma and substance abuse can also help raise institutional awareness.

**Challenge:** Clinician lack of familiarity with the common presentations of posttraumatic stress symptoms in adolescents.

**Suggested Solution:** Use the materials in this toolkit to help become familiar with the common presentations of posttraumatic stress symptoms in adolescents. Access more information via the National Child Traumatic Stress Network website: www.NCTSN.org.

**Challenge:** Time and cost associated with conducting standardized assessments and training staff to use evidence-based interventions.

**Suggested Solution:** To convince institutional administrators to invest the time and money required for the initial stages of such program development, present them with research on improved treatment adherence and treatment outcomes when standardized assessments and evidence-based interventions are employed. Once the program has been established and youth outcomes are improved, working with youth will be more rewarding, which may encourage administrators to seek additional funding opportunities.

**Challenge:** Adolescents with severe co-occurring disorders often require assistance with other practical aspects of life—such as transportation, schooling, court advocacy, health insurance—which not all institutions are equipped to provide.

**Suggested Solution:** Partnerships with local agencies can often go a long way towards meeting the practical needs of clients when they cannot be met by a single organization.

**Challenge:** Difficulty engaging adolescents with trauma and substance abuse histories, who often employ avoidant coping mechanisms, in treatment.

**Suggested Solution:** Use the tips in this toolkit that help engage adolescents in treatment for trauma and substance abuse histories. For clinicians, struggling to engage difficult clients: access institutional support including additional supervision.

**Challenge:** Lack of local substance abuse and trauma training resources.

**Suggested Solution:** Search the Internet for substance abuse and trauma training resources that can be learned from online courses and programs. To reduce the cost of face-to-face training sessions, agencies can send a single representative to be trained, who can subsequently train his/her colleagues.
Understanding TRAUMATIC STRESS
In Adolescents

Youth services providers should always be aware of the links between adolescent traumatic stress and substance abuse problems. Carefully assessing for trauma exposure and its possible effects on youth functioning should be an integral part of the services provided by agencies and individuals working with adolescents, particularly in substance abuse treatment programs where youth trauma exposure is very common. Even with all the challenges to delivering integrated services, better care can be achieved through increased communication and coordination among mental health providers and substance abuse providers and through increased awareness about the needs of youth with co-occurring disorders across fields.

In people suffering from traumatic stress and/or substance abuse, particular triggers contribute to dysregulated emotions or behaviors. In traumatized youth, reminders of past traumas or losses can trigger a range of emotional and behavioral problems including physiological hyperarousal, hypervigilance, avoidance, numbing, angry outbursts, and substance craving. When substance abuse providers become more trauma-informed, and mental health providers become more substance abuse-informed, they become better able to reinforce youths’ practice and acquisition of more adaptive coping skills to manage distress in the context of either type of problem. Improvements in the ability to manage traumatic stress symptoms, for example, reduce the chances of relapse after substance abuse treatment is completed.

Adolescents in treatment for substance abuse will greatly benefit from receiving care from clinical staff who are also knowledgeable about trauma exposure, trauma-informed treatment, the complex relationship between traumatic stress and substance abuse, and the potential impact of both problems on treatment outcomes.

With the information in this fact sheet providers can broaden their understanding of adolescent traumatic stress and the typical problems that follow trauma exposure in adolescence. A developmental and contextual perspective on youth trauma is presented, with special attention paid to the links between trauma exposure, traumatic stress, and the development of substance abuse problems.

This project was funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies, and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.
Maria’s Story*

Maria, a 14-year-old girl, has been physically and sexually abused by her 22-year-old stepbrother for five years. The first incident of abuse happened when she and her mother moved in with the new stepfamily, after having been evicted from their old apartment. In addition, Maria has seen her stepfather severely hit her mother several times, and is now constantly worried about her mother’s safety. Maria has become withdrawn at school and no longer participates in activities she once enjoyed. Once very popular with her peers, she has isolated herself from many of her friends and spends most of her time alone. She fears that someone will find out about the abuse and that she will be taken away from her mother. The only person that Maria has been spending a lot of time with is her cousin who lives in the neighborhood. Lately, they have been skipping school and experimenting with marijuana and alcohol. Maria used to be an honor roll student, but her grades have been spiraling downward. Her favorite teacher, Ms. Jacobs, is extremely concerned and has been trying to get Maria to talk to her about what is causing such a change.

As you read through the pages that follow, think about cases like Maria’s, and consider the following questions:

- How common is child sexual abuse among adolescent girls? What are the most common forms of trauma exposure among adolescents?
- How do these traumatic experiences affect adolescents in the long run?
- Are there characteristics that place some youth at greater risk for trauma exposure?
- Are there specific developmental effects of early trauma exposure?
- How is trauma exposure related to the development of substance abuse problems?

* “Maria’s story” was created by the authors as a composite representation of stories heard from real teenage clients struggling with these issues and provides examples of the challenges that clinicians face in providing care for youth with trauma and substance abuse problems. Models portrayed are not representative of cases described.
Traumatic Exposure in Adolescents

Traumatic events are those that cause overwhelming anxiety or distress and include experiencing, witnessing, or being confronted with physical, verbal, and emotional abuse, or another event that involve actual or threatened death or serious injury to oneself or someone else.

Responses to trauma exposure most often include intense fear, helplessness, or horror (American Psychological Association, 2000; National Child Traumatic Stress Network, 2007). Trauma exposure is a common occurrence among adolescents. It is estimated that approximately 25% of children and adolescents will have experienced at least one traumatic event by age 16 (Costello, Erkanli, Fairbank, & Angold, 2002).

Estimates of trauma exposure among children and adolescents vary widely by cultural and social background. Consider the following facts:

- Inner-city children and adolescents are more likely to encounter community violence (Lipschitz, Rasmusson, Anywan, Cromwell, & Southwick, 2000).

- African-American, Pacific Islander, and American Indian/Alaska Native children and youth have higher rates of substantiated child maltreatment compared to their white (Hispanic and non-Hispanic) peers (U.S. Department of Health and Human Services, Children’s Bureau, 2006).

- Refugee children and adolescents are more likely to have experienced war trauma and displacement (National Child Traumatic Stress Network, 2007).

- Homeless youth are particularly vulnerable to a wide range of traumatic exposure including sexual assault and being beaten or attacked with a weapon resulting in serious injury (Unger, Kipke, Simon, Montgomery, & Johnson, 1997).

- Maltreatment of children and adolescents with disabilities occurs 1.5 to 10 times more often than among children and adolescents without disabilities.

- Lesbian, gay, bisexual, and transgender (LGBT) youth experience increased rates of physical harassment, assault, and injury at school (Kosciw & Diaz, 2006; Goodenow, Szalacha, & Westheimer, 2006).
The Body’s Acute Response to Trauma

In the face of potentially dangerous or threatening situations, the body’s natural response is to try to evaluate the level of danger and respond as quickly as possible. During times of danger, the body’s alarm response (“fight, flight, or freeze”) is activated to help the body’s organs react better to threat.

Physical Response

When fight, flight or freeze reactions are set in motion, the body prepares to respond to threat by sending more resources (e.g., blood and oxygen) to vital organs and conserving resources in others. See the boxes below for a list of some of the physical sensations that occur at this time:

- Heart pounding, palpitations, fast pulse
- Nausea
- Knot in stomach
- Dry mouth and throat
- Feeling detached from self or surroundings
- Feeling frozen or immobile
- Difficulty swallowing
- Sweating, clammy feeling
- Cold hands
- Pale face and skin
- Blurred vision, light seems brighter
- Feeling spaced out or in another world

Mental Response

When exposed to dangerous or threatening situations, the mental mechanisms that help us make everyday decisions temporarily shut down. This response enables us to make more primitive responses and take quick action rather than to think carefully about the situation at hand.

Long-lasting Problems

While these responses are important and vital for survival, prolonged exposure to threatening situations, or exposure to threat in situations where a protective response is inhibited (such as sexual abuse), can result in lasting physical and emotional problems.
When trauma leads to emotional and behavioral problems...

Individuals who experience trauma early in their lives usually develop a number of difficulties (Briere & Spinazzolla, 2005; APA, 2000; National Child Traumatic Stress Network, 2007; Strand, Sarmiento, & Pasquale, 2005) including:

Post Traumatic Stress Disorder:

PTSD is characterized by symptoms that are clustered into three broad categories:

1. Reexperiencing the traumatic event through intrusive thoughts or dreams of the event, or intense psychological distress when exposed to reminders of the event;

2. Persistent avoidance of thoughts, feelings, images, or locations that remind the adolescent of or are associated with the traumatic event;

3. Increased arousal such as hypervigilance, irritability, exaggerated startle response, and sleeping difficulties (American Psychological Association, 2000).

How Common Is PTSD?

- An epidemiologic study (Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003) of adolescents using a national sample found that 3.7% of males and 6.3% of females met diagnostic criteria for PTSD. Another epidemiologic study of older adolescents and young adults (aged 16–22) found prevalence rates for PTSD to be 1% in males and 3% in females (Cuffe, Addy, Garrison, Waller, Jackson, McKeown, et al., 1998).

- PTSD appears to be a fairly common diagnosis among adolescents seeking treatment. A study of adolescents treated in a psychiatric inpatient unit found that 42% of the overall sample (47.4% of females, 34.2% of males) met diagnostic criteria for PTSD (Koltek, Wilkes, & Atkinson, 1998). One study examined female juvenile offenders and a control sample matched on age and socioeconomic status (SES). Rates of PTSD were significantly different between the two groups, with 37% of offenders and 4% of controls meeting diagnostic criteria for PTSD (Dixon, Howie, & Starling, 2004).

Although exposure to traumatic events does not always lead to PTSD, traumatized individuals often experience some PTSD symptoms. They may report ongoing fear of the event occurring again, persistent flashbacks and nightmares, avoidance of things that remind them of the event, being on edge all the time, or having trouble sleeping.
Exposure to trauma can result in symptoms or disorders involving anxiety and depression. Anxious youth can appear very worried, nervous, or fearful, and may refuse to participate in daily activities such as school or social events. Depressed youth can display deep sadness, constant crying, trouble concentrating, irritability, feelings of guilt, and thoughts of wanting to die. Dysregulated emotional states can also be characterized by intense anger, leading youth to display aggressive or disruptive behavior.

Avoidance Activities:
The intense flood of negative emotions that often accompany traumatic stress can lead individuals to rely on (or overrely on) potentially problematic ways of avoiding trauma-related distress. Some examples of such avoidance activities include:

- **Dissociation:** Among the common types of dissociation that traumatized individuals may experience are depersonalization, derealization (feelings of unreality), fugue states, and dissociative identity disorder.

- **Substance abuse:** Individuals with complex and chronic trauma histories are more likely to use drugs and alcohol. Research studies suggest that among individuals with PTSD and substance use disorders, drug cravings increase with exposure to trauma reminders, suggesting that substance abuse for these individuals is an automatic avoidant response to prevent the onset of distressing emotions (Coffey, Saladin, Drobes, Brady, Dansky, & Kilpatrick, 2002; Saladin, Drobes, Coffey, Dansky, Brady, & Kilpatrick, 2003).

- **Tension reduction activities:** Compulsive sexual behavior, bingeing and purging, self-mutilation, and suicidality are also common among individuals exposed to early trauma.

Anxiety and Mood Problems:
Exposure to trauma can result in symptoms or disorders involving anxiety and depression. Anxious youth can appear very worried, nervous, or fearful, and may refuse to participate in daily activities such as school or social events. Depressed youth can display deep sadness, constant crying, trouble concentrating, irritability, feelings of guilt, and thoughts of wanting to die. Dysregulated emotional states can also be characterized by intense anger, leading youth to display aggressive or disruptive behavior.

Negative perceptions about oneself and the world:
Individuals who have experienced trauma and adverse life events often suffer from low self-esteem, self-blame, helplessness, hopelessness, expectations of rejection and loss, an overestimation of the amount of danger in the world, and/or expectations of maltreatment or abandonment by others.

Somatoform Symptoms:
This refers to bodily distress or dysfunction that arises from (or is significantly intensified by) psychological phenomena. Traumatized youth may report ongoing physical complaints and have difficulty meeting academic or social responsibilities.

Interpersonal Difficulties:
Youth who have been hurt by loved ones often develop a loss of trust or withdrawal and isolation from others, which can lead to ongoing conflict and social problems.
Youth Responses to Different Traumatic Events

Traumatic stress reactions for children and adolescents can also vary by type of trauma. Below are some highlights from the relevant research on this area.

Physical, Sexual, and Emotional abuse

It is often hard to imagine the extent of the impact on children and adolescents of experiencing physical, sexual, or emotional abuse by a loved or trusted one. Research studies in this area have demonstrated a range of resulting problems including psychological distress, behavioral difficulties, and social problems (Porter, Lawson, & Bigler, 2005). Specifically, physically abused and neglected children demonstrate increased risk for difficulties in language development and school readiness. Children with histories of physical abuse show deficits in verbal and memory skills. Research on girls indicates that those who have been sexually abused display lower cognitive abilities and academic achievement (Spaccarelli & Fuchs, 1997).

Interpersonal Violence and Victimization

Interpersonal violence such as physical or sexual assault or witnessed violence has been shown to increase the risk of PTSD, depression, and substance abuse or dependence among adolescents, even after controlling for demographic factors and family substance use problems (Kilpatrick, et al., 2003). Many characteristics of interpersonal abuse can have an impact on how children who experience abuse respond. For example, the identity of the perpetrator, the type of abuse, its frequency, and whether force was used can all have a specific impact on an individual’s response to the trauma.

Exposure to Community Violence

Exposure to community violence can have a serious psychosocial impact in children and adolescents. For example, a study of youth aged 12–17 found that exposure to community violence was often associated with conduct disorder and externalizing problems two years later (McCabe, Lucchini, Hough, Yeh, & Hazen, 2005). In another study, African American adolescents aged 10–18 exposed to community violence reported more depressive symptoms, after controlling for gender and age (Fitzpatrick, Piko, Wright, & LaGory, 2005). Interestingly, in this same study, social capital (personal and social resources) was shown to be inversely related to adolescent depression.
Natural Disaster/Terrorism

The impact of trauma due to natural disasters or terrorism can also be great for adolescents. Traumatic grief reactions to tragic losses suffered as a result of the attack on the World Trade Center on September 11, 2001, included symptoms of PTSD, anxiety, depression, poor coping responses, and secondary adversities resulting from the event (Brown & Goodman, 2005). In a study of Nicaraguan youth who had experienced Hurricane Mitch (Goenjian, Molina, Steinberg, Fairbanks, Alvarez, Goenjian, & Pynoos, 2001), researchers found that posttraumatic stress symptom severity was associated with the level of impact and devastation and the presence of thoughts of revenge. Depressive symptoms were associated with severity of the posttraumatic stress reactions, the death of a family member, and being female.

Traumatic Loss and Grief

Although all adolescents grieve after the death of a loved one, traumatic grief occurs when the teen experiences the death/loss as a traumatic event and experiences many of the symptoms of PTSD (e.g., intrusive thoughts about the death, increased physical agitation, emotional numbing). These PTSD-like symptoms hinder the natural bereavement process, can cause interference in daily functioning, and do not allow the teen to process and, eventually, let go of the loss (Goodman, Cohen, Epstein, Kliethermes, Layne, Macy, & Ward-Wimmer, 2004). Traumatic grief is often complicated by the secondary consequences of the loss such as moving in with grandparents after the loss of a parent (Cohen & Mannarino, 2004).

Medical Trauma

A study by Costello, Erkanli, Fairbank, & Angold (2002) found that medical trauma (either serious illness or serious accident) was the third-most common traumatic event for youth to experience. Medical trauma can include severe injury, diagnosis and treatment of a life-threatening illness, or other serious medical procedure. Medical trauma can have a significant impact on the emotional well-being of youth as well as of their parents. A study by Winston, Kassan-Adams, & Garcia-Espana (2003) found that 17% of youth who suffered severe injuries and 15% of their parents reported meeting symptom criteria for PTSD; 22% of youth and 33% of parents reported meeting symptom criteria for Acute Stress Disorder (ASD).

Complex Trauma

The term complex trauma is often applied when a child experiences multiple, chronic traumatic events beginning in early childhood (e.g., neglect, maltreatment, witness to domestic violence). Complex trauma can lead to a variety of psychosocial problems including (but not limited to) PTSD, difficulties with attachment, anxiety, substance abuse, aggressive behaviors, eating disorders, and diverse physical disorders such as problems with the metabolic, cardiovascular, and immunological systems (National Child Traumatic Stress Network, 2007). In addition, because of the problems that can develop after living with chronic trauma (e.g., lack of attachment, emotional dysregulation, inability to distinguish danger cues), these youth are at greater risk to be revictimized and experience subsequent trauma (Spinazzola, Ford, Zucker, van der Kolk, SilvaSmith, & Blaustein, 2005).
Risk and Protective Factors Associated with Trauma Exposure

Several factors have been identified as placing youth at risk for experiencing trauma including:

**Family characteristics:** Trauma exposure is more common among youth whose families are characterized by relationship problems and parental psychopathology (Costello et al., 2002). This same study found that a family history of mental illness doubles the risk of trauma exposure. A closer look at gender differences revealed that girls were at greater risk if either parent had a criminal record or if the home was poor or disorganized.

**Stressful events:** Experiencing stressful events—such as parental separation or divorce, moving or changing schools, or breaking up with a friend—has been associated with increased risk for trauma exposure (Costello et al., 2002). Adolescents who have experienced high levels of stress in the context of exposure to violence are at greater risk for poor psychological outcomes (Self-Brown, LeBlanc, & Kelley, 2004).

**Homelessness:** Homeless youth are at a greater risk for experiencing trauma when compared to other adolescents. Often times, these teens have been the victims of severe and recurrent physical, emotional, and/or sexual abuse. When the abuse is at the hand of their caregivers, the result is often running away or being forced to leave their homes. Female homeless adolescents are particularly at risk for experiencing sexual trauma compared to their male counterparts. Even after leaving an abusive home, these teens are extremely vulnerable to continued maltreatment once on their own or residing in shelters (Gwadz, Nish, Leonard & Strauss, 2004).

**Monitoring:** Research has shown that spending more time in risky contexts (e.g., unmonitored time with friends) and less time in protective contexts (e.g., structured time in recreational activities or with family) were associated with more exposure to violence (Richards, Larson, Miller, Luo, Sims, Parrella, & McCauley, 2004). This exposure, in turn, can lead to development of delinquent behaviors or emotional distress.

**Sibling influences:** Exposure to deviant activities by an older sibling and participation in such deviant activities with a sibling were found to increase the risk for development of many problems including arrests, drug use, antisocial behavior, deviant peer association, and early sexual experience, as well as the experience of traumatic stress (Snyder, Bank, & Burraston, 2005). These problems were particularly salient in the context of early sibling conflict and ineffective parenting. According to this study, modeling of antisocial behavior and coparticipation in drug use and other risky activities increased chances of victimization in risky contexts.

Having more than one of the of the problems mentioned above places youth at an even greater risk of experiencing additional difficulties. For example, one study examined the cumulative effect of risk, and found that the experience of sexual abuse was more common among children who had a higher number of “vulnerability factors” (Costello et al., 2002).
Several studies in the area of child maltreatment have been conducted to identify ways in which this type of trauma exposure is associated with problems in childhood development. Findings point to possible alterations in specific biological stress systems, which, in turn, can lead to adverse effects on brain development as well as delays in language, cognitive, and academic skills (De Bellis, 2005).

It is important to note that not all children who are maltreated are adversely affected. Additionally, although environmental stress plays a large role in this process, some evidence suggests that the negative effects of stress on the central nervous system may be reversible.

Child maltreatment can have an impact on the body’s physical response to ongoing stress. Because neurobiological stress systems are interconnected at many levels, dysregulation in one system can lead to problems in others. For instance, dysregulation of the neurobiological stress system is thought to lead to several of the symptoms associated with PTSD.

Critical stress response mechanisms that have been shown to be affected by childhood maltreatment include:

- Dysregulation of the serotonin system (Kaufman, Birmaher, Perel, Dahl, Stull, Brent, et al., 1998), which increases the risk for depression, suicidality, and aggression;

- Increased sensitivity to the limbic-hypothalamic-pituitary-adrenal (LHPA) axis, which is associated with psychiatric symptoms (e.g., depression, anxiety, sleep difficulties) and physical problems (e.g., memory loss, difficulty concentrating);

- Decreased ability of the immune system to respond due to the dysregulation of the LHPA axis, which can increase the risk for developing infectious diseases.

In addition, neuroimaging findings have suggested a link between child maltreatment and specific problems in brain development and maturation (De Bellis, Keshavan, Clark, Casey, Giedd, Boring, et al., 1999; De Bellis & Keshavan, 2003). Prolonged exposure to such stressors is thought to impair neurophysiological functioning and have a direct impact on memory, learning, and the ability to store and process spatial information due to its impact on the hippocampus.
Trauma as a Risk Factor for Substance Use

Exposure to traumatic events and the experience of grief and loss can place youth at higher risk of developing substance use problems.

Many providers are familiar with the self-medication hypothesis: that people develop substance abuse problems in an attempt to manage distress associated with the effects of trauma exposure and traumatic stress symptoms. This theory suggests that youth turn to alcohol and other drugs to manage the intense flood of emotions and traumatic reminders associated with PTSD, or to numb themselves from the experience of any intense emotion, whether positive or negative.

Research findings have shown that, in a substantial proportion of youth, substance use problems develop following exposure to trauma (25–76%) or the onset of PTSD (14–59%) (Clark, Lesnick, & Hegedus, 1997; Deykin & Buka, 1997; Giaconia, Reinherz, Hauf, Paradis, Wasserman, & Langhammer, 2000; Perkonigg, Kessler, Storz, & Wittchen, 2000). Specifically, the experience of physical assault, sexual assault, and witnessing violence has been associated with a greater risk for substance abuse or dependence (Kilpatrick, Acierno, Saunders, Resnick, & Best, 2000). In addition, having PTSD or traumatic stress symptoms can place youth at greater risk of developing substance abuse or dependence (Kilpatrick, et al., 2000; Kilpatrick, et al., 2003; Stevens, Murphy, & McKnight, 2003).

Recent substance abuse treatment outcome studies with adults have documented that elevated PTSD and traumatic stress symptoms at follow-up are associated with relapse after substance abuse treatment (Read, Brown, & Kahler, 2004). Higher initial symptom severity among youth with co-occurring traumatic stress and substance abuse problems was associated with more internal distress and violent behavior at posttreatment (Titus, Dennis, White, Scott, & Funk, 2003).

A likely explanation for the link between traumatic stress and substance abuse is offered by studies that examine levels of craving for substances. Research with adults in this area suggests that substance use craving increases among individuals with co-occurring trauma and substance abuse when they are exposed to cues related to the traumatic event (Coffey, et al., 2002; Saladin, et al., 2003). This suggests that for individuals with both types of problems, trauma and loss reminders can serve as triggers for future substance use. Further evidence is provided by findings indicating that among adults with cocaine dependence, individuals with PTSD were more likely to use following negative experiences (such as unpleasant emotions and physical discomfort) when compared to those without PTSD (Waldrop, Back, Verduin, & Brady, 2006). In the absence of coping strategies to manage distress associated with trauma, individuals with substance abuse problems may be more likely to use.
Carefully assessing for substance use and abuse, and their possible effects on youth functioning should be an integral part of the services provided by agencies and individuals working with adolescents. This is particularly important to remember in mental health service systems, which traditionally have not screened for substance use problems on a regular basis.

Youth services providers should always be aware of the links between adolescent traumatic stress and substance abuse problems. The traditional division between mental health and substance abuse service systems, the limited availability of evidence-based integrated approaches, and the difficulties associated with having separate sources of funding available for these types of problems all can pose many challenges to providing integrated and coordinated care for multiproblem youth. Adolescents in treatment for traumatic stress and other emotional problems benefit greatly from receiving care from clinical staff who are knowledgeable about substance abuse and treatment, how both disorders present and manifest, and how the functional relationship between them can have an impact on treatment outcomes.

A stimulus or trigger can lead to dysregulated emotions or behaviors in adolescents experiencing substance abuse or traumatic stress. In substance-abusing youth, a stimulus or trigger of the context of use (e.g., substance-using peers, place where they obtain drugs, time of day) can lead to an increase in substance abuse cravings, which is likely to lead to use. For traumatized individuals who have substance abuse problems, a reminder of past trauma or loss can also lead to increased substance abuse cravings (Coffey, Saladin, Drobes, Brady, Dansky, & Kilpatrick, 2002; Saladin, Drobes, Coffey, Danksy, Brady & Kilpatrick, 2003). When mental health providers become more substance abuse-informed and when substance abuse providers become more trauma-informed, they all become better able to reinforce in youth the practice and acquisition of coping skills to manage distress in the context of either type of problem. Improvements in the ability to manage substance abuse cravings, for example, may enhance the youth’s readiness to learn how to manage trauma and loss reminders.

With the information in this fact sheet, providers can broaden their understanding of adolescent substance use and abuse and the reasons why teens are drawn to drugs and alcohol. Risk and protective factors associated with use along with types of problems youth experience with prolonged use are presented in both developmental and contextual perspectives. Special attention is paid to the links between substance use, trauma exposure, and traumatic stress. The Appendix contains useful information about some of the substances of abuse.

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Tony’s Story

Tony was 15 when he saw his best friend, Curtis, get shot in the cross fire of gang-related violence in their neighborhood. He called 911; and after Curtis was attended to by the paramedics, Tony was allowed to ride in the ambulance to the hospital with Curtis. Curtis died in the ICU several hours later. Tony was devastated but believed that Curtis would have wanted him to stay strong. So he tried to get back to his daily routine as quickly as possible. Tony lived at home with his 14-year-old brother, Mikey, and his mom and stepfather, who frequently argued. Before Curtis’s death, Tony was doing pretty well in his classes and was on the school basketball team. However, he began to find it harder to focus in school and was having recurrent nightmares about Curtis’s death that were making it difficult for him to sleep.

At a basketball party one weekend, a teammate offered Tony some Vicodin for a game-related injury. Tony took a couple of extra pills to help him fall asleep. On the way home from the party he noticed that he no longer had that on-edge feeling he usually had while walking through his neighborhood. During the next week he discovered that the Vicodin made it easier for him to deal with his brother when he was getting on his nerves. But then he ran out of Vicodin, so he checked around for another source and found a teammate who knew someone who was selling painkillers. Tony soon started using these every day, sometimes skipping school when he’d sleep through his alarm. When the dealer offered him OxyContin he switched to buying that and liked the stronger effect that it had, but it cost a lot more money, so he started stealing from his parents. When the original amounts did not cause the same effect, he started crushing and snorting the pills for an even stronger effect, and he eventually tried injecting morphine.

He was placed on probation for missing so much school, and eventually the courts ordered drug counseling services. He went to an inpatient program for one month and then transitioned to a partial-day program. After being off drugs for some time, he started thinking more of his friend’s horrific death and started to experience survivor guilt. His nightmares and hyperarousal returned and felt so unbearable that he soon began using again to gain temporary relief.

While the specific ways in which adolescents are impacted by use will vary greatly for each individual, there are important facts to keep in mind when providing care to this population. As you read the pages that follow, think about cases like Tony and consider the following questions:

- What are the signs of substance abuse and dependence common in adolescents?
- Does starting to use early in life have an impact on youth development?
- What are some of the reasons youth give about initiating and continuing to use substances?
- What are some of the reasons youth give about stopping using substances?
- Can substance abuse serve as a risk factor for trauma exposure?
- What are some of the characteristics of substances commonly abused by adolescents?

* "Tony’s story" was created by the authors as a composite representation of stories heard from real teenage clients struggling with these issues and provides examples of the challenges that clinicians face in providing care for youth with trauma and substance abuse problems. Models portrayed are not representative of cases described.
About 1 in 4 adolescents experiment with illegal drugs by the time they finish 8th grade, and more than half by the end of high school (Johnston, O’Malley, & Bachman, 2003). Substance use is most common among adolescents and young adults. Prevalence estimates indicate that 11% of adolescents ages 12–17 have used illicit drugs within the past month, most often marijuana (Substance Abuse and Mental Health Services Administration, 2005). Alcohol, cigarettes, and marijuana are the substances most commonly used by adolescents, followed by inhalants and smokeless tobacco. Specific rates vary by age group: inhalants are more commonly used among younger teens; marijuana, alcohol, and tobacco are more common among older teenagers (Johnston, O’Malley, Bachman, & Schulenberg, 2006). Initiation of substance use tends to be at an early age. One national survey found that by age 13, approximately 1 in 3 youths had consumed alcohol, and 1 in 10 had used marijuana (Giaconia, Reinherz, Silverman, Pakiz, Frost, & Cohen, 1994). Rates of substance use are also high among homeless youth, even when compared to high risk youth seen in adolescent health clinics or those in juvenile detention centers (Baer, Peterson & Wells, 2004; Kipke, Montgomery, Simon & Iverson, 1997; Yates, MacKenzie, Pennbridge & Cohen, 1988).

The Role of Gender in Substance Use

Gender is an important factor in the use and effects of substances. Boys tend to have opportunities for use earlier in life and thus tend to initiate at younger ages (Van Etten, Neumark, & Anthony, 1999). However, once girls have the opportunity to experiment, they are just as likely as boys are to use (Van Etten & Anthony, 2001). Data from the 2005 Monitoring the Future survey (Johnston, O’Malley, Bachman, & Schulenberg, 2006) suggest that there are similar trends for substance use by boys and girls, but that boys are more likely to consume marijuana, steroids, and smokeless tobacco; and girls are more likely to abuse amphetamines and methamphetamine. Rates of drug use for both genders have been converging over the past decade (Wallace, Bachman, O’Malley, Schulenberg, Cooper, & Johnston, 2003).

Research indicates that there are few differences in the type or amount of substances that male and female adolescents use; however, the effects of substances on their emotional and physiological health can vary. Substance abuse stemming from traumatic events and/or psychological problems is more common in females than in males. Additionally, female substance abusers are more vulnerable to some of the physiological effects and psychological difficulties that can result from substance use. Research has also shown that females have a greater chance of developing neurological problems associated with alcohol abuse (Brady & Ashley, 2005).

In addition to varying by gender, adolescent drug and alcohol use also tends to vary by population. According to a 2005 national survey American Indian/Alaska Native Youth reported the highest rates (Substance Abuse and Mental Health Services Administration, 2005). Additionally a Massachusetts state wide survey indicated that lesbian-gay-bisexual youth reported higher rates than heterosexual youth (Hanlon, 2004).
Why Do Adolescents Use?

Why do teenagers start using, continue using, and in some cases, quit? Each teenager’s circumstances are unique—as are his or her reasons for using. It is important, therefore, to find ways to openly elicit youths’ perspectives during treatment. Researchers have tried to capture general categories of motivation. This section summarizes the research of Titus, Godley, & White (under review), and is based on information from 923 teenagers receiving outpatient and residential substance abuse treatment.

Motives for Initiating Drug Use

The two most common reason teens give for initiating substance use are social pressures and experimentation. They may use because they see “everyone else” doing it and want to blend in; because it’s a way of spending time with friends, of being accepted, of becoming popular, of enhancing social and other activities, or because they may fear that if they refuse, they might alienate potential friends. Many youths say that curiosity about substances and their effects leads to their first use—to “see what it’s like.” Others say that they decide to start after witnessing a parent or relative using. A significant minority (7%) cite using to “cope with difficulties,” and thus relieve stress, chill out, escape family problems, or deal with physical pain.

Motives for Continuing Drug Use

In contrast to adolescents’ reasons for initiating drug use, motives for continuing drug use seem to revolve around experience with use and the reinforcing effects provided by the substance itself:

- 29% of the adolescents reported continuing use because it feels good
- 23% indicated that using helped them cope with difficulties. For instance, many teens indicated that “being high or drunk feels good,” or that they like the taste, the buzz, or the confidence that they feel while intoxicated.
- Additionally, youth often note that drugs “take away problems” that are associated with adolescence such as difficulties with parents, peers, and school.

Among individuals experiencing traumatic stress, continued substance use may serve as a coping strategy to deal with stress, forget unpleasant experiences, avoid negative emotions, do away with worries, or feel numb or indifferent to the challenges of daily life or the reminders of past trauma. Using substances reportedly helps teens forget, get to sleep, or escape. Teens stated that in some situations, their drug use continued because they were bored and it “helped pass the time,” or because it helped them “celebrate special occasions.” A smaller percentage of adolescents (7%) cited addiction as a reason for continued use including craving and a desire to avoid withdrawal symptoms. Other teens reported not seeing any harm in continuing their use or not having a reason to stop.
Motives for Quitting Drug Use

Among the reasons reported by teens about why they quit using drugs were:

1. Substance use no longer fit in with their desired lifestyle (22%) because they:
   - Didn’t like the way it made them feel.
   - Got tired of the drug lifestyle, saying, “It was getting old.”
   - Wanted to “change their life.”
   - Wanted to please friends or family.
   - Had a change in their living situation such as having a baby.

2. Prolonged use might have adverse impacts on their anticipated future (21%) including fear:
   - That drugs would keep them from their life goals.
   - Of where they would “end up in life.”

3. Continued use might have negative physical and psychological effects (14%) including:
   - Possibility of long-term impact of drugs on their bodies and ability to think clearly.
   - In addition, other teens reported quitting after being “pressured” by outside influences such as jail time, probation, or drug testing.

Other possible factors include: demographic characteristics (e.g., age, gender, socioeconomic status), substance use patterns (e.g., types of drugs used, frequency, number of drugs abused, stage of involvement with drugs), and personal characteristics (e.g., psychosocial maturity, co-occurring conditions).

Understanding youth incentives for initial and continued use, as well as the reasons for stopping will be very useful when delivering substance abuse interventions. It is important, therefore, to find ways to openly elicit youth perspectives during treatment. More research is needed to evaluate reasons for initiating, continuing, and stopping use given by adolescents who have experienced trauma. Among adults with cocaine dependence, for example, studies show that individuals with PTSD are more likely to use following negative experiences (such as unpleasant emotions and physical discomfort) when compared with those without PTSD (Waldrop, Back, Verduin, & Brady, 2007). It appears that in the absence of alternative coping strategies to manage distress associated with trauma, individuals with substance abuse problems may be more likely to use.
When drugs and alcohol are introduced into the body, many physical and mental reactions may occur. Different substances produce different acute responses. Table 1 below outlines some of the body’s acute responses to different substances of abuse.

### Table 1: Acute Responses to Substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Acute Response</th>
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<tbody>
<tr>
<td><strong>Inhalants</strong></td>
<td>- Reduced inhibition&lt;br&gt;- Excitement&lt;br&gt;- Confusion and disorientation&lt;br&gt;- Drowsiness&lt;br&gt;- Flu-like symptoms&lt;br&gt;- Nausea</td>
</tr>
<tr>
<td><strong>Heroin &amp; Other Opioids</strong></td>
<td>- Intense pleasure and sense of wellbeing&lt;br&gt;- Confusion&lt;br&gt;- Pain relief&lt;br&gt;- Slowed breathing&lt;br&gt;- Decreased blood pressure&lt;br&gt;- Constricted pupils&lt;br&gt;- Dry mouth&lt;br&gt;- Suppressed cough reflex&lt;br&gt;- Reduced sexual urges&lt;br&gt;- Drowsiness&lt;br&gt;- Slurred and slow speech&lt;br&gt;- Reduced coordination&lt;br&gt;- Nausea and vomiting</td>
</tr>
<tr>
<td><strong>Cannabis</strong></td>
<td>- Relaxation&lt;br&gt;- Loss of inhibition&lt;br&gt;- Increased appetite&lt;br&gt;- Affected perception of color, sound&lt;br&gt;- Impaired coordination&lt;br&gt;- Affected thinking and memory</td>
</tr>
<tr>
<td><strong>Methamphetamine</strong></td>
<td>- Speeding up of bodily functions&lt;br&gt;- Increased energy, alertness&lt;br&gt;- Reduced appetite&lt;br&gt;- Irritability</td>
</tr>
<tr>
<td><strong>Cocaine/Crack</strong></td>
<td>- Arousal&lt;br&gt;- Anxiety&lt;br&gt;- Decreased hunger&lt;br&gt;- Poor concentration&lt;br&gt;- Indifference to pain&lt;br&gt;- Enlarged pupils&lt;br&gt;- Sexual arousal&lt;br&gt;- Feeling of great physical strength</td>
</tr>
<tr>
<td><strong>Ecstasy</strong></td>
<td>- Increased confidence&lt;br&gt;- Feeling of well-being&lt;br&gt;- Anxiety&lt;br&gt;- Dilated pupils&lt;br&gt;- Jaw clenching&lt;br&gt;- Increased heart rate&lt;br&gt;- Nausea&lt;br&gt;- Loss of appetite</td>
</tr>
<tr>
<td><strong>Steroids</strong></td>
<td>- Nausea/vomiting/diarrhea&lt;br&gt;- Joint/muscle pain or weakness&lt;br&gt;- Weight loss&lt;br&gt;- Fever&lt;br&gt;- Headache and fatigue&lt;br&gt;- Low blood pressure</td>
</tr>
<tr>
<td><strong>Hallucinogens</strong></td>
<td>- Distorted sense of time and space&lt;br&gt;- Distorted body image&lt;br&gt;- Dilated pupils&lt;br&gt;- Rapid heart rate&lt;br&gt;- Increased blood pressure&lt;br&gt;- Relaxation&lt;br&gt;- Nausea&lt;br&gt;- Chills, flushing&lt;br&gt;- Shaking&lt;br&gt;- Paranoia and/or confusion&lt;br&gt;- Rapid breathing&lt;br&gt;- Acute panic&lt;br&gt;- Abdominal discomfort&lt;br&gt;- Poor coordination</td>
</tr>
<tr>
<td><strong>GHB “Date-Rape Drug”</strong></td>
<td>- Euphoria&lt;br&gt;- Increased libido&lt;br&gt;- Memory lapses&lt;br&gt;- Drowsiness&lt;br&gt;- Sleep&lt;br&gt;- Dizziness and headache&lt;br&gt;- Tremor&lt;br&gt;- Decreased blood pressure&lt;br&gt;- Nausea&lt;br&gt;- Diarrhea&lt;br&gt;- Urinary incontinence</td>
</tr>
<tr>
<td><strong>Nicotine</strong></td>
<td>- Stimulation of and then reduction in nervous system activity&lt;br&gt;- Enhanced alertness&lt;br&gt;- Mild euphoria&lt;br&gt;- Relaxation&lt;br&gt;- Increased blood pressure&lt;br&gt;- Decreased blood flow to extremities&lt;br&gt;- Dizziness&lt;br&gt;- Decreased appetite and sense of smell</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>- Relaxation&lt;br&gt;- Reduced concentration&lt;br&gt;- Slower reflexes</td>
</tr>
</tbody>
</table>
Substance abuse refers to the use of drugs in a manner that is illegal or harmful to the individual and causes significant adverse consequences, such as accidents or injuries, blackouts, legal problems and risky sexual behavior. Substance dependence involves continued substance abuse despite significant substance-related problems, and usually includes tolerance of the drug (requiring higher doses to achieve the same effect) and withdrawal, symptoms experienced when use of the drug is discontinued (American Psychological Association, 2000; National Institute on Drug Abuse, 2005). Symptoms in adolescents who are using substances include:

- Failing to fulfill major obligations at home or school;
- Use of substances when it is physically hazardous;
- Legal, social, or interpersonal problems;
- Tolerance, withdrawal symptoms, problems cutting back on consumption; or other indications of severe substance abuse, which may warrant a diagnosis of substance dependence (American Psychological Association, 2000).

**Signs that an adolescent has developed substance use problems include**

<table>
<thead>
<tr>
<th>Frequent Intoxication</th>
<th>Dropping out of activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty sleeping</td>
<td>Disruptive behavior</td>
</tr>
<tr>
<td>Depression</td>
<td>School avoidance</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Decline in academic performance</td>
</tr>
<tr>
<td>Changes in peer group or failing to introduce peers to parents</td>
<td>Rapid Changes in mood or hostile outbursts</td>
</tr>
<tr>
<td>Changes in physical appearance or poor hygiene</td>
<td>Secretive behaviors such as sneaking out, lying, and locking doors</td>
</tr>
</tbody>
</table>

(Estimates of the prevalence of lifetime substance use problems (e.g., meeting DSM-IV criteria for substance abuse or dependence) in adolescents range from 10 to 32% (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Reinherz, Giacconia, Lefkowitz, Pakiz, & Frost, 1993). One study concluded that 9% of adolescents met criteria for having a substance use disorder within the year prior to the study (Substance Abuse and Mental Health Services Administration, 2005). Several epidemiological studies indicated that substance use disorders tend to onset in middle-to-late adolescence and early adulthood (Centers for Disease Control and Prevention, 2000; Segal & Stewart, 1996; Weinberg, Rahdert, Colliver, & Glantz, 1998). One cross-cultural study found that the lifetime risk for having a substance use disorder is relatively high in European Americans and relatively low among African Americans (Roberts, Roberts, & Xing, 2006).
Regular users of alcohol and drugs may eventually develop tolerance and need larger amounts of the substance to achieve the same effect. When the body adjusts to having the substance present, users may feel emotionally and physically ill when they discontinue use (withdrawal). Substance use initially may serve as a means to find pleasure or relief from emotional distress, but once physiological dependence develops, substance use becomes a way to manage cravings and withdrawal symptoms (see Table 2 below). Although all psychoactive substances work on the brain’s pleasure center, they are associated with specific affective states and they influence the body in different ways (see Appendix).

### Table 2: Common Withdrawal Symptoms

<table>
<thead>
<tr>
<th>Substance</th>
<th>Common Withdrawal Symptoms</th>
</tr>
</thead>
</table>
| **Inhalants**              | • Hand tremors  
• Excess sweating  
• Constant headaches  
• Nervousness                                                                                                                                                    |
| **Steroids**               | • Nausea/vomiting/diarrhea  
• Joint/muscle pain or weakness  
• Weight loss  
• Fever  
• Headache and fatigue  
• Low blood pressure                                                                                                                                           |
| **Heroin & Other Opioids** | • Nausea/vomiting  
• Insomnia  
• Diarrhea  
• Irritability  
• Loss of appetite  
• Shaking  
• Tremors  
• Panic  
• Chills or profuse sweating                                                                                                                                     |
| **Hallucinogens**          | • No known withdrawal symptoms                                                                                                                                                                                              |
| **GHB “Date-Rape Drug”**   | • Profuse sweating  
• Anxiety attacks  
• High blood pressure and pulse  
• Hallucination  
• Rapid pulse                                                                                                                                                     |
| **Cannabis**               | • Irritability  
• Anxiety and physical tension  
• Decreases in appetite and mood                                                                                                                                     |
| **Methamphetamine**        | • Irritability  
• Moderate-to-severe depression  
• Psychotic reactions  
• Anxiety                                                                                                                                                    |
| **Nicotine**               | • Irritability/aggression  
• Depression  
• Poor concentration  
• Increased appetite  
• Light-headedness  
• Restlessness  
• Night-time awakenings  
• Craving                                                                                                                                                     |
| **Cocaine/Crack**          | • Agitation/irritability  
• Depression and/or anxiety  
• Intense cravings  
• Angry outbursts  
• Lack of motivation, fatigue  
• Nausea/vomiting  
• Shaking                                                                                                                                                    |
| **Ecstasy**                | • Depression  
• Anxiety, including panic attacks  
• Depersonalization/derealization  
• Paranoid delusions  
• Sleeplessness                                                                                                                                                |
| **Alcohol**                | • Sweating or rapid pulse  
• Increased hand tremor  
• Nausea/vomiting  
• Physical agitation  
• Anxiety  
• Insomnia  
• Visual, tactile, auditory hallucinations  
• Grand mal seizures                                                                                                                                             |
Much research has been devoted to identifying common risk and protective factors associated with adolescent substance use. Table 3 below outlines some of these factors that are associated with various domains of an adolescent’s life.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Risk Factors</th>
<th>Protective Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>• Aggressive behavior &lt;br&gt;• Inherited genetic vulnerability &lt;br&gt;• Low self-esteem &lt;br&gt;• Academic failure &lt;br&gt;• Risk-taking propensity &lt;br&gt;• Impulsivity</td>
<td>• Self-control &lt;br&gt;• Positive relationships with adults (e.g., parents, teachers, doctors, law enforcement officers, etc.) &lt;br&gt;• Involvement in extracurricular activities &lt;br&gt;• Positive future plans</td>
</tr>
<tr>
<td>Family</td>
<td>• Lack of parental supervision &lt;br&gt;• Family member with a history of alcohol or other drug abuse &lt;br&gt;• Lack of clear rules and consequences regarding alcohol and other drug use &lt;br&gt;• Family conflict/abuse &lt;br&gt;• Loss of employment</td>
<td>• Parental monitoring &lt;br&gt;• Close family relationships &lt;br&gt;• Education valued and encouraged; parents actively involved &lt;br&gt;• Clear expectations and limits regarding alcohol and other drug use &lt;br&gt;• Shared family responsibilities including chores and decision making &lt;br&gt;• Nurturing family members who support each other</td>
</tr>
<tr>
<td>Peer</td>
<td>• Substance abuse &lt;br&gt;• Ties to deviant peers/gang involvement &lt;br&gt;• Inappropriate sexual activity among peers</td>
<td>• Academic competence &lt;br&gt;• Involvement in substance-free activities &lt;br&gt;• Negative view of alcohol and other drug use among peers</td>
</tr>
<tr>
<td>School</td>
<td>• Drug availability &lt;br&gt;• Students lack commitment or sense of belonging at school &lt;br&gt;• High numbers of students who fail academically at school &lt;br&gt;• Parents and community members not actively involved</td>
<td>• Antidrug use policies &lt;br&gt;• Positive attitudes toward school and regular school attendance promoted &lt;br&gt;• Goal-setting, academic achievement, and positive social development encouraged &lt;br&gt;• Tutoring made available &lt;br&gt;• Leadership and decision-making opportunities for students provided &lt;br&gt;• Substance-free events sponsored</td>
</tr>
<tr>
<td>Community</td>
<td>• Poverty &lt;br&gt;• Alcohol and other drugs readily available &lt;br&gt;• Laws and ordinances unclear or inconsistently enforced &lt;br&gt;• Norms unclear or encourage use of drugs &lt;br&gt;• Lack of sense of connection to community &lt;br&gt;• High unemployment &lt;br&gt;• Youths’ activities not monitored</td>
<td>• Laws and ordinances consistently enforced &lt;br&gt;• Norms and policies encourage nonuse of drugs &lt;br&gt;• Strong sense of connection to neighborhood &lt;br&gt;• Jobs and other resources (e.g., housing, healthcare, childcare, community service opportunities, recreation; religious organizations) available</td>
</tr>
</tbody>
</table>
Paying attention to the risk and protective factors outlined in Table three could play a role in preventing the onset of substance use among adolescents, as well as reducing the likelihood of developing abuse and dependence. Some of these factors are further discussed below.

**Individual factors:**

Paying attention to these risk and protective factors could play a role in preventing the onset of substance use among adolescents, as well as reducing the likelihood of developing abuse and dependence. The way teenagers cope with difficulties can have an impact on their future outcomes. For example, studies have shown that adolescents who tend to use positive coping strategies such as good decision-making skills, assertiveness, and cognitive mastery, are less likely to use substances or engage in delinquent behavior (Griffin, Botvin, Scheier, Doyle, & Williams, 2003). On the other hand, adolescents who tend to engage in avoidant stress coping and have difficulty in managing temptations are more likely to use drugs and alcohol (Wagner, Myers, & McIninch, 1999).

**Family factors:**

When faced with external pressures, adolescents with a stronger sense of attachment to their parents are less likely to engage in risky behaviors such as drug and alcohol use (Kostelecky, 2005). Parental attitudes about substance use and their expressed disapproval of antisocial behavior have also been associated with decreased use among teenagers (Bahr, Hoffmann, & Yang, 2005; Herrenkohl, Tajima, Whitney, & Huang, 2005).

**School environment:**

Bonding with school and having a strong commitment to doing well have been associated with decreased substance use rates (Kumpfer & Turner, 1990-1991; O’Donnell, Hawkins & Abbott, 1995)

**Peer influences:**

Numerous studies have documented the negative influence of associating with substance-using peers on adolescent substance use patterns (Bahr, et al., 2005; Kuntsche & Jordan, 2006; Oetting & Beauvais, 1986; Brook, Brook, Arenobia-Mireles, Richter, & White-man, 2001; Griffin, et al., 2003; Stormshak, Comeau, & Shepard, 2004).

**Community factors:**

Limited availability of needed services or quality educational and recreational opportunities can lead to youth participation in risky activities and substance use (McIntosh, MacDonald, & McKeeganey, 2005).
Substance Use and Youth Development

Why are the risks associated with substance use greater for adolescents?

Although recreational alcohol and drug use are more common in adults, youth are at greater risk for lifelong negative consequences due to use – especially when they start using at a young age. Here’s why:

- Since the teenage brain is still growing and changing, alcohol and drug use at an early age has a greater potential to disrupt normal brain development. The most affected brain regions include 1) the hippocampus, which is related to learning and memory, and 2) the prefrontal cortex, responsible for critical thinking, planning, impulse control, and emotional regulation (DeBellis, Narasimhan, Thatcher, Keshavan, Soloff, & Clark, 2005; Nagel, Schweinsburg, Phan, & Tapert, 2005; Zeigler, Wang, Yoast, Dickinson, McCaffree, Robinowitz, et al., 2005).

- Drug and alcohol use interferes with many physiological processes and can destabilize mood. Thus, adolescent substance use is associated with higher rates of depression, aggression, violence and suicide (Diamond, Panichelli-Mindel, Shera, Dennis, Tims, & Ungemack, 2006).

- Because teens’ decision-making abilities are not fully developed, they are more likely to engage in risky behavior such as driving while under the influence (CDC, 2000; Windle, 1994).

- The earlier onset the age of first drinking, the greater the risk for a lifetime alcohol abuse or dependence (DeWit, Adlaf, Offord, & Ogborne, 2000).
Substance Use as a Risk Factor for Trauma

Many researchers and providers point to the self-medication hypothesis to explain the connection between trauma exposure and substance abuse, suggesting that youth develop substance abuse problems in an attempt to cope with traumatic stress or reminders of loss. Although there is much evidence to support this pathway, it is also true that substance abuse can increase the risk for trauma exposure and traumatic stress symptoms.

High Risk Behaviors:
Adolescents having problems with substance use may be more likely to engage in risky activities that could lead to experiencing trauma. Several epidemiological studies have found that for some adolescents (45–66%) Substance Use Disorders (SUDs) precede the onset of trauma exposure (Clark, Lesnick, & Hegedus, 1997; Giaconia, Reinherz, Hauf, Paradis, Wasserman, & Langhammer, 2000; Perkonigg, Kessler, Storz, & Wittchen, 2000). Adolescents with SUDs are significantly more likely than are those without SUDs to have experienced traumas that are more likely to result from engaging in risky behavior such as traumas involving harm to themselves and traumas that entail witnessing harm to others (Clark et al., 1997; Giaconia et al., 2000; Perkonigg et al., 2000). Studies have also shown a direct link between alcohol use and engaging in risky behaviors in which adolescents may get hurt (Giaconia et al., 2000) such as hitchhiking, walking in unsafe neighborhoods, and driving after using alcohol or drugs (Centers for Disease Control and Prevention, 2000).

Increased Susceptibility:
The presence of substance use disorders may decrease youths’ ability to appropriately cope with distressing and traumatic events, thus leading to the increased likelihood of developing PTSD. In a study by Giaconia et al. (2000), investigators found that after controlling for exposure to trauma, adolescents with SUDs continued to be at greater risk (two times more likely) for developing PTSD following trauma than were their peers without SUDs. Researchers suggested that the extensive psychosocial impairments found in adolescents with SUDs were associated with their lack of skills needed to cope with trauma exposure.

A likely explanation for the link between traumatic stress and substance abuse is offered by studies that examine levels of craving in substance abusers. Research with adults in this area suggests that substance use craving increases among populations with co-occurring trauma and substance abuse when exposed to cues of the traumatic event (Coffey, et al., 2002; Saladin, et al., 2003). This suggests that for individuals with both types of problems, trauma and loss reminders can serve as triggers for future substance use. In the absence of coping strategies to manage distress associated with trauma, individuals with substance abuse problems may be more likely to use.
Appendix – Common Drugs of Abuse

Adolescents who have experienced trauma and have a co-occurring substance use disorder suffer many common difficulties. Substance use is often one of several avoidant coping strategies used by teenagers to manage the intense outpouring of negative emotions associated with trauma. However, each drug or psychoactive substance may have a unique impact on individuals who have experienced traumatic events. Several research studies have examined the unique relationship between traumatic stress and use of different substances of abuse. For example:

• Among youth who have experienced trauma, the risk for developing PTSD varies by type of substance use disorder (Kilpatrick, Acierno, Saunders, Resnick, Best, & Schnurr, 2000). When adolescents with substance abuse or dependence were compared with teens who were not substance abusing or dependent for likelihood of PTSD, those with alcohol abuse or dependence were four times more likely, those with marijuana abuse or dependence six times more likely, and those with hard drug abuse or dependence were nine times more likely.

• A substance use disorder is more likely to precede trauma or onset of PTSD among adolescents abusing hard drugs than among adolescents abusing alcohol (Perkonigg, et al., 2000).

• Individuals with co-occurring alcohol dependence and PTSD evidence higher levels of craving to substance cues than do those having co-occurring cocaine dependence and PTSD (Coffey, et al., 2002; Saladin, et al., 2003). This is consistent with findings that alcohol tends to decrease some PTSD symptoms, whereas cocaine tends to exacerbate PTSD symptoms (Bremner, Southwick, Darnell, & Charney, 1996). This would suggest that since alcohol is more often used to manage the symptoms of PTSD, craving among alcohol-dependent individuals is greater in the face of trauma cues compared to those dependent on cocaine.

The sections that follow list information about each commonly abused substance in terms of the incentives and the negative consequences associated with its use.
**General Information**

Generally, alcohol is rapidly ingested and absorbed into the bloodstream. In its purest form, alcohol is tasteless, colorless, and odorless. One unit—which is the typical amount of alcohol found in a 12 oz. can of beer, a 5 oz. glass of wine, or a 1.5 oz. shot of liquor—is the equivalent of 8 grams of pure alcohol and contains 80 calories. The amount of alcohol in liquor varies according to the type of spirit and is measured according to “proof” (a spirit’s proof is double the percentage of alcohol, e.g., 40 proof = 20% alcohol).

**Prevalence among Teenagers**

Alcohol use among adolescents is a prominent health problem. Adolescents use alcohol more frequently than they do all other drugs combined. A survey conducted in 2002 yielded the following results (Johnston, O’Malley, & Bachman, 2003):

- 19.6% of 8th graders, 35.4% of 10th graders, and 48.6% of 12th graders report using alcohol in the preceding 30 days.
- 78% of high school seniors report having tried alcohol at least once.
- 6.7%, 18.3%, and 30.3% of 8th, 10th, and 12th graders, respectively, reported having been drunk in the preceding 30 days.

In 1999, 20% of all alcoholic beverages purchased were consumed by underage drinkers (The National Center on Addiction and Substance Abuse at Columbia University, 2003).
Incentives for Use

 Teens may use alcohol for a number of reasons including wanting to fit in (and other peer pressures), to enhance social or other pleasurable experiences, and to cope with negative affect. In social situations, a teen might use to feel less inhibited in his/her actions and speech, more at ease, happy, and elated. Alcohol may numb emotions (such as anxiety in social settings). Alcohol use can also serve as an escape for teenagers who are experiencing anxiety and depression. Younger adolescents report drinking to relieve tension; older adolescents say they drink primarily for the euphoric effects and altered social behaviors.

Negative Consequences of Use

 There are many negative consequences associated with alcohol use. Alcohol acts as a depressant on the body. It can have a multitude of harmful short-term effects, including but not limited to, headaches, slowed reflexes, sluggish mental processing, impaired perception, lack of coordination, loss of consciousness, blackouts, and memory lapses. Long-term effects of alcohol include cirrhosis of the liver, ulcers, miscarriages, cancer of the mouth and throat, hypertension, hypoglycemia, dependence, and death. Research shows that teens who drink are more likely to be victims of crimes, particularly violent crimes. They often become sexually active at a younger age and have poor sexual decision-making skills, leading to an increased risk of pregnancy and sexually transmitted diseases (STDs). They are more likely to have significant difficulties with their schoolwork and are more prone to problems with conduct. Teens who use alcohol are twice as likely as adults to be involved in a fatal traffic accident. Research has demonstrated that individuals who start using alcohol as a teen are four times more likely to become dependent on alcohol than are individuals who start as an adult (Grant, 1998).

† Information in this section provided courtesy of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) via http://www.niaaa.nih.gov or the Leadership to Keep Children Alcohol Free via http://www.alcoholfreechildren.org/.
Cannabis is derived from the hemp plant, is the most commonly used illegal substance in the United States. The form of cannabis most often used is marijuana, which consists of the dried leaves, stems, seeds, and flowers of the plant. Marijuana contains various levels of a psychoactive substance known as tetrahydrocannabinol (THC), typically 2–5%, but the amount of THC can be as high as 14%. Hashish is a stronger form of cannabis, derived from the resin of the flowers, and contains, on average, 8–14% THC. Hash oil, a black or red oily substance, is a purified form of hashish that typically contains 15–50% THC.

Marijuana is most often smoked after being rolled into the shape of a cigarette (“joint”) or cigar (“blunt”). It is also smoked through wooden pipes or water pipes (“bongs”). When smoked, the THC in marijuana quickly enters the bloodstream through the lungs, causing an immediate effect that can last up to two hours. The odor of marijuana smoke is similar to that of burning leaves. Marijuana is less often consumed orally. When eaten, the body more slowly absorbs the THC in marijuana, resulting in a less intense, but more long-lasting effect. Hashish is shaped into small rocks that can be smoked or orally ingested. Hash oil may be added to tobacco or heated in a pipe.

Prevalence among Teenagers

According to the 2004 Monitoring the Future Survey, researchers found:

- 46% of 12th-graders reported using marijuana at some point in their lives, while 21% reported using marijuana in the month prior to the study.
- 35% of 10th-graders and 16% of 8th-graders reported using marijuana at least one time.
- 16% of 10th-graders and 6% of 8th-graders reported marijuana use in the month prior to the survey.
- There was a slight decrease in use compared with prevalence in 2003 and a statistically significant decrease compared with peak levels of use in 1996.
Incentives for Use

Adolescents who use marijuana report that they feel euphoric or relaxed (“high” or “stoned”), and that it enhances pleasurable experiences (such as listening to music, tasting food, and having sexual intercourse). Marijuana use can also cause people to feel more sociable (at least temporarily). Other reasons adolescents might use marijuana include feeling pressured by their peers and because it makes them feel more popular. Marijuana and cannabis use can also serve as an escape for teenagers who are experiencing anxiety, depression, or other negative affect. While marijuana’s effect on the immune system has not been fully evaluated, the discussion of the drug’s possible health benefits can make the drug more enticing for some adolescents. The effects of marijuana vary widely, depending on a number of factors including the potency of the drug, the user’s previous experience with marijuana, how it is consumed, and whether other substances (such as alcohol) have also been used.

Negative Consequences of Use

There are many negative consequences associated with cannabis use. Some teens report increased anxiety and paranoia after using marijuana. Adolescents with a family history of schizophrenia, depression, or other mood disorders run a greater risk of developing these disorders, are sometimes more susceptible to experiencing these negative effects, and often do so at doses tolerated well by others without such family histories. Other effects include increased hunger and sleepiness. Short-term effects may also include impairment in memory and attention, alterations in perception (such as blurry vision), loss of motor coordination, and rapid heart rate. As inexperienced drivers, adolescents may experience additional impairment relative to adults in motor, cognitive, and perception abilities. The effects can also interfere with other daily activities, such as playing sports and focusing on schoolwork. Memory impairments caused by marijuana use can last days or weeks after the acute effects have worn off, which may also have a deleterious effect on adolescents’ academic performance.

Because marijuana use can lead to impaired judgment, adolescents who use marijuana may engage in risky sexual behavior, which makes them vulnerable to teen pregnancy and sexually transmitted diseases (such as HIV/AIDS). Chronic use of marijuana may increase the risk of lung cancer and/or other respiratory problems. Marijuana may suppress the immune system, causing the user to be more susceptible to illness. Legal consequences of using marijuana are significant including arrest, probation, suspension of driver’s license, and incarceration. Regular use of marijuana in adolescence has shown to increase the risk of marijuana dependence, other illicit drug use, depression, suicidal ideation and suicide attempts, and violent or property crimes occurring in young adulthood.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/Infofacts/marijuana.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/marijuana.html unless otherwise noted.
Cocaine or Crack

General Information

Cocaine is a powerfully addictive stimulant drug. Stimulant drugs are often referred to as “uppers” and reverse the effects of both mental and physical fatigue. The powdered, hydrochloride salt form of cocaine can be snorted or dissolved in water and injected. Crack is cocaine that has not been neutralized by an acid to make the hydrochloride salt. This form of cocaine comes in a rock crystal that can be heated and its vapors smoked. The term “crack” refers to the crackling sound heard when it is heated. Cocaine is a strong central nervous system stimulant that interferes with the reabsorption process of dopamine, a chemical messenger associated with pleasure and movement. The buildup of dopamine causes continuous stimulation of “receiving” neurons, which is associated with the euphoria commonly reported by cocaine abusers.

The duration of cocaine’s immediate euphoric effects—which include hyperstimulation, reduced fatigue, and mental clarity—depends on the route of administration: the faster the absorption, the more intense the high. On the other hand, the faster the absorption, the shorter the duration of action. The high from snorting may last 15 to 30 minutes, while that from smoking may last only 5 to 10 minutes. Smoking allows extremely high doses of cocaine to reach the brain very quickly and brings an intense, immediate high, thus increasing the likelihood of addiction.

Prevalence among Teenagers

Cocaine is the second-most commonly used illicit drug (following marijuana) in the United States. In June 2000, the Centers for Disease Control and Prevention (CDC) reported that in a study of 15,349 students in grades 9 to 12, 4% reported cocaine use at least once in the month prior to the study. According to the National Survey on Drug Use and Health (NSDUH), in 2005, 33.9 million Americans aged 12 and over reported lifetime use of cocaine, and 8.4 million of these reported using crack. This survey also reported that 0.4% of 8th graders, 2.2% of 10th graders, and 3.9% of 12th graders had used cocaine in the year prior to the survey and 0.2% of 8th graders, 0.6% of 10th graders, and 1.1% of 12th graders had used cocaine in the month prior to the survey. The Monitoring the Future survey (Johnston et al, 2006) from the same year found slightly higher results: 2.2% of 8th graders, 3.5% of 10th graders, and 5.1% of 12th graders had used cocaine in the year prior to the survey and 1.0% of 8th graders, 1.5% of 10th graders, and 2.3% of 12th graders had used cocaine in the month prior to the survey.
Cocaine or Crack†

Incentives for Use

Cocaine and crack cocaine, like all stimulant drugs, stimulate the action of the central nervous system, speeding up activity in the brain and spinal cord. This, in turn, can cause the heart to beat faster, and both blood pressure and metabolism to increase. Stimulants often influence a person to feel more alert and have more energy. Users of cocaine or crack cocaine often become more talkative and can feel exhilarated and euphoric. This rush of pleasurable sensations exceeds the sensations felt as a result of naturally occurring pleasurable human experiences, which explains in part why drug seeking eventually becomes a priority for adolescents. Users also experience increased self-confidence, heightened alertness, and increased sex drive. Another side effect is a loss of appetite, which can cause weight loss.

Negative Consequences of Use

Cocaine is one of the most powerfully addictive drugs of abuse. Some cocaine users report restlessness, irritability, and anxiety. Complications (some very serious) associated with cocaine use include disturbances in heart rhythm and heart attacks, chest pain and respiratory failure, strokes, hallucinations, seizures and headaches, and gastrointestinal complications such as abdominal pain and nausea. Paranoia is a classic result of cocaine intoxication, and hallucinations and violent behavior may also occur. Because cocaine has a tendency to decrease appetite, many chronic users become malnourished. About 60% of cocaine users report psychiatric problems related to drug use. Cocaine seems to be related to suicide risk, especially among younger African American and Hispanic users. Different means of taking cocaine can produce different adverse effects. Regularly snorting cocaine, for example, can lead to loss of sense of smell, nosebleeds, problems with swallowing, hoarseness, and a chronically runny nose. Ingesting cocaine can cause severe bowel gangrene due to reduced blood flow. People who inject cocaine can experience severe allergic reactions and, as with any injecting drug user, are at increased risk for contracting HIV/AIDS and other blood-borne diseases. Users can experience a heart attack or stroke, which could result in sudden death.

Cocaine use in combination with alcohol is especially dangerous because it causes the production of a secondary substance in the body, cocaethylene, which is more toxic than cocaine alone.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/Infofacts/cocaine.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/cocaine.html unless otherwise noted.
Ecstasy

General Information

Methylenedioxymethamphetamine (MDMA), aka Ecstasy, acts as both a stimulant and a hallucinogen. Stimulants prevent mental and physical fatigue, and hallucinogens have the ability to alter perception and, in some cases, produce euphoria. Ecstasy is a synthetic drug that is commonly referred to as a “club drug” because it is often found at nightclubs and underground parties called raves. Ecstasy is typically taken orally in the form of a capsule or tablet (available in different colors or imprints, “brands”). It is also available in a powder and is sometimes snorted or occasionally smoked but rarely injected. The effects of Ecstasy last 3 to 6 hours.

Ecstasy’s primary effects are in the brain on neurons that use the chemical serotonin to communicate with other neurons. The serotonin system regulates mood, aggression, sexual activity, sleep, and pain sensitivity.

Prevalence among Teenagers

Ecstasy is among the most frequently reported club drugs. According to the 2005 Monitoring the Future survey (Johnston, et al, 2006):

- 6.5% of 12th-graders, 4.5% of 10th-graders, and 2.5% of 8th-graders reported a lifetime prevalence of Ecstasy.

- Within the year prior to the survey, 4.1%, 2.8%, and 1.4% of 12th-, 10th-, and 8th-graders, respectively, had used Ecstasy; 1.3%, 1.2%, and 0.7%, respectively, had used within the month prior to the survey.

- Perceived availability of Ecstasy reportedly decreased from 30.2% in 2005 to 27.4% in 2006, according to a sample of 10th-graders.

Street Names:

E, X, XTC, Adam, rolls, candy, hug, beans, love drug, enhancements, vitamin E, blue lips, blue kisses, and white dove.
**Incentives for Use**

Ecstasy produces feelings of euphoria and love, as well as a loss of inhibition and boundaries. Senses are heightened (e.g., visual perceptions are intensified) and perception of time and spatial relations is altered. One of the reasons it is often used during dance parties and raves is because of the enhancement of the overall social and musical experience. Ecstasy increases a user’s desire to interact with others and makes him/her feel more confident and accepted. Ecstasy may also instill a sense of calm or well-being, and can increase positive emotion and decrease negative emotion.

**Negative Consequences of Use**

Negative effects associated with Ecstasy use include mental slowing, decreased desire to do mental or physical tasks, increased heart rate and body temperature, anxiety, dry mouth, dehydration, bruxism, and occasionally nausea. In the short term, depression may occur in the 48 hours after use. With increased use, the perceived benefits of Ecstasy may be harder to attain, and users report fatigue and decreased euphoria. The negative morning-after effects may intensify with increased use as well. Research shows that Ecstasy may have long-lasting effects on the brain that can alter memory function and motor skills. Ecstasy can also cause arrhythmia. Long-term effects can include depression, paranoid or confused thoughts, trouble sleeping, and anxiety.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/Infofacts/ecstasy.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/mdma.html unless otherwise noted.
**GHB or “Date Rape Drug”†**

### General Information

Gamma hydroxybutyrate (GHB) was first synthesized in 1960 and used as an anesthetic. Most use of GHB in the United States is illicit. GHB began being abused widely in the early 1990s in the United States. Its over-the-counter sale was banned in 1993 in the U.S. after a form of it was readily available at health food stores in the 1980s and early 1990s. In 2000, GHB became classified as a Schedule 1 Controlled Substance in the United States, and it is now illegal to obtain it as a supplement. GHB is used in select research trials in order to test its effectiveness in decreasing drowsiness in patients with narcolepsy.

GHB is often abused by young and predominantly white partygoers in combination with various other drugs or alcohol at raves and other gatherings. It has been used in a number of sexual assaults and, like the drug Rohypnol (flunitrazepam), is known as a “date-rape drug” because of its ability to sedate and impair the memory of potential assault victims. Because it metabolizes quickly, there are often no traces of it in a victim’s bloodstream by the time the assault is remembered. GHB generally comes mixed with water or in its pure powder form. It is commonly sold in small bottles (the size of complimentary shampoo containers supplied by hotels), which are generally inexpensive and contain about 10 “hits.”

### Prevalence among Teenagers

GHB use has greatly increased in recent years, with the most prevalent use observed in the southeastern and western United States. In the 2005 Monitoring the Future survey (Johnston, O’Malley, & Bachman, 2006), researchers found that 0.5% of 8th graders, 0.8% of 10th graders, and 1.1% of 12th -graders reported using GHB at least once within the year prior to the study. Of the people presenting to hospital emergency departments with GHB ingestion 94% are of European ethnicity, 79% are male, and approximately 66% are between 18 and 25 years old (SAMHSA, 2004). The DAWN Report: Club Drugs, 2002 Update reported that in 2000, GHB-related emergency department visits peaked at 4,969 visits (SAMHSA, 2004).
Incentives for Use

 Teens who take GHB in a club setting reportedly use it for its euphoric and relaxing properties and its tendency to cause amnesia. Typically, a person who has taken GHB experiences a short period of euphoria followed by a rapid and profound decline in the level of consciousness. The fact that GHB was available in health food stores has likely added to the perception of GHB as a “safe drug.” Some bodybuilders have taken GHB for its purported growth-enhancing properties; no studies have demonstrated increased muscle growth associated with GHB use.

Negative Consequences of Use

The use of GHB can result in the following: drowsiness, nausea, vomiting, headache, loss of consciousness, loss of reflexes, seizures, coma, and death. Withdrawal effects include increased heart rate, restlessness, feelings of anxiety and agitation, delirium, and sleep disruptions. Death from GHB often occurs after combining use with alcohol. The combination of inconsistent purity and potency of individual doses of GHB, along with the need for increasingly higher doses to achieve the desired effects, increases the potential for overdose. Combining GHB with other central nervous system depressants increases the chance of death. Individuals who report to emergency departments for GHB intoxication usually present with a decreased level of consciousness or even coma. The drug produces tolerance and dependence with severe and potentially lethal withdrawal symptoms.

† Information in this section provided courtesy of the National Institute on drug abuse (NIDA) via http://www.nida.nih.gov/Infofacts/RohypnoI GHB.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/ghb_factsheet.html unless otherwise noted.
Hallucinogens

General Information

Hallucinogens are a class of illicit drugs that alter perception and, in some cases, produce euphoria. Some hallucinogens include LSD (lysergic acid diethylamide), ketamine, psilocybin, mescaline) and DXM (dextromethorphan). PCP (Phencyclidine) is not a hallucinogen in the chemical sense; however its effects are the same as other hallucinogens, so it is typically included in this class of drugs. LSD is the primary drug that makes up the hallucinogen class and is also the most potent. It is often taken by mouth—in small tablets or via squares of absorbent paper or gelatin laced with the drug. The effect of an oral dose can last up to 12 hours.

**Street Names:**
LSD is often referred to as acid, blotter, windowpane, microdot, trips, or Lucy in the Sky with Diamonds. Alternate names for PCP include: angel dust, peace, crystal, hog, or rocket fuel. Some of the names for Ketamine are Special K, vitamin K, Lady K, ketelar, a ketaset. Psilocybin is often called “magic mushrooms.”

PCP and ketamine were initially developed as general anesthetics for surgery. They produce perceptual distortions and dissociation, not hallucinations, and are thus known as “dissociative anesthetics.” PCP is typically snorted, ingested, or smoked. In order to smoke PCP, it can be combined with herbs (such as parsley or mint) or tobacco and rolled into a cigarette, used as a dip on cigarettes (“sherm sticks”), mixed with marijuana (“wicky stick” or “donk”), or sprayed on a tobacco-like substance (“mint leaf” or “love leaf”). Ketamine is available in pill, powder, or liquid form. It may be injected intravenously, snorted, smoked, or mixed into beverages. Ketamine is increasingly being used as a club drug. DXM is available over the counter as a cough suppressant found in many cough and cold remedies, and is also illegally sold as a white powder packaged in clear, unmarked capsules. DXM can produce effects similar to PCP and ketamine when taken in high doses.

Mescaline, a derivative of the peyote cactus, has been used for centuries in natural medicines and religious ceremonies. Mescaline can be smoked, brewed in tea, chewed, and incorporated into food. Typically, the cactus is cut into thick slices and dried, producing “mescal buttons” that are chewed and eventually swallowed. Mescaline is also produced synthetically in a saltlike crystal but may produce different effects from peyote in this form. Psilocybin is found in mushrooms native to North America and has also been used in religious rituals by Native Americans.

Prevalence among Teenagers

Hallucinogen use is generally rare in the population, although higher among teens and young adults. According to the 2005 Monitoring the Future survey (Johnston et al, 2006):

- The lifetime prevalence of LSD use in 2004 among 8th-, 10th-, and 12th-graders was 1.8%, 2.8%, and 4.6%, respectively, with 2005 use reflecting a decline for 10th- and 12th-graders compared with previous years.
- Lifetime prevalence of PCP among high school seniors in 2004 was 1.6%.
- In the year prior to the survey, 0.6% of 8th graders, 1.0% of 10th graders and 1.6% of 12th graders had tried ketamine.
Incentives for Use

Hallucinogens produce profound changes in sensory perceptions while allowing the user to maintain a relatively clear level of consciousness. The subjective effects of LSD use may include euphoria, labile mood, visual and auditory hallucinations, dissociation, and depersonalization. For example, intensification or alteration in colors and sound are perceived (synesthesia), common objects appear novel or fascinating, and perception of time and space distortion frequently occurs. Psilocybin is much less potent than LSD but produces similar effects. Mescaline also often produces visual hallucinations. Neither PCP nor ketamine produce true hallucinations, but in small doses, they cause a dreamy, floating feeling of distancing from one’s environment and body into an alternate reality, a sense of relaxation, tingling, numbness, distortions of body image, and euphoria. Easy access to some hallucinogens such as DXM in cough suppressants also may serve as an incentive for use.

Negative Consequences of Use

Hallucinations generally intensify whatever mood the user is in at the time the drug is taken and can amplify negative feelings, causing a dysphoric experience or a “bad trip.” A bad trip (hallucinogen delusional disorder) is often characterized by a temporary episode of paranoia, panic, and/or fear of imminent insanity. Flashbacks may also occur. Hallucinogen persisting perceptual disorder (HPPD) is rare but does occur. Many adolescents report decreased involvement in daily activities, decreased school performance, and lack of social interaction. Behavioral toxicity may occur (e.g., accidents that occur while the user is driving, other bizarre behavior such as jumping off a building), sometimes leading to death.

Negative effects associated with ketamine use may include excitability, clumsiness, confusion, rapid shifts in emotion, and irrational behavior. Higher doses make it difficult to move; very high doses may cause a person to become anaesthetized or to lose consciousness. Some people may not remember their experiences. At higher doses of PCP, some individuals develop a psychotic-like state, including depersonalization, confusion, and intense anxiety, which may last several days. It is easy to become injured under the influence of PCP or ketamine because the user is relatively anesthetized to pain, agitated, and/or irrational. Some users will not respond to being subjugated or subdued because they perceive they have “superhuman strength.” Ketamine has been labeled a “date-rape drug” because a user may become more vulnerable to attack, both because it can be easily added to one’s drink without one’s knowledge and because it can render the unsuspecting user unable to move. Chronic use of ketamine/PCP may lead to dependence, disruptions in consciousness, dulled thinking and reflexes, loss of impulse control, lethargy, and depression.

† Information in this section provided courtesy of the National Institute on drug abuse (NIDA) via NIDA Research Report – Hallucinogens and Dissociative Drugs: NIH Publication No. 01-4209, Printed March 2001 or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/hallucinogens.html unless otherwise noted.
Heroin and other Opioids

General Information

Opioids are derived from opium, which is found in the seed of some poppy plants. Opioids are the most powerful known pain relievers, and their analgesic and euphoric effects have been known since 4000 BC. There are three classes of opioids: 1) direct derivatives of opium, 2) partially synthetic derivatives of morphine, and 3) synthetic compounds. Direct derivatives of opium include morphine and codeine. Partially synthetic derivatives of morphine include heroin and prescription pain medication that can be dangerous if used inappropriately including oxycodone HCl (OxyContin), oxymorphone, and hydrocodone (Vicodin). Synthetic opioids include fentanyl, alfentanil, levorphanol, meperidine (Demerol), methadone, bitartrate, propoxyphene, acetaminophen (Tylenol, Percocet), and thebaine.

Most opioids can be administered in multiple ways, including sniffing, smoking, oral administration, and injection. Death from opioid use is disproportionately high compared with death from intravenous drug use. Signs of use include drowsiness, nausea, vomiting, itchiness, contracted pupils, loss of appetite, sleep disruption, slowed breathing, sexual dysfunction, constipation, inflamed nasal mucosa (if drug is snorted), and needle marks (if drug is injected).

Prevalence among Teenagers

Heroin use has increased over the last decade, particularly among adolescents; however, overall heroin use remains low. A 2005 survey (Johnston et al, 2006) reported that 1.5% of 8th-graders, 10th-graders, and 12th-graders reported using heroin at least once in their lifetime. The same survey found that 0.8% of youth in each of these grades reported using heroin in the year prior to the survey. The abuse of prescription painkillers—particularly those containing opiates (narcotics), including Vicodin, OxyContin, Percocet, Demerol, and Darvon—have risen dramatically in the United States (SAMHSA, 2007). The overall incidence of emergency department visits related to narcotic abuse has been increasing in the U.S. since the mid-1990s and more than doubled between 1994 and 2001 (SAMHSA, 2007). According to emergency department data, in 2005 nearly 50,000 youth ages 12-17 presented to the emergency department because of non-medical uses of prescription painkillers (SAMHSA, 2007). Nationally, an estimated 14% of high school seniors have used prescription drugs for nonmedical reasons at least once in their lifetime, making prescription drugs the second-most commonly abused illegal substance by teenagers, after marijuana (SAMHSA, 2006).
Incentives for Use

Teens may turn to opioids to cope with stress, relieve physical or emotional pain, forget unpleasant experiences, and avoid negative emotions. The effects of heroin appear soon after a single dose and disappear in a few hours. Opioids create feelings of warmth and detachment, while providing almost instantaneous anxiety relief. Opioids also induce feelings of euphoria and analgesia (users may feel sedated); and body functioning is slowed down.

Negative Consequences of Use

Negative side effects of opioids are often present from first use. These include nausea, vomiting, itchiness, sleep disruption, sexual dysfunction, respiratory depression, low blood pressure, urinary retention, and constipation. Opioids have very high addictive potential, putting users at high risk for long-term consequences after just one use. Chronic use can result in tolerance (taking higher doses to achieve the same initial effects), which sometimes becomes more than the body can handle. Heroin is often used in combination with other drugs, increasing the risk of dangerous interactions and overdose. Consequences of opioid dependence include depression, sleep disturbance, lack of interest in daily activities, selflessness, suicidal ideation, poor coping skills, delirium, coma, and death. In adolescents, school performance, family relations, and social functioning decline significantly as the drug takes priority.

Long-term use can also lead to physical dependence and addiction, causing withdrawal symptoms if use is reduced or stopped. Symptoms of opioid withdrawal include flulike symptoms, fever, vomiting, tachycardia, profuse sweating, stomach cramps, high blood pressure, overall body pain, diarrhea, runny nose, hot and cold flashes, goose bumps, sleeplessness, depression, restlessness, and irritability. Opioid users are more likely to engage in antisocial behaviors putting users at risk for incarceration.

Sharing needles or using dirty needles to inject opioids can spread deadly infectious diseases such as HIV and Hepatitis B and C. Injecting drugs and/or sharing needles can contribute to other serious and life-threatening diseases and conditions including endocarditis, embolism, botulism, tetanus, flesh-eating bacteria, or abscesses (a painful skin inflammation that may result in blood poisoning).

Inhalants

**General Information**

Inhalants are breathable chemical vapors that produce psychoactive effects. Initial use causes a feeling of stimulation, but repeated inhalation causes a loss of inhibitions, a feeling of less control, and possible loss of consciousness. Sniffing inhalants is often referred to as “huffing.” Inhalants can also be used by placing the inhalant in a bag and then sniffing into the bag or putting the bag over the head (“bagging”). They are very easy to find, are not illegal, and are less expensive than most drugs. Inhalants can be obtained from many common products found in the household and workplace. Listed below are the categories of inhalants:

**Volatile solvents (vaporize at room temperature)**
- Paint thinners, paint removers (e.g., nail polish remover), degreasers, dry-cleaning fluids, gasoline, glue, correction fluids, felt-tip-marker fluid, contact lenses cleaners

**Aerosols and gases (sprays that contain propellants and solvents)**
- Butane lighters, propane tanks, aerosols/dispensers (e.g., whipped cream [“Whippets”], refrigerant gases, vegetable cooking spray, spray paint, hairspray, deodorant sprays, fabric-protector sprays, aerosol computer cleaning products), medical anesthetic gases (e.g., ether, chloroform, halothane, nitrous oxide [“laughing gas”])

**Nitrites (Nitrites do not work directly on the central nervous system to alter mood like other inhalants do; rather, they dilate blood vessels and relax muscles, and they are often used as sexual enhancers)**
- Organic nitrites (“poppers” or “snappers”), cyclohexyl, butyl, and amyl nitrites (often sold in small brown bottles and labeled “video head cleaner,” “room odorizer,” “leather cleaner,” or “liquid aroma”)

**Prevalence among Teenagers**

Inhalants are most likely to be used by children and adolescents because they are easy to obtain. About 6% of children in the United States have tried inhalants by the 4th grade (NIDA, 2007). Survey data from 2005 indicates that 12.2% of teens in grades 9–12 had used an inhalant in their lifetime, while 1% of those teens had used an inhalant in the month prior to the survey (SAMHSA, 2006). A similar survey found slightly higher results with lifetime prevalence rates of 17.1% of 8th graders, 13.1% of 10th graders, and 11.4% of 12th graders; as well as last month prevalence rates of 4.2%, 2.2%, and 2.0%, respectively (Johnston et al, 2006). In 2002, more females (9.6%) than males (7.7%) in 8th grade used inhalants, but there were more male (5.2%) than female (2.9%) users in 12th grade (Johnston et al, 2003). Males appear to be more likely to exhibit sustained abuse of inhalants (NIDA, 2007). Furthermore, among young adolescents, inhalant use is more prevalent than is marijuana use (SAMHSA, 2006). Inhalant use is also more frequent for boys living in adverse socioeconomic conditions (SAMHSA, 2006).
Incentives for Use

When asked why they sniff inhalants, children typically report that it is fun and that they enjoy the feeling of intoxication. Inhalants can cause altered perception, disorientation, and a slight buzz. They work like anesthetics, slowing down the body’s functions and causing a brief (few minutes) feeling of intoxication upon first inhalation. Repeatedly breathing in inhalants can cause this feeling to last for several hours. Nitrates in particular have a stimulant rather than depressant effect and are often used to enhance sexual activity.

Negative Consequences of Use

Inhalant use can cause a host of short- and long-term medical, psychological, social, and neurological problems. In the short term, inhalant intoxication is similar to alcohol intoxication, producing anxiety relief and feelings of relaxation and disinhibition. Increased intoxication leads to slurred speech, impairments in balance and fine motor movements, and eventually loss of consciousness and even coma. Combining inhalant use and strenuous activity often results in impaired cardiac function and arrhythmias. The use of inhalants can result in headache, muscle weakness, abdominal pain, nausea, fatigue, nosebleeds, severe mood swings, and violent behavior. It can have long-term negative effects on sensory abilities including numbness and tingling of hands and feet, decrease or loss of sense of smell, and hearing loss. Chronic use can cause severe damage to internal organs and systems including the liver, lungs, kidneys, and central nervous system (including the brain). Chronic use is also associated with hepatitis and peripheral neuropathy. Sniffing highly concentrated amounts can cause rapid heart failure and death, even in a first-time user. Suffocation, asphyxiation, and choking (on vomit) are possible. Abusers can exhibit cognitive deficits, from mild impairments of attention to severe dementia. The chronic abuse of solvents can break down the protective sheath surrounding nerve fibers in the brain, causing symptoms similar to those found in multiple sclerosis (NIDA, 2005).

† Information in this section provided courtesy of the National Institute on drug abuse (NIDA) via http://www.nida.nih.gov/Infofacts/inhalants.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/inhalants.html unless otherwise noted.
Methamphetamine†

**General Information**

Methamphetamine is classified as a stimulant. Stimulants ("uppers") can reverse the side effects of mental and physical fatigue. Methamphetamine is an addictive stimulant closely related to amphetamine; however, methamphetamine has longer lasting and more toxic effects on the central nervous system. Methamphetamine was originally used in nasal decongestants and bronchial inhalers. Methamphetamine is often made in small, illegal laboratories called “meth labs,” using relatively inexpensive over-the-counter ingredients. Methamphetamine is taken orally, intranasally (snorting the powder), by needle injection, or by smoking.

**Street Names:**

speed, meth, chalk, ice, crystal, and glass.

**Prevalence among Teenagers**

During 2005, 10.4 million people age 12 or older in the United States population reported trying methamphetamine at least once in their lifetime, with highest rates of use among older adolescents and young adults (SAMHSA, 2006). According to the 2005 Monitoring the Future survey 4.5% of 12th-graders reported a lifetime prevalence of methamphetamine abuse, declining from 6.2% in 2004 (Johnston et al, 2006). In the same survey, 1.8% of 8th and 10th graders and 2.5% of 12th graders reported using methamphetamine in the year prior to the survey (Johnston et al, 2006).
Incentives for Use

Like all stimulant drugs, methamphetamines stimulate the action of the central nervous system, speeding up activity in the brain and spinal cord. This, in turn, can cause the heart to beat faster and an increase in blood pressure and metabolism. Stimulant users often become more talkative and can feel exhilarated and euphoric. Methamphetamine is known for enhancing mood and body movement. It can be used as an appetite suppressant for weight loss, and to enhance performance during sports or other activities that require endurance.

Negative Consequences of Use

Methamphetamine is made in illegal laboratories and has a high potential for abuse and addiction. Negative effects include propensity toward anxiety, violence, irritability, paranoia, psychosis, convulsions, aggression, and malnutrition due to suppression of appetite. Methamphetamine is particularly addictive and has a neurotoxic effect, damaging brain cells. Over time, methamphetamine can result in heart problems and symptoms like those of Parkinson’s disease. Methamphetamine users may experience unpredictable mood swings as well as tooth decay caused by dry mouth and excessive tooth grinding. Users commonly have the sensation that insects are crawling on their skin, and many users will scratch themselves raw, causing lacerations on their face and arms.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/Infofacts/methamphetamine.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/methawareness/ unless otherwise noted.
Nicotine

General Information

Nicotine is one of the most frequently used addictive drugs. It is a clear liquid that turns brown when burned. The tobacco smell occurs when it interacts with air. Nicotine enters the bloodstream through absorption in the nose and mouth or by inhalation in the lungs. It increases dopamine levels in the reward circuits, which activates feelings of pleasure. When inhaled via cigarettes, nicotine is absorbed through the lungs and reaches the brain within 20 seconds of each puff.

Nicotine addiction in the United States is primarily accounted for by cigarette smoking. Most American cigarettes contain 10 mg or more of nicotine, 1–2 mg of which is inhaled, on average. Chewing tobacco and cigars are other common ways that individuals use nicotine.

Prevalence among Teenagers

In 2005 4.1 million Americans aged 12–17 were smokers, making up 17% of this age group (SAMHSA, 2006). Another study found the percentage of use of nicotine in the month prior to the study by adolescents to be (Johnston, 2006):

- **Cigarettes:** 9.3% of 8th graders, 14.9% of 10th graders, and 23.2% of 12th graders.
- **Smokeless:** 3.3% of 8th graders, 5.6% of 10th graders, and 7.6% of 12th graders

Such high prevalence rates may be accounted for by research which suggests that adolescents are more susceptible to rapid development of nicotine addiction, with measurable symptoms of dependence observable after only a few weeks of casual use (NIDA, 2006). Although prevalence rates are still quite high, cigarette smoking appears to be on the decline in the last 5 years (Johnston et al, 2006). For example, between 2000 and 2005, daily smoking of less than a half-pack per day decreased from 7.4% to 4% in 8th graders, from 14% to 7.5% in 10th graders, and from 20.6% to 13.6% in 12th graders; daily smoking of a half-pack or greater showed similar decreases.

Information from a NIDA report indicates that there are significant gender differences in regards to smoking (NIDA, 2006). Women are more likely to smoke fewer cigarettes per day and inhale less deeply. These smoking habits may indicate that women have a greater sensitivity to nicotine than do men. In addition, women are less likely than men are to quit smoking, which is due to several factors; they are less likely to initiate quitting, find nicotine replacement methods less effective (replacements do not reduce craving as much as they do for men), appear to experience more intense withdrawal symptoms, and are more likely to gain weight.
Incentives for Use

Using tobacco is associated with enhanced concentration, improved attention to task performance, quicker reaction time, and better problem solving. Smokers also report improved mood including enhanced pleasure and reduced anger, tension, depression, and stress. Because of the unique delivery system of nicotine—with one puff being the equivalent of one hit—beginner smokers are able to individualize and control their intake in a way not possible with other drugs. Young people often begin smoking as a result of influence from peers or admiration for an adult who smokes.

Negative Consequences of Use

Using tobacco can lead to addiction, heart problems, cancer, bronchitis, respiratory problems such as emphysema and asthma, and problems during pregnancy. Less serious consequences include stained fingers and teeth; halitosis; aging of the skin resulting in premature wrinkles; and lingering smell on hair, skin, and clothing.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/infofacts/tobacco.html
General Information

Anabolic steroids are human-made substances related to male sex hormones. Originally developed in the late 1930s to treat hypogonadism (a condition in which the testes do not produce sufficient testosterone for normal growth, development, and sexual functioning), steroids are legal by prescription but are often abused. In addition to treating conditions that occur when the body produces lower-than-normal levels of testosterone (such as delayed puberty and some types of impotence) anabolic steroids are used to treat body wasting in patients with AIDS and other diseases that result in loss of lean muscle mass. Steroids are a performance-enhancing drug.

Anabolic steroids are taken orally or injected, usually in weekly or monthly cycles. They may also be applied to the skin in the form of gels and creams. Some commonly abused oral steroids include Anadrol (oxymetholone), Oxandrin (oxandrolone), and Winstrol (stanozolol). Injectable steroids include Deca-Durabolin (nandrolone decanoate), Depo-Testosterone (testosterone cypionate), and Tetrahydrogestrinone (THG). Steroids are often sold at gyms, at competitions, and by mail order. Most illegal steroids are obtained outside the United States from countries that do not require a prescription for the purchase of steroids.

Prevalence among Teenagers

Anabolic steroid use among athletes is estimated at 1–6%. According to the 2005 Monitoring the Future survey, most anabolic steroids users are male (Johnston, 2006). Among male students, use of steroids prior to the study year was reported by 1.1% of 8th-graders, 1.3% of 10th-graders, and 1.5% of 12th-graders. Adolescents may be more likely to abuse anabolic steroids if they have experienced muscle dysmophoria, a history of physical or sexual abuse, or a history of engaging in high-risk behaviors (NIDA, 2000).
Incentives for Use

One of the main reasons an individual abuses anabolic steroids is to increase athletic performance or to improve physical appearance by increasing muscle size and decreasing body fat. Steroids are often seen as a quick fix for undesirable bodily characteristics. Steroids may also speed recovery time from an injury. Pleasurable effects of steroid use may also include euphoria, a heightened self-esteem, increased energy levels, and an increased sex drive.

Negative Consequences of Use

Steroid use is associated with many adverse side effects. For adolescents using anabolic steroids, growth may be halted prematurely through premature skeletal maturation and accelerated puberty changes. This means that if an adolescent takes steroids before the typical adolescent growth spurt, he/she runs the risk of remaining short for the rest of his/her life. Other major side effects may include liver tumors and cancer, kidney tumors, high blood pressure, increases in LDL (bad cholesterol), decreases in HDL (good cholesterol), jaundice, fluid retention, severe acne, and trembling. Steroid users also show increased aggressiveness with extreme mood swings or other psychiatric side effects. Halting steroid use may result in depression, encouraging a continuance of steroid use. In addition, people who inject steroids are at risk of contracting HIV/AIDS or hepatitis.

† Information in this section provided courtesy of the National Institute on Drug Abuse (NIDA) via http://www.nida.nih.gov/Infofacts/Steroids.html or the Drug Enforcement Agency (DEA) via http://www.usdoj.gov/dea/concern/steroids.html unless otherwise noted.
Careful assessment of traumatic stress and substance abuse problems and their possible effects on youth functioning should be an integral part of the services provided by agencies and individuals working with adolescents. An individualized treatment plan should take into consideration that one of these problems can exacerbate the other, and that treatment services should be integrated and coordinated.

Although much progress has been made in the treatment of both youth substance abuse and child traumatic stress, these fields have grown independently of each other. Despite the clear link between the two clinical areas, very few attempts have been made to address service integration, and different methods and procedures for assessment for each have evolved.

Few treatment providers are proficient in the multiple areas of need among youth with co-occurring disorders. Substance abuse providers, for example, may not have the tools necessary to identify the impact of trauma exposure on adolescent functioning and its interaction with substance use; and they may not have experience or training in using trauma-informed interventions. Trauma treatment specialists, and mental health providers in general, may overlook signs of increasing substance use severity. They may not have a deep understanding of the process of addiction, or may not be familiar with effective strategies to strengthen youths’ abilities to reduce use or abstain from substances, and therefore do not target these problems as a central part of the intervention.

This toolkit is meant to help identify youth at risk and provide some guidance about integrated treatment approaches for youth afflicted with both traumatic stress and substance abuse problems.
Helping Clarissa*

The signs and symptoms of trauma and substance abuse can at times be hard to spot, especially amidst the turbulent lives of teenagers today.

Clarissa was only 5 years old when her stepfather started sexually abusing her. She lived in a rural town where everyone knew each other. Clarissa’s neighbors and classmates noticed that she always kept to herself and was usually “on edge.” She was very scared that her stepfather would hurt her or her mother if she told anyone about the things he did to her when they were alone. It wasn’t until Clarissa turned 11 that a school guidance counselor found out what she was going through. The Department of Social Services was notified, and Clarissa was removed from her parents’ home. She went through several foster placements before settling in with an aunt and uncle who lived in a big city in a crowded apartment with many other relatives.

Clarris started to get into fights with her cousins and would often refuse to participate in activities with her relatives. When she was reprimanded for her failing grades, Clarissa told her aunt that she wished she didn’t exist. Her teachers noticed that Clarissa had trouble managing her emotions, often exhibiting deep sadness, irritability, agitation, and/or intense anger. The social worker assigned to the case told her caregivers that he noticed that Clarissa displayed a lack of regard for her own safety and well-being, as she was getting involved in several risky activities. She was introduced to marijuana at school when she was 13 and quickly progressed to alcohol use, and later to OxyContin.

When she turned 15, Clarissa told her friends that she felt worthless and unimportant. One of the ways she responded to conflict and tensions in the home was by going into her room and making superficial cuts on her arms with a razor blade. Her teachers wondered why she wore long sleeves all the time. Clarissa tried to stay away from home as much as possible, spending a lot of her time with peers in unsafe neighborhoods. On her way back from a party with friends late one night, Clarissa was attacked by a group of teens on the train, but none of her friends tried to help her because they were high at the time. She felt betrayed by her friends who she felt hadn’t stood up for her. Clarissa was already failing school, had lost trust in her friends and family, and did not feel that she had anyone to go to. She started considering the possibility of ending her life.

Throughout her life, Clarissa showed signs that she was in trouble. If the adults around her had noticed these signs, they would have had many opportunities to offer help. As you read the pages that follow, think about teens like Clarissa and consider the following questions:

• Are there different pathways that explain the link between traumatic stress and substance abuse?

• What are instruments and tools available to providers that can make it easier to identify youth at risk?

• Are there specific ways to provide integrated treatment for these adolescents?

• What are some treatment approaches and strategies that can be used to help adolescents with traumatic stress and substance abuse problems?

* “Clarissa’s story” was created by the authors as a composite representation of stories heard from real teenage clients struggling with these issues and provides examples of the challenges that clinicians face in providing care for youth with trauma and substance abuse problems. Models portrayed are not representative of cases described.
The Connection Between Trauma and Substance Abuse

Several pathways have been described explaining the temporal link between trauma exposure, posttraumatic stress disorder, and substance abuse among adolescents (Giaconia, Reinherz, Paradis, & Stashwick, 2003):

**High-Risk Hypothesis:**

Adolescents having problems with substance use may be more likely to engage in risky activities that could potentially lead to experiencing trauma. Several epidemiological studies have found that for some adolescents (45–66%) Substance Use Disorders (SUDs) precede the onset of trauma exposure (Clark, Lesnick, & Hegedus, 1997; Giaconia, Reinherz, Hauf, Paradis, Wasserman, & Langhammer, 2000; Perkonigg, Kessler, Storz, & Wittchen, 2000). Additionally, adolescents with SUDs are significantly more likely than their peers with no SUDs to have experienced traumas that are more likely to result from engaging in risky behavior such as traumas involving harm to themselves and traumas that entail witnessing harm to others (Clark, et al., 1997; Giaconia, et al., 2000; Perkonigg, et al., 2000). Studies have also shown a direct link between alcohol use and engaging in risky behaviors in which adolescents may get hurt (Giaconia et al., 2000) such as hitchhiking, walking in unsafe neighborhoods, and driving after using alcohol or drugs (Centers for Disease Control, 2000).

**Susceptibility Hypothesis:**

The presence of substance use disorders may decrease the youth’s ability to cope appropriately with distressing and traumatic events, thus leading to an increased likelihood of developing PTSD. In a study by Giaconia, et al. (2000), investigators found that even after controlling for exposure to trauma, adolescents with SUDs were two times more likely to develop PTSD following trauma than were their peers without SUDs. Researchers suggested that the extensive psychosocial impairments found in adolescents with SUDs were in part because they lacked the skills necessary to cope with trauma exposure.

**Self-Medication Hypothesis:**

Teenagers develop SUDs in an attempt to manage distress associated with the effects of traumatic stress. Most clinicians are familiar with this pathway, which suggests that youth turn to alcohol and other drugs to manage the intense flood of negative emotions and traumatic reminders associated with PTSD. Several studies have found that substance use disorders developed following trauma exposure (25–76%) or the onset of PTSD (14–59%) for a proportion of the adolescent sample (Clark et al., 1997; Deykin & Buka, 1997; Giaconia et al., 2000; Perkonigg et al., 2000). More recently, research in this area suggests that substance use craving increases among populations with co-occurring trauma and substance abuse when exposed to cues of the traumatic event (Coffey, Saladin, Drobes, Brady, Dansky, & Kilpatrick, 2002; Saladin, Drobes, Coffey, Dansky, Brady, & Kilpatrick, 2003).

Regardless of the pathway describing the onset of trauma exposure or PTSD and the development of substance abuse problems, it is evident that youth with this co-occurrence experience difficulties with emotional and behavioral regulation, and thus find it hard to stop using. A successful treatment approach should be flexible enough to accommodate for the multiple ways in which trauma and substance abuse may be related.
Screening and Assessment of Trauma and Substance Abuse

Many of the signs of both trauma and substance abuse are similar to problem behaviors that are part of the natural developmental course of adolescence. For this reason, it may be hard to recognize these problems early. What is evident about this group of teenagers, is that they often experience a great deal of distress and need considerable help. Proper assessment of trauma and substance abuse is critical in order to provide adequate care. Service providers having regular contact with adolescents should incorporate screening and assessment instruments that address trauma and substance use into their general intake process.

The following table provides information about some assessment resources:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Brief Description</th>
<th>Source</th>
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<tbody>
<tr>
<td>Adquest Adolescent Intake Questionnaire</td>
<td>This self-report measure allows adolescents to identify various issues of concern, which the therapist can then use to engage adolescents in discussion on a variety of topics including health, sexuality, safety, substance abuse and friends.</td>
<td>Peake, K., Epstein, I., &amp; Medeiros, D. (Eds.). (2005). Clinical and research uses of an adolescent mental health intake questionnaire: What kids need to talk about. Binghamton, NY: The Haworth Press, Inc.</td>
</tr>
<tr>
<td>CANS-TEA Child and Adolescent Needs and Strengths-Trauma Exposure and Adaptation Version</td>
<td>This clinician-report instrument assesses a variety of domains including trauma history, traumatic stress symptoms, emotional and behavioral regulation (e.g., anxiety, depression, self-harm, substance abuse), environmental stability, caregiver functioning, attachment, child strengths and child functioning.</td>
<td>For information on the guidelines for use and development contact Cassandra Kisiel: (312) 503-0459 <a href="mailto:c-kisiel@northwestern.edu">c-kisiel@northwestern.edu</a></td>
</tr>
</tbody>
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<p>| TSCC Trauma Symptom Checklist for Children | The Trauma Symptom Checklist for Children is a self-rating measure used to evaluate both acute and chronic posttraumatic stress symptoms. | John Briere, Ph.D. Psychological Assessment Services <a href="http://www3.parinc.com/products/product.aspx?Productid=TSCC">http://www3.parinc.com/products/product.aspx?Productid=TSCC</a> |
| UCLA PTSD RI for DSM-IV University of California Los Angeles Posttraumatic Stress Disorder Reaction | This scale is used to screen for exposure to traumatic events and DSM-IV PTSD symptoms. Three versions exist: a self-report for school-age children, a self-report for adolescents, and a parent report. An abbreviated version of the UCLA PTSD RI is also available. This 9-item measure provides a quick screen for PTSD symptoms. | UCLA Trauma Psychiatry Service 300 UCLA Medical Plaza, Ste 2232 Los Angeles, CA 90095-6968 <a href="mailto:rpynoos@mednet.ucla.edu">rpynoos@mednet.ucla.edu</a> |</p>
<table>
<thead>
<tr>
<th>Resource</th>
<th>Brief Description</th>
<th>Source</th>
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<tr>
<td><strong>POSIT</strong> Problem Oriented Screening Instrument for Teenagers</td>
<td>This scale was designed to identify potential problems in need of further assessment and potential treatment or service needs in 10 areas including substance abuse, mental health, physical health, family relations, peer relations, educational status, vocational status, social skills, recreation, and aggressive behavior/delinquency.</td>
<td>National Institute on Drug Abuse (NIDA), National Institutes of Health Elizabeth Rahdert, Ph.D., 6001 Executive Blvd, Bethesda, MD, 20892 Email: <a href="mailto:Elizabeth_Rahdert@nih.gov">Elizabeth_Rahdert@nih.gov</a></td>
</tr>
<tr>
<td><strong>CPSS</strong> Child Posttraumatic Stress Disorder Symptom Scale</td>
<td>The CPSS was adapted from the adult Posttraumatic Diagnostic Scale (PTDS). The CPSS is a self-report measure that assesses the frequency of all DSM-IV-defined PTSD symptoms and was also designed to assess PTSD diagnosis. The measure yields a total Symptom Severity score as well as a daily functioning and impairment score.</td>
<td>To obtain the CPSS, contact: Edna Foa, Ph.D. Center for the Treatment and Study of Anxiety University of Penn. School of Medicine Department of Psychiatry 3535 Market Street, Sixth Floor Philadelphia, PA 19104</td>
</tr>
<tr>
<td><strong>CRAFFT</strong></td>
<td>The CRAFFT is a six-item measure that assesses adolescent substance use. The measure assesses reasons for drinking or other substance use, risky behavior associated with substance use, peer and family behavior surrounding substance use, as well as whether the adolescent has ever been in trouble as a result of his or her substance use.</td>
<td>The CRAFFT Questions were developed by The Center for Adolescent Substance Use Research (CeASAR). To get permission to make copies of the CRAFFT test, email <a href="mailto:info@CRAFFT.org">info@CRAFFT.org</a>.</td>
</tr>
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For a more comprehensive list of trauma assessment and screening tools, please visit the National Child Traumatic Stress Network’s online Measures Review database at [www.NCTCSNet.org/measures](http://www.NCTCSNet.org/measures).

Several fact sheets in this toolkit provide specific information about the multiple emotional problems and maladaptive behaviors that can result from traumatic stress (II. Understanding Traumatic Stress and Adolescents) and substance use problems (III. Understanding Substance Abuse in Adolescents). Providers should incorporate information from multiple sources to generate a treatment plan that will work including a complete evaluation of the signs and symptoms of trauma and substance abuse as well as the adolescent’s degree of functional impairment caused by these problems.
Treatment Outcome Studies

There is a dearth of research evaluating integrated treatment approaches for youth with substance abuse and traumatic stress problems. However, a review of the adolescent substance abuse treatment literature suggests that traumatized youth do not do well in treatment focusing only on substance use.

• In a study comparing inpatient and outpatient treatment outcomes, there was no difference in treatment outcome between the two groups for adolescents with low victimization. However, adolescents with high levels of victimization in the inpatient treatment program had fewer substance-abuse problems at follow-up than did those in the outpatient programs—suggesting that traumatized youth with co-occurring substance abuse problems do not respond well to available outpatient treatments (Funk, McDermeit, Godley, & Adams, 2003).

• Titus, Dennis, White, Scott, & Funk (2003) illustrated that, along with gender, severity of victimization was a significant predictor of treatment outcome for substance abuse treatment.

• Grella & Joshi (2003) looked at treatment processes and outcomes among adolescents with a history of abuse who were in drug treatment and found that, in general, youths with a history of physical abuse had a lower likelihood of posttreatment abstinence.

• Research in adults with co-occurring trauma and substance abuse supports the same conclusion. Studies of adults receiving substance abuse treatment indicate that individuals with co-occurring PTSD and substance abuse have higher relapse rates than do those with substance abuse problems alone, and that initial PTSD severity is a significant predictor of both alcohol/drug relapse and PTSD status (Brown, 2000; Ouimette, Brown, & Najavits, 1998).
Adolescents who have experienced trauma and adversity often turn to alcohol and drug use in order to cope with painful emotions. Youth with both substance abuse and trauma exposure show more severe and diverse clinical problems than do youth who have been afflicted with only one of these types of problems. When these problems are treated separately, youth are more likely to relapse and revert to previous maladaptive coping strategies.

Although the importance of addressing these co-occurring conditions is evident, integrating these services is not as clear-cut. For example, some providers may feel that before being able to address underlying issues relating to trauma, it is important to treat substance-abusing symptoms and limit the potential harm and threat to the individual. Conversely, some providers may feel that unless the individual learns strategies to manage distress associated with trauma, the likelihood of substance abuse relapse remains high. The research on integrated treatment approaches for this population is limited; however, there are guidelines that providers can follow to better serve this population. Given the multiple and complex needs of youth with co-occurring traumatic stress and substance abuse problems, several investigators have proposed the recommendations listed below (Back, Dansky, Coffey, Saladin, Sonne, & Brady, 2000; Giaconia, et al., 2003; Ouimette & Brown, 2003):

- Providers in regular contact with adolescents should include assessments of substance abuse problems and traumatic stress as part of routine screening and assessment procedures.
- Youth and families should be provided with more intense treatment options to address the magnitude of difficulties often experienced by this population.
- An emphasis on management and reduction of both substance use and PTSD symptoms should happen early in the recovery process. Youth will need help in addressing the negative affect common to both Substance Use Disorders and PTSD in an effort to help prevent relapse of both types of symptoms.
- Relapse prevention efforts, targeting both substance and trauma-related cues, should be provided early in treatment.
- School-based treatment programs may represent an important means of reaching at-risk youth.

Cohen, Mannarino, Zhitova, & Capone (2003) suggest that treatment of youth with trauma and substance abuse should include the following components:

- Therapeutic relationship that is consistent, trusting, and collaborative
- Stress management skills such as relaxation and positive self-talk
- Emotion regulation skills such as the identification, expression, and modulation of negative affect
- Cognitive restructuring such as recognizing, challenging, and correcting negative cognitions
- Increasing problem-solving, drug refusal, and safety skills
- Social skills training
- Gradual exposure to achieve desensitization to trauma reminders
- Parental involvement in treatment with the goals of increasing parenting skills, communication, and conflict resolution
- Psychoeducation for both youth and their families about trauma and substance abuse problems
- Random urine drug screenings
- Adjunct psychopharmacologic treatments
- Possible referral to adolescent self-help groups
Considering Culture and Context

It is important for providers to remember that adolescents with co-occurring traumatic stress and substance abuse and their families could belong to any number of cultural communities. Providing services that are culturally competent lays the foundation for establishing a safe, respectful environment that communicates to adolescents and families that they are uniquely valued. Culturally competent service providers are specially trained in, and are aware and respectful of the values, beliefs, traditions, customs, and parenting styles of the youths and families they serve whose cultures are different from those of the majority of Americans. One’s cultural background goes beyond ethnicity and race, and can include identities associated with disability, socioeconomic status, sexual orientation, homelessness, immigration/refugee status, spiritual or religious groups, foster care, and others.

Providers who offer culturally competent care respect the community’s values. See box below for examples (Anderson, Scrimshaw, & Fullilove, 2003; Cross, Bazron, Dennis, & Isaccs, 1989):

- Staff and agency demonstration of understanding and respect for diverse worldviews
- Staff who reflect the cultural diversity of the community served
- Use of interpreter services or, preferably, bilingual providers for clients with limited English proficiency
- Ongoing staff cultural competency education, training, and requirements
- Use of linguistically and culturally appropriate educational materials
- Physical environment that reflects the diversity of communities served, including artwork, accessibility, and materials
- Culturally relevant assessments
- Working within the family’s defined structure (e.g., the family may include elders or other relatives)
- Understanding and respect for the social mores related to interactions by gender and age

Emphasizing Strengths

When dealing with youth of all cultural and social backgrounds, it will be important to adopt a “strength-based” approach that capitalizes on individual, family, and contextual factors that can serve to promote healthy coping and adjustment. These factors can include a family’s religious or spiritual beliefs; extended families and available social support networks; positive role models in the community; opportunities for participating in positive recreational, artistic, or academic activities; adolescent’s built-in capacity to grow and flourish in the midst of adversity.

Special Treatment Considerations for Homeless Youth

Given the high rates of trauma exposure and substance use among homeless youth (Gwadz, Nish & Leonard, 2007; Johnson, Whitbeck, & Hoyt, 2005), it is particularly important to be aware of treatment considerations specific to this population (NCTSN, 2007; Thompson, McManus, & Voss, 2006). The lives of homeless youth are often characterized by high levels of personal and environmental instability, including uncertainty about basic needs such as having access to a meal or a place to sleep. Even the most elemental therapeutic processes such as engaging youth in treatment and attempting to develop a trusting relationship between the adolescent and service providers can be quite challenging. In addition, it might also be difficult to safely conduct more involved therapeutic strategies such as exposure-based treatment, particularly when access to environmental supports and the possibility of regular attendance is limited.

For this reason, it will be important to prioritize homeless youths’ immediate and primary needs, and to provide access to complimentary services that address additional psychosocial needs (NCTSN, 2007). Brief interventions employing motivational interviewing (Baer, Peterson, & Wells, 2004) as well as skill-based cognitive-behavioral approaches appear to better suited for this population. These approaches are described in the sections that follow.
Several successful treatment programs have been developed or adapted from adult models that help adolescents process traumatic memories and manage distressing feelings, thoughts, and behaviors. These empirically supported manuals are described in detail below.

**Trauma-Focused Cognitive Behavioral Therapy (TF-CBT):**

TF-CBT is a short-term individual treatment that involves sessions with the youth and parents as well as parent-only sessions. TF-CBT is for youth (aged 4–18) who have significant behavioral or emotional problems related to traumatic life events, even if they do not meet full diagnostic criteria for PTSD (Cohen, Mannarino, Berliner, & Deblinger, 2000). Utilizing weekly, clinic-based, individual treatment, TF-CBT helps youth process traumatic memories, and manage distressing feelings, thoughts, and behaviors. TF-CBT also uses joint parent and youth sessions to provide parenting and family communication skills training. When compared to a nondirective supportive therapy, sexually abused youth aged 8–15 treated with TF-CBT demonstrated significantly greater improvement on levels of anxiety, depression, and dissociation at 6-month follow up. Youth treated with TF-CBT also showed a significant improvement in PTSD symptoms and dissociation at 12-month follow-up (Cohen, Mannarino, & Knudsen, 2005). Online training for TF-CBT is currently available at http://tfcbt.musc.edu.

**Cognitive-Behavioral Intervention for Trauma in Schools (CBITS):**

CBITS is an intervention program for youth exposed to traumatic events that can be delivered on school campuses by school-based clinicians. It was developed in collaboration with the Los Angeles Unified School District for students and their families. CBITS utilizes individual and group sessions to teach youth relaxation techniques and social problem-solving skills, as well as how to challenge upsetting thoughts and process traumatic memories. CBITS also includes a parent and teacher psychoeducation component. In a randomized controlled trial comparing this intervention with a 3-month wait-list condition, those receiving CBITS reported lower PTSD, depression, and psychological dysfunction symptom scores after 3 months (Stein, Jaycox, Kataoka, Wong, Tu, Elliott, et al., 2003).
Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS):

SPARCS is a group intervention specifically designed to address the needs of chronically traumatized adolescents who may still be living with ongoing stress, are currently experiencing stress, and are experiencing problems in areas of functioning such as impulsivity, affect regulation, self-perception, dissociation, relations with others, somatization, and struggles with their own purpose and meaning in life. The 16-session program can be provided in a variety of settings, including school, outpatient, and residential, and incorporates components of three existing interventions. These components include mindfulness, interpersonal, and emotion regulation skills derived from Dialectical Behavior Therapy for Adolescents (Wagner, Rathus & Miller, 2006); problem-solving skills from Trauma Adaptive Recovery Group Education and Therapy (TARGET), Ford, Mahoney & Russo (2004); and social support enhancement and skills regarding planning for the future from the School Based Trauma/Grief Group Psychotherapy (Layne, Saltzman, Pynoos, et al. 2001).

Trauma Systems Therapy (TST):

Developed at the Center for Medical and Refugee Trauma at Boston Medical Center (Saxe, Ellis, Fogler, Hansen, & Sorkin, 2005), TST acknowledges the complexity of the social environment that surrounds an individual and the ways in which disruptions in one area of the social ecology may create problems in another. The social ecological model of human behavior—in which the contexts of family, school, peer group, neighborhood, and culture all interact with an individual’s development (Bronfenbrenner, 1979)—is applied to youth exposed to traumatic stress, who often live in environments characterized by child maltreatment, parental illness and substance abuse, and domestic violence. TST interventions are designed to work in two dimensions: strategies that operate through and within the social environment to promote change, and strategies that enhance the individual’s capacity to self-regulate their emotions.

The TST model involves choosing a series of interventions that correspond to the fit between the traumatized youth’s own emotional regulation capacities and the ability of the youth’s social environment and system-of-care to help him/her manage emotions or to protect him/her from threat. TST begins with an assessment of both the youth’s level of emotional regulation and the degree of environmental stability in the youth’s world. Preliminary data from an open trial of TST demonstrate a significant reduction of trauma symptoms and increased emotional regulation skills among youth, as well as a more stable social environment after three months of treatment (Saxe, et al., 2005). A controlled trial of TST is currently in progress.
Substance Abuse Interventions for Adolescents

Several successful treatment programs have been developed or adapted from adult models in order to focus on the unique cognitive changes, developmental transitions, and peer and family issues that typically occur during adolescence. Treatments for adolescents incorporate these developmental considerations in different ways. Described below are the current approaches utilized within various types of interventions, as well as empirically supported treatment manuals available for substance-abusing adolescents in an outpatient setting.

Brief Interventions
Interventions that are of shorter duration and less extensive than more traditional substance abuse treatments can be appealing to consumers, service providers, and managed care providers. These treatments have the overarching goal of addressing and enhancing motivation to change problem behaviors as well as providing skills to meet these goals. Generally, brief interventions contain between one and five sessions and can be delivered virtually anywhere by a variety of professionals. Two of the most widely used brief intervention approaches include cognitive-behavioral therapy and motivational interviewing.

Cognitive-Behavioral Therapy (CBT):

Cognitive-behavioral models, based on social learning theory, conceptualize substance use and related problems as learned behaviors that are initiated and maintained in the context of environmental factors. This treatment approach incorporates the principle that unwanted behavior can be changed by clear demonstration of the desired behavior and consistent reward of incremental steps toward achieving it. CBT may incorporate emotional exposure to internal cues in order to inoculate individuals against future relapse. Therapeutic activities include completing specific assignments, rehearsing desired behaviors, experiencing imagined and real exposures to emotions and situations to enhance emotional tolerance, and recording and reviewing progress. Praise and privileges are given for meeting assigned goals. This model can be implemented via individual sessions as well as within a group treatment approach. According to research studies, individual and group CBT can help adolescents become drug free and increase their ability to remain drug free after treatment ends.
Motivational Interviewing (MI):
This treatment approach involves using specific interviewing and discussion techniques to enhance the individual’s motivation to change their problematic behavior. MI pertains to both a style of relating to the client as well as therapeutic techniques that facilitate the process. Its main tenets include: 1) taking an empathic, nonjudgmental stance while listening reflectively, 2) developing discrepancy, rolling with the client’s resistance, and avoiding argumentation, and 3) supporting self-efficacy for change. Motivational interviewing has been found to significantly reduce drinking and driving in teens with initial low motivation to change.

Motivational Enhancement Therapy and Cognitive Behavioral Therapy for Cannabis Users:
The Cannabis Youth Treatment Collaborative developed an empirically tested 5-session treatment manual that combines the motivational interviewing treatment approach and cognitive behavioral therapy. The treatment consists of two initial individual sessions designed to increase the adolescent’s motivation to deal with their drug use, followed by three group CBT sessions designed to help adolescents develop skills useful for stopping or reducing marijuana use. This brief therapy has been proven effective in reducing marijuana use in adolescents. The option also exists for therapists to utilize an additional 7-session CBT component to provide additional skills training. The complete manuals for both the brief 5-session treatment as well as the extended treatment with 12 CBT sessions are available at: http://www.chestnut.org/LI/cyt/products/.

Family-Based Therapies
Family-based treatment is the most thoroughly studied treatment modality for adolescent substance use. Considerable research underscores the influential role played by family relationships and family environments in the development of adolescent alcohol and drug problems. The more thoroughly researched family approaches are outlined below.

Multidimensional Family Therapy (MDFT):
This is an outpatient family-based drug abuse treatment for teenagers. MDFT views adolescent drug use in terms of a network of influences (made up of individual, family, peer, and community) and utilizes this network to reduce unwanted behavior and increase desirable behavior in different settings. Treatment includes individual and family sessions held in the clinic; in the home; or with family members at family court, school, or other community locations.

Multidimensional Family Therapy for Adolescent Cannabis Users:
This manual-based treatment integrates family therapy and substance-abuse treatment and has been proven effective with a cannabis-using adolescent population. The treatment focuses on the adolescent and the parents, as well as on patterns of family interaction, both within the family and with other systems such as schools, courts, and other support networks. The manual is available at: http://www.chestnut.org/LI/cyt/products/.
**Brief Strategic Family Therapy (BSFT):**

This intervention is used to treat adolescent drug use that occurs with other problem behaviors such as conduct problems, oppositional behavior, delinquency, associating with antisocial peers, aggressive and violent behavior, impaired family functioning, and risky sexual behavior. BSFT is a family systems approach based on the premise that the drug-using adolescent is displaying problem behaviors that are indicative of what is going on within the family system. BSFT holds the principle that patterns of interaction in the family influence the behavior of the adolescent. The role of the BFST counselor is to plan interventions that carefully target and provide practical ways to change the patterns of interaction (e.g., failing to establish rules and consequences) that are directly linked to the adolescent’s drug use.

**Brief Strategic Family Therapy for Adolescent Drug Abuse:**

The National Institute of Drug Abuse has made an online version of the BSFT manual available at the following internet address: [http://www.nida.nih.gov/TXManuals/bsft/BSFT2.html](http://www.nida.nih.gov/TXManuals/bsft/BSFT2.html).

**Multisystemic Therapy (MST):**

This treatment approach targets multiple systems that contribute to the development of delinquent behavior in adolescents including family, peers, school, and the neighborhood. MST is tailored to each individual’s needs and may include individual, family or marital therapy; peer group counseling; and case management. Services are provided within the adolescent’s natural environment, such as the home or school, which facilitates both the application to and the maintenance of treatment gains in the “real world.” MST also helps adolescents and their families develop social support networks through such means as making connections with extended family or religious communities. MST has been shown to significantly reduce adolescent drug use during treatment and for at least 6 months after treatment.

**More information regarding the MST approach is available at:**

Community-Based Interventions

Community-based interventions provide mental health services within the normal environment of an individual or population. Service sites may include the home, school, or other neighborhood settings, which increases access to care for underserved populations, particularly for individuals who do not have the resources to travel to specialty clinics. Because teenagers are influenced by many aspects of their environment (such as family, peers, teachers, cultural norms), community interventions often take place across a number of settings to maximize the social ecological validity of the intervention and to support practice of skills learned in treatment. Community interventions may target specific individuals who have already begun to display high-risk behaviors—such as drug and alcohol abuse, delinquent behavior, and unsafe sexual behaviors—or they may target select groups who may be at greater risk for engaging in these behaviors—such as athletes who are at greater risk for steroid use and teenagers who live in a community with a lot of gang violence. In many community interventions, a social support component for adolescents and their parents is important and may decrease the likelihood of relapse. Three interventions for adolescents displaying high-risk behaviors, which include a community-based component, are described below:

- **Adolescent Community Reinforcement Approach (ACRA):**
  This treatment approach recognizes the powerful role the environment plays in encouraging or discouraging drug use. It attempts to rearrange environmental contingencies to make substance use a less rewarding behavior. ACRA blends an operant model with a social systems approach to teach teens new ways of handling life’s problems without drugs or alcohol. It focuses on the interpersonal interaction between individuals and those in their communities. ACRA teaches adolescents when and where to implement the techniques learned in treatment as well as how to build on positive reinforcements and use existing community resources that will support positive change. ACRA also guides adolescents in developing a positive support system.

- **The Adolescent Community Reinforcement Approach for Adolescent Cannabis Users:**
  This 14-session treatment model consists of 10 individual sessions with the youth, 2 sessions with one or two caregivers, and 2 sessions with both the youth and caregiver(s). This treatment uses functional analyses to identify triggers for drug use as well as other prosocial activities that compete with drug use, skills training in a variety of areas including relapse prevention, and the “Happiness” scale to monitor progress. The manual is available online at: http://www.chestnut.org/LI/cyt/products/ACRA_CYT_v4.pdf.
This substance abuse intervention is a school-based program for identifying, assessing, and treating students with alcohol and/or substance abuse problems. There are more than 1,500 student assistance programs in the country; however, these programs vary widely. For example, some SAPs refer all identified alcohol and drug users to clinics for treatment, while other programs bring trained clinicians to the school to provide intervention on-site. The most effective school-based substance abuse interventions are empirically guided and manualized, and focus on providing psychoeducation and skills training to adolescents. In addition, effective programs enforce school-wide policies regarding alcohol and drug use. Preliminary analyses of certain programs suggest that adolescents who participate in SAPs can show reduced substance use.

**The Residential Student Assistance Program (RASP)**

(RASP) is a residential substance abuse prevention program for high-risk adolescents, modeled after the Westchester Student Assistance Model. More information is available at: http://www.sascorp.org/residesap.htm or http://www.sascorp.org.
Although there is strong evidence to support the need for integrated treatment models, there are few existing treatments that address both trauma and substance abuse problems among adolescents. Some of these models are highlighted below:

**Seeking Safety (SS)**

SS (Najavits, 2000) is a manualized treatment for co-occurring SUD and PTSD in adults developed by Lisa Najavits, PhD (Najavits, 2002). The focus of SS is to eliminate or reduce risky or dangerous behaviors, situations, or symptoms including substance abuse, dangerous relationships, severe psychological symptoms, and self-harm behaviors. The treatment model posits a meaningful connection between past trauma and current self-abusing behaviors, and it utilizes 25 topics or modules divided among cognitive, behavioral, and interpersonal themes that can be selected based on the individual’s need (Najavits, 2002).

Applying SS to an adolescent population involves minor modifications of the original manual to suit the developmental level of adolescents. Modifications include offering the information verbally if an adolescent refuses to read the handouts, using hypothetical third-person examples to discuss situations, limited parental involvement with the adolescent’s permission, and discussing details of the trauma if the adolescent chooses to do so (Najavits, Gallop, & Weiss, 2006).

In randomized, clinical trials, SS has shown significant improvements over treatment as usual in both incarcerated (Zlotnick, Najavits, Rohsenow, & Johnson, 2003) and community (Hien, Cohen, Miele, Litt, & Capstick, 2004) adult female samples. When implemented with adolescent girls, SS showed greater improvements than did treatment as usual in substance abuse domains, PTSD cognitions, levels of deviant behavior, as well as anorexia and somatization ratings (Najavits, et al., 2006).
Risk Reduction Through Family Therapy (RRFT)

RRFT (Danielson, 2006) is an intervention developed to reduce the risk of substance abuse and other high-risk behaviors, revictimization, and trauma-related psychopathology in adolescents who have been sexually assaulted. RRFT integrates several existing empirically supported treatments, such as Trauma Focused-Cognitive Behavioral Therapy, Multisystemic Therapy, and other risk reduction programs for revictimization and risky sexual behaviors. Adolescents participating in this treatment can be heterogeneous with regard to symptom expression, thus a clinical pathways approach is taken in the RRFT manual. The manual consists of 6 primary components: Psychoeducation, Coping, Substance Abuse, PTSD, Sexual Education and Decision Making, and Sexual Revictimization and Risk Reduction. A pilot trial of RRFT is currently under way.

Trauma Systems Therapy for Substance Abuse in Adolescence

TST-SA (Suárez, Saxe, Ehrenreich, & Barlow, 2006) is an adaptation of Trauma Systems Therapy (TST) (Saxe, Ellis, & Kaplow, 2006) to the problem of adolescent traumatic stress and substance abuse, utilizing existing promising practices for treating adolescent substance abuse, traumatic stress, and emotional regulation problems. The application of TST to adolescent substance abuse includes several modifications to the existing intervention. Motivational interviewing strategies are included to engage youth in treatment and to establish a commitment to change. Additionally, parents and teens are provided with psychoeducation about substance abuse and its interaction with symptoms of traumatic stress. This approach incorporates a strong emphasis on behavior management strategies for parents to increase monitoring and appropriate limit setting, particularly around drug use and high-risk behaviors. In addition, the model incorporates substance abuse treatment strategies such as parent-teen communication skills, recognizing and planning for substance abuse cues or trigger situations, cognitive and interpersonal problem-solving techniques, and other relapse-prevention techniques. Careful attention is given to the connection between substance abuse and negative emotions associated with the experience of trauma. In addition, youth learn skills to manage emotion, behavior, and substance abuse cravings. An open trial of TST-SA is currently under way.
The commonalities between posttraumatic stress disorder and substance use disorders suggest that pharmacotherapies targeting a specific neurotransmitter or neuroendocrine system might be particularly beneficial (Brady, Back, & Coffey, 2004). An important goal of pharmacotherapies for this population is to decrease PTSD symptoms so that the adolescent does not utilize substances of abuse in order to distance himself/herself from the traumatic event. Some antidepressants have been shown to improve intrusive and depressive symptoms of PTSD. Furthermore, standard pharmacotherapeutic treatments for SUDs may be useful for individuals with co-occurring PTSD. Integration of pharmacotherapy and psychotherapy may be beneficial in order to maximize treatment outcomes in this population.

For More Information

Substance Abuse and Mental Health Services Administration (SAMHSA) Model Programs
http://modelprograms.samhsa.gov/

Society for Adolescent Substance Abuse Treatment Effectiveness (SASATE)

The National Institute of Drug Abuse (NIDA)
http://www.nida.nih.gov

The National Institute on Alcohol Abuse and Alcoholism (NIAAA)
http://www.niaaa.nih.gov
To successfully identify and treat adolescents with traumatic stress and substance abuse, clinicians must continually explore better ways to encourage their participation in treatment. This is particularly important in mental health service systems and substance abuse service systems, as these teens present a unique set of challenges to any service system.

Adolescents with both traumatic stress and substance abuse problems often have complex histories (See section II: Complex Trauma) and numerous additional problems that make this population particularly difficult to treat. Empirically based treatment interventions offer adolescents a good chance of success in overcoming a variety of psychological problems; however, many youth fail to obtain treatment, and those who enter treatment often terminate prematurely. Clinicians who work with adolescents encounter a series of challenges when trying to engage youth who have histories of traumatic stress and substance abuse. Most adolescents do not enter treatment voluntarily and are often apprehensive about the process. Furthermore, substance abusing adolescents, much like their adult counterparts, often have a hard time making positive changes in their use patterns. To provide effective services, these challenges and barriers must be addressed.

This fact sheet offers an introduction to many important issues regarding engaging adolescents in treatment that providers must consider when treating adolescents with symptoms of both traumatic stress and substance use. Topics include identifying and encouraging youth to seek help, getting adolescents into initial treatment sessions, addressing practical barriers to care, getting families involved, building alliances, and enhancing community awareness.
Brenda, a 16-year-old mother of a 10-month-old boy, was mandated to treatment after a marijuana-related arrest. Born into a chaotic family, Brenda has lived, at various times, with her mother, her father, and other family members; she now spends most of her time with the father of her son at his parents’ home. Brenda began drinking and smoking marijuana when she was 10. At age 12, she began selling marijuana and other drugs and became involved in a loosely organized gang. She has attended school only sporadically since she was 14 years old.

Illegal substances were common in the environment where Brenda was raised. Both of Brenda’s parents have been intermittent users of heroin and other drugs, and her father spent a significant amount of time in jail during Brenda’s childhood. Brenda was sexually assaulted by an adult friend of her father’s at age nine. Brenda prided herself on never using heroin, and on “just” using marijuana and alcohol. Even the occasional use of cocaine was of very little concern to her and to most of the important figures in her personal life.

Brenda is a watchful, cautious, strong-willed, and outwardly confident girl. She speaks quietly about feeling old, feeling responsible for her younger siblings and her son, and about feeling disillusioned by the world, particularly by her father. Attending school, following the rules, and meeting the expectations that are typical for girls her age hold little meaning for her, and she has few dreams for her future. She is highly suspect of other people’s intentions and experiences a sense of profound interpersonal distance. It is not likely that Brenda would have entered treatment without having been mandated by the court.

As you read through the pages that follow, think about adolescents like Brenda, and consider the following questions:

- What are some specific challenges related to Brenda’s history that might make engaging her in treatment difficult?
- How can we identify youth in need early?
- Are there ways to encourage adolescents to seek help?
- How can we get youth to give therapy a chance?
- What are the practical barriers that might keep adolescents out of treatment?
- How can we best get families and other caregivers involved in treatment?
- What are some ways to build alliances with these youth and their families?
- What steps can we take to educate the greater community about the link between substance abuse and traumatic stress?

*“Brenda’s story” was created by the authors as a composite representation of stories heard from real teenage clients struggling with these issues and provides examples of the challenges that clinicians face in providing care for youth with trauma and substance abuse problems. Models portrayed are not representative of cases described.
Identifying & Encouraging Youth to Seek Help

Teens tend not to seek out professional help for a variety of reasons. They may not believe they need help. They often are not aware of the range of services available. They may be concerned about the stigma of obtaining mental health services or hesitant to seek out an adult for assistance. Researchers and clinicians have developed a variety of ways to overcome these initial hurdles.

Offer multiple types of assistance

Teens are far more likely to seek assistance with issues concerning employment, relationships, and family than they are for mental health or emotional issues like posttraumatic stress or substance abuse. An agency that can act as a resource center and can offer the variety of services that might be sought by teens themselves, is more likely to be in a position to help an adolescent with multiple problems including those related to trauma and/or substance abuse.

Identify youth in schools

The school is a key access point for early identification of at-risk youth (See section 4: e.g., CBITS; SAPS). Two of the successful methods are:

Via peer networks: School-based support programs offer a promising pathway to reach at-risk youth. Programs that identify and train student leaders to provide peer assistance can help clinicians recognize at-risk students and provide needed support and referrals. By utilizing in-school student support resources, clinicians are more likely to be able to identify youth who would otherwise not have approached an adult for treatment. Programs that employ peer support networks to identify youth at risk should provide close adult supervision to peer supporters and have counselors readily available to provide assistance to the youth identified by the peer supporters.

Via standardized screening: Youth at risk can be identified by screenings and evaluations conducted in school or after-school settings. Clinicians administering annual or semiannual mental health or substance abuse screenings at a school can help identify youth who would not have sought treatment or otherwise been identified, thus facilitating youths’ engagement in treatment or services. Multiple schools have screened their adolescent students for substance abuse problems using the CRAFFT (Children’s Hospital Boston, 2002), a brief and adolescent-appropriate instrument. Programs that employ the Cognitive-Behavioral Intervention for Trauma in Schools (CBITS), Stein et al. (2003), have successfully screened large numbers of students for traumatic stress within high-school populations. (See also Section 4: CBITS.)
No-show rates for initial sessions at substance abuse clinics are reported at about 50% (Lerman and Pottick, 1995). Factors associated with missed appointments include active substance abuse, young age, and antisocial behavior. Listed below are some of the ways clinicians can increase the likelihood that an adolescent will attend the first session and continue coming thereafter:

**Make reminder calls**

Call the adolescent’s home prior to the appointment and speak with both the youth and a parent. Tell them that you look forward to meeting them. Discuss the importance of arriving to the sessions on time; mention a couple of success stories of previous clients; and ask about any obstacles they anticipate to attendance.

**Be especially welcoming at the first session**

Praise the teen and family for just making it to the first session — let them know that you’re glad to see them.

**Use your cultural knowledge (Discussed in section IV: e.g., Considering culture and context; TST) of diverse youths and families to better relate**

When engaging youths—and especially their caregivers—from diverse backgrounds, it is essential to use what you know about the cultural values and expectations that guide social interaction, mental health/substance abuse treatment, and salient themes in their communities. Establishing the trust of youths and families from diverse backgrounds is an important factor in determining whether they will continue to show up for appointments; and the quality of the initial interaction will greatly influence this decision. Remember that one’s cultural community extends far beyond their racial/ethnic groups, and can also be defined by sexual orientation, homelessness, disabilities, socioeconomic status, and immigrant/refugee status, to name a few. If any staff members are unaware of the cultural backgrounds of the youths and families they are likely to assist, make sure they receive training in cultural competence; this will greatly contribute to successful treatment engagement and delivery.

**Reach out to the family**

Make an intense outreach effort starting with the very first session. Obtain several ways to get in touch with the youth and family and get contact information for those involved in their care. Make follow-up phone calls, letting them know that you care and that you want to continue to see them. This is particularly important for adolescents who are mandated for treatment.
Drug use by homeless youth is reported to be double that of youth in school (Forst & Crim, 1994). Furthermore, homeless adolescents who abuse substances engage in more high risk behaviors, are more resistant to treatment, and have higher rates of psychopathology and family problems than substance-using adolescents who are not homeless. While engaging this overlooked population in treatment is particularly important, it is also an especially challenging endeavor. Homeless youth are very unlikely to self-refer to treatment and, as they are frequently not in touch with caregivers, are rarely referred by motivated family members who may have otherwise initiated treatment. Although shelters are the primary intervention for these adolescents, many are not equipped to provide treatment for the multiple areas of need and various co-occurring conditions often characterizing this population. (Slesnick, Meyers, Meade, & Segelken, 2000).

**Strategies to engage substance-abusing homeless adolescents and their families in treatment (Slesnick, Meyers, Meade, & Segelken, 2000) include:**

- Meeting youth “at their level” when making the first contact. The therapist can facilitate engagement by showing the adolescent that he or she understands the youth’s language and culture.

- Presenting the treatment in a non-threatening, appealing manner. For example, the therapist should avoid asking personal questions, convey the message that youth similar to the client have participated in and benefited from the program, and appear knowledgeable about the issues faced by many homeless adolescents, such as a history of abuse.

- Avoiding blaming the adolescent. Reframe current situations (e.g. drug behavior, living in shelter) in terms of relational factors rather than personal failure.

- Conveying hope throughout the engagement process that change is possible as well as a sense of control over their participation in treatment.

- Respecting the client’s concerns, such as those surrounding confidentiality or engaging primary caregivers, and being open to negotiation.
Many adolescents encounter real barriers to accessing treatment. Parents, caregivers, and adolescents need help to overcome them. Specific barriers and ways to assist include:

**Transportation**
Discuss with the youth and family potential obstacles to getting to appointments regularly. Whenever possible, offer to provide bus or transit passes if your center is near public transportation.

**Scheduling**
Both parents and adolescents may have difficulty with scheduling appointments. If a family is working with other treatment team members, try to coordinate with these members to schedule as many appointments as possible on the same day, so that the family has to make only one trip to your location. Discuss the possibility of holding sessions before or after usual business hours to enable families to schedule appointments around work and school commitments.

**Address child care limitations**
Families may have young children to care for and may not be able to afford child care during family sessions or parent sessions. If your agency has access to volunteers, ask them to assist with child care while parents are in session.

**Address caregivers’ treatment issues**
Caregivers may need referrals for treatment themselves. Providing independent referrals for caregiver treatment may help to alleviate stress on a family.
Getting Families Involved

Adolescents whose caregivers are involved and engaged in treatment are more likely to have better outcomes than those whose caregivers do not believe that treatment will help and/or are unwilling to work with treatment providers (Dakof, Tejeda, & Liddle, 2001). Specific strategies for family involvement in treatment (See section 4: Family-Based Therapies) include:

**Fostering family motivation:** Determine what changes each family member would most like to see and incorporate those changes into treatment goals to increase the family’s motivation and engagement.

**Validating parents:** Validate parents’ past and ongoing efforts to help their adolescent.

**Acknowledging parental stress:** Acknowledge parents’ stress and sense of burden (as both a parent and an individual).

**Being an ally for parent:** In addition to trying to manage their teen’s emotional and behavioral problems, parents are often overwhelmed by difficulties in their own lives. Be sure to provide active support and guidance.

**Providing education about the nature of mental health problems:** Families may prefer to see their adolescent’s symptoms solely as a medical and/or behavioral problem, and not as a mental health problem, and thus treat it with medical and/or behavioral solutions. In the case of substance abuse, for example, families may believe that once the adolescent is sober, all emotional and/or behavioral problems will disappear. Psychoeducation (See section IV) regarding the nature of substance abuse and emotional problems may help family members better understand their adolescent’s issues.

**Addressing complex family dynamics (See section 2: Complex Trauma; section IV: Treatment Options):** Adolescents often come to treatment with complex family backgrounds, It is important to identify the family members and/or caretakers who have legal custody and practical influence over treatment-related decisions. It is also important to identify others who are most likely to be involved in an adolescent’s care day to day including close friends and mentors who might support the adolescent’s successful engagement in treatment. Be particularly sensitive to situations in which an adolescent does not live with a biological parent.
Building Alliances

As with any treatment, it is important that youth and caregivers feel that their clinician is an ally. This includes having a set of common goals. The entire family must believe that their work with the clinician and participation in treatment will lead to improvement in issues that are important to them. This kind of alliance can be fostered by doing the following:

**Establishing rapport, setting clear boundaries, and allowing for autonomy:**

Many adolescents do not respond to an intervention that they perceive as being imposed upon them, whether by a clinician, parents, or other authority figures. Regardless of the specific treatment approach, it is essential that clinicians get to know an adolescent in the beginning of treatment and develop a solid working relationship. It is also essential that clinicians outline a framework for the therapeutic relationship that establishes clear boundaries but allows for the adolescent to make autonomous decisions.

**Finding out what the adolescent wants to talk about:**

Although adolescents may be reluctant to disclose details about their risky behavior, there are several ways to encourage meaningful conversations that will lead to open discussion about what is going on in their lives. These strategies include the following.

- Discovering and displaying both genuine interest in and respect for his/her unique interests, concerns, and worldview

- Showing some understanding of the culture the adolescent is surrounded by.

- Offering wisdom and guidance that can help the adolescent solve his/her life problems as he/she sees them.

**Informing youth about normal behavior**

Teenagers benefit from contrasting their behavior to that of the average person their age. Although they might believe that “everyone smokes or drinks,” they will be surprised to know, for example, that in a study only 6.7% of 8th-graders reported having been drunk in the 30 days preceding the study (Johnston, O’Malley, & Bachman, 2003). Provide the teenager with information about the difference between recreational use and problematic use (abuse or dependence).
Using appropriate assessment tools

Administer assessment instruments that aren’t face-to-face in order to encourage more disclosure. Adolescents tend to disclose more about topics such as substance abuse and suicidal ideation when they aren’t talking to a clinician. For example, clinicians can use the Adolescent Questionnaire (Adquest), an 80-item self-report measure that includes questions about health, sexuality, safety, substance abuse, and friends, designed to open up many areas of interest and engage the adolescent in conversations involving these topics. (See more about this and other adolescent assessment resources in Section 4, Table 1, of this toolkit).

Discussing the limits of confidentiality thoroughly

To build trust with an adolescent, discuss the limits of confidentiality at the start of treatment and plan with the adolescent specifically how information will be communicated to parents and other authority figures. Stick to your agreement! There is no surer way to lose the trust of an adolescent than by sharing information without the adolescent’s awareness. Reassure the adolescent that if you must disclose information (e.g., if someone’s life is in danger), you will make every effort to tell him/her before you do it.

Employing Motivational Interviewing (discussed in section 4)

Motivational interviewing (MI; Miller & Rollnick, 2002) has been shown to be effective at reducing alcohol and substance use in adolescents with an initial low motivation to change. The scope of this fact sheet cannot address the complexity of MI, but listed below are some of the main principles:

- **Taking an empathic, nonjudgmental stance and listening reflectively.** This involves attempting to understand the teenager’s perspective and helping them feel understood, so that they can be more open and honest with others.
- **Identifying how the adolescent’s current behavior may affect their goals.** This involves working with adolescents to identify personally meaningful goals, and helping youth evaluate whether what they are doing now will interfere with where they want to be in the future.
- **Rolling with resistance.** Rather than arguing with youth when they hit a roadblock, help them develop their own solutions to the problems that they have identified. Thus, youth are not reinforced when being a devil’s advocate for the clinician’s suggestions or recommendations about discontinuing use.
- **Supporting self-efficacy for change.** The belief that change is possible is an important motivator for successful change. Help adolescents be hopeful and confident about their ability to impact their own future in a positive way.

Leaving the door open

When an adolescent wants to terminate treatment, make sure you leave the door open for them so they know that they can come back at any time. Treatment providers note that often it takes awhile for an adolescent to start coming in regularly.
Community members often interact with teens, but they often do not have the training to identify and understand youth at risk. To improve community awareness, providers can:

**Provide information about symptoms associated with traumatic stress**

For example, help parents, providers and community members understand the effects of traumatic experiences on youth functioning.

**Provide information about symptoms of substance abuse**

In addition to understanding the negative health effects of substance use, community members should be able to recognize the signs and symptoms associated with abuse and dependence.

**Provide information about risk and protective factors**

Arming the community with this knowledge will be useful in identifying and treating youth in need, as well as in preventing future difficulties.

**Provide links to help**

This includes information regarding hotlines to call when a person suspects that a child or adolescent is being abused, contacts for guidance during a crisis, and referrals for meeting additional youth and family needs.


HELPING YOUR TEEN COPE WITH

Traumatic Stress and Substance Abuse
All parents hope that their child will grow up without experiencing major difficulties, but sometimes things we never expect can happen. When kids go through stressful and difficult circumstances, they might turn to alcohol and drugs in an attempt to deal with their feelings. Compared to teenagers who are not struggling with these issues, kids with emotional problems and ongoing stress are at greater risk for developing alcohol and drug dependence.

This pamphlet was created to help parents and caregivers who believe their teenagers might be experiencing problems as a result of traumatic stress and substance abuse. You’ll find information about why these problems often occur simultaneously, tips on how to help your teen cope with trauma and stay drug-free, and where to go if your teen needs more help.

What is a traumatic event?

A traumatic event is a situation in which a person perceives grave threat to their physical self or their very life or that of someone close to them. Examples include being involved in or witnessing natural or man-made disasters, violent crimes, automobile accidents, life-threatening illness, sexual abuse, and physical abuse. Teenagers’ response to trauma varies. Some seem to show few, if any, problems as a result of being involved in a traumatic event. Others may go on to develop long-lasting problems, including post-traumatic stress disorder (PTSD).

How can I tell if my teenager has PTSD?

PTSD is an intense emotional and physical response that can be triggered by reminders of the traumatic event. Symptoms are generally classified into three categories:

1. Reexperiencing: Having nightmares, flashbacks, and physical or emotional responses to reminders of the event.

2. Avoidance: Avoiding feelings, thoughts, people, places, or activities that might remind the teenager of the event, and sometimes having feelings of being outside of oneself or disconnected from others.

3. Increased arousal: Being easily startled, having outbursts of anger, having difficulty sleeping or concentrating, feeling increasingly irritable, or frequently being on guard for danger.

Teens with PTSD sometimes develop problems with their peers, avoid school, or exhibit antisocial behavior (e.g., lack of regard for social rules and norms, ignoring the safety of self and others, etc.). They may also have any of the following: suicidal thoughts, increased difficulties associated with school, depression, and anxiety. For these reasons, it is not surprising that teens might turn to alcohol or drugs to try to get away from the problems associated with PTSD.
What are some signs that my teenager might be using alcohol or drugs?

- Academic changes: Dramatic drop in grades or in the ability or willingness to do school work; skipping school
- Social changes: Developing new friends but unwilling to introduce them to family; lack of interest in previously enjoyed activities; decreased attention to physical appearance or cleanliness
- Behavior changes: More forgetful, distracted, jittery, or aggressive; secretive behavior (e.g., locking bedroom door, lying about where they go, sneaking out of the house); increase in borrowing money from family or friends; stealing money; dramatic changes in eating and/or sleeping patterns
- Attitude changes: Significant drop in motivation; withdrawal from responsibilities; being less cooperative

What are the signs of long-lasting substance abuse problems?

Because alcohol and other drugs have such powerful effects on a teenager’s emotional experience, the teen can quickly turn from recreational or occasional use to more serious patterns of drug abuse or dependence.

- Drug abuse refers to a pattern of use in which a person continues to consume drugs or alcohol in spite of very serious associated problems. Drug-abusing teenagers may fail to fulfill major responsibilities, use drugs in situations that are physically dangerous to them, have serious legal problems, or have ongoing problems with friends or family.

- Drug dependence is a more serious pattern of use. As with abuse, the teenager continues to use drugs despite the negative consequences. The adolescent might give up other activities (such as sports or hobbies) that he or she previously enjoyed because drugs become more important, to the point that virtually all of the teen’s daily activities might revolve around drug use. He or she may try unsuccessfully many times to use less or to stop using altogether.

  - The more that alcohol or drugs are used, the more likely they can lead to tolerance, which is the need to take increasingly more in order to be intoxicated or to get the desired effect. The teen might spend a lot more time obtaining and using the drug as well as recovering from its effects. When the teen becomes physically dependent and then tries to use less or stop taking drugs, he or she might experience withdrawal, which refers to physical and mental symptoms that make it hard to function in daily life. Withdrawal symptoms can vary by substance. For example, symptoms of alcohol withdrawal include anxiety, tremors, insomnia, and increased heart rate. Symptoms of cocaine withdrawal include depression, fatigue, vivid nightmares, and increased appetite. If the teen takes more of the drug than he or she intended or realized, this could lead to an overdose. An overdose can cause life-threatening consequences or death.
Why are the risks from using alcohol and drugs greater for adolescents than for adults?

Although recreational drinking and drug use might be common in adults, youth are especially at risk for negative consequences when they start using at a young age. Here’s why:

- Since the teenage brain is still growing and changing, alcohol and drugs can cause more serious damage in teens than in adults. The most affected brain regions include the hippocampus (which is related to learning and memory) and the prefrontal cortex (responsible for critical thinking, planning, impulse control, and regulating emotions).

- Drug and alcohol use interferes with many physiological processes and causes more unstable moods. Adolescent substance use is associated with higher rates of depression, aggression, violence, and suicide.

- Because teens’ decision-making abilities are not fully developed, they are more likely to engage in risky behavior and may further endanger themselves by engaging in risky situations such as drunk driving or walking in unsafe neighborhoods.

- The younger an adolescent is when he or she starts drinking, the more likely he or she is to develop an alcohol problem.

What is the connection between trauma and substance abuse?

It’s not uncommon for teens to use alcohol or drugs to cope with PTSD symptoms. Alcohol or drugs can at first seem to ease their distress. They can give teens pleasurable feelings or help them avoid the intense feelings that can follow stressful experiences. But in the long run, substance abuse can keep the teen in a cycle of avoidance and can make it more difficult to recover from trauma. In order to overcome the distress associated with trauma, teenagers will need help in learning better ways to cope that do not result in additional health and social problems.

Teenagers who already have a history of using substances are also more likely to participate in risky activities (such as driving under the influence or hanging out in unsafe neighborhoods), which can put them at risk of experiencing traumatic events (such as victimization and injury). Because of the many problems associated with alcohol and drug use, these teenagers may have a harder time being able to cope with traumatic events.

Regardless of whether teenagers experienced traumatic stress or substance abuse first, it is clear that these problems can be better understood together. The next few pages offer a few tips on how you can support your teen.
How can I help my teen deal with trauma?

Teenagers benefit from early intervention and ongoing parental support. If the trauma is recurring or has the potential to recur, talk with your teen about ways to minimize risk of future trauma. Remember, safety and both mental and physical health should be top priorities.

Here are some other ways you can support your child during this difficult time:

➤ Some traumatic events can lead to fear, shame, and guilt. Encourage your teen to talk to you about the event, including the ways his or her life has been affected since the event happened and the ways that things have remained the same. To help your teen resolve feelings of guilt, discuss how to more accurately tell the difference between things he or she is responsible for and things he or she is not.

➤ Adolescents exposed to trauma may feel self-conscious about their emotional reactions and worry about how these feelings make them different from their peers. Encourage your teen to openly express his or her feelings about the event to you. Be supportive and don’t criticize.

➤ Help your teen cope and work through feelings of unfairness, shame, guilt, anger, and revenge. Experiencing a traumatic event can cause a radical shift in the way a teen sees the world. Recognize that teens may “act out” or behave in self-destructive ways in an attempt to express their emotions. Helping your teen come up with constructive alternatives will lessen his or her feelings of helplessness.

➤ Learn to recognize your teen’s “triggers” or “reminders” of the traumatic event, as they may lead to a loss of emotional or behavioral control. Be there to offer support when he or she is reminded of the event and becomes upset.

➤ If the event affected the whole family, discuss the possible strain on relationships. Each family member will experience the event in a different way and, therefore, have his or her personal reaction. Be honest about your own difficulty with the event and get help for yourself if necessary.

How can I help my teen stay drug-free?

➤ Provide your teenager with encouragement and praise.
Let your teenager know that you have confidence in his or her ability to do things well, and that you’re proud of him or her. Whenever your teen exhibits good behavior, praise him or her immediately.

➤ Get into the habit of talking to your teenager every day.
In addition to talking about drugs and alcohol, it is important to talk to teens about what is going on in their lives. Ask your teen about things that are going well and things he or she might be having a hard time with.

➤ Be a good role model.
Do not engage in illegal, unhealthy, or dangerous drug use. But, if you do use alcohol, tobacco, or illegal drugs, don’t involve your children in your use. For example, don’t ask your teen to grab you a beer out of the fridge.

➤ Help your child get recommitted to school and the community.
Look for after-school activities your teen could get involved in. Communicate with his or her school board, principal, teachers, and counselors, and advocate for them to get the best education possible. Help your teenager realize that what he or she learns in school will be useful later in life.

➤ Get involved in your teenager’s life.
Take the time to be a part of the activities your teen is involved in by attending games and performances. Find at least one opportunity each week for you and your teen to do something special together. Use some of that time to talk to them about whether their friends use drugs or alcohol.

➤ Make clear rules about what you expect and then enforce those rules.
Discuss why using drugs and alcohol is not acceptable in your family. Set your rules and expectations in advance because rules do not work after the fact. If a rule is broken, follow through with the consequences that you’ve established immediately and consistently. When your teenager does follow the rules, make sure to acknowledge it and praise him or her for it.
How can I get more help for my teen?

If you suspect that your son or daughter has experienced a traumatic event or may be using drugs or alcohol, be sure to talk to your teenager and seek support, and keep the following in mind:

Try to remain calm and be specific about your concerns. It can be helpful to express your love for your teen and that you feel worried, and that you want to listen to him or her. Let your teen know that you will be part of the solution and that you are there to offer help and support.

Seek support from the school and your community. Get in touch with teachers and school counselors to find out how your son or daughter is doing. Your teen’s pediatrician, school counselor, or spiritual leader can help you identify mental health and substance abuse counselors and resources in your area.

Consult national databases. Look on the Internet for information on the subjects discussed in this pamphlet as well as for referrals to sources you can turn to in your own community.

Educate yourself by seeking out information from other reputable sources. See a partial list of resources on the next page.

Where can I find useful resources on the Internet?

For information about National Mental Health and Substance Abuse Treatment Centers:

http://mentalhealth.samhsa.gov/databases
http://dasis3.samhsa.gov

For additional information about trauma and substance abuse:

http://mentalhealth.samhsa.gov/child/childhealth.asp
www.nida.nih.gov
www.NCTSNet.org
www.bu.edu/atssa/

Additional information from sources used in this pamphlet:

www.family.samhsa.gov/get/treatment.aspx
www.adolescent-substance-abuse.com
www.nimh.nih.gov/publicat/violence.cfm
www.ncptsd.va.gov/facts/specific/fs_children.html
www.theantidrug.com
www.nationalyouth.com/substanceabuse.html
About the National Child Traumatic Stress Network

Established by Congress in 2000, the National Child Traumatic Stress Network (NCTSN) is a unique collaboration of academic- and community-based service centers whose mission is to raise the standard of care and increase access to services for traumatized children and their families across the United States. Combining knowledge of child development, expertise in the full range of child traumatic experiences, and attention to cultural perspectives, the NCTSN serves as a national resource for developing and disseminating evidence-based interventions, trauma-informed services, and public and professional education.

This project was funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies, and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.
Using Drugs to Deal with Stress and Trauma
Are You Using Drugs Because...

- You've been through a lot of stress in your life and feel overwhelmed, hurt, or angry?
- You're trying to stop hurting, numb yourself out and feel nothing, because many things in your life are going wrong?
- You feel really nervous, on edge, irritable, or have trouble sleeping?
- You feel afraid, helpless, or horrified about bad things that have happened to you or someone else?
- You are anxious, easily startled, really angry, really sad, feel hopeless, or can’t concentrate?

Then read on. This booklet may have important information for you.

"Hey, I'm Brian.*
I'm 17 years old.
It's not easy to talk about my problems, but I want to help other kids going through the same stuff. I haven't always made the best choices but I'm really trying to turn things around."

"Hi. My name is Janice.*
I am 16 years old.
I want to tell you my story.
I've been through a lot in my life and I've made a few mistakes along the way, but I hope that in sharing this with you, maybe your life can be different."
Did You Know That...

Sometimes people turn to alcohol and drugs to deal with stressful and even traumatic experiences.

A traumatic event is a time in your life when something very scary, sad, or dangerous happens to you or someone close to you. It can be something that you saw or something that you went through, and it might have made you believe that you or someone else was going to die or was going to get very badly hurt physically or emotionally.

Traumatic events might happen only once and last a short time, or they might happen many times over many months or even years. After these traumatic events you might have very strong feelings that you feel you cannot control—like feeling really scared, horrified, and helpless.

A traumatic event includes being physically or sexually abused or seeing these things happen to someone you care about. Sometimes a traumatic event can be seeing violent things happening in your neighborhood or at school, or when someone you love dies. Being in a natural disaster like a hurricane or tornado, or a disaster caused by people like a fire or terrorist attack are also examples of traumatic events. There can be other forms of traumatic events. If something happens that scares or upsets you to the point that it is very hard for you to deal with, it is a traumatic event.

“I’ve had difficulties all my life. When I was little, my parents were always fighting. At first, I tried to stay out of the way, but when I got tired of it, I started fighting back. As a teenager, I’ve been kicked out of my house many times, bullied in school, and constantly threatened in my own neighborhood. I started to get really angry at everyone, and eventually I got into a lot of trouble. During the toughest times, drinking and smoking seemed to be the only things I had to look forward to.”

Our Body’s Response...

When we think that something dangerous or threatening may happen, our body’s normal way of reacting is to act as soon as possible to avoid being hurt. This is our body’s natural way of surviving and protecting itself. When we react like this we may have strong physical or emotional feelings, our bodies may get very tense, we may have problems breathing, or we might have other reactions.

Our body’s alarm response begins to work right away to help the organs in the body react better to the threat. There are three ways the body responds: fight, flight (get away from the situation), or freeze (be unable to do anything to help ourselves or even scream, as if we were frozen to the spot). When that alarm begins to work we may feel or experience any of the following:

- Heart pounding
- Heart palpitations
- Fast pulse
- Feeling like you can’t move
- Cold hands
- Pale face and skin
- Nausea
- Feeling like you are detached from yourself
- Sweating
- Clammy feeling
- Blurred vision
- Feeling like you are spacing out into another world

“When I was 6 years old, I remember staying awake at night, in a corner, waiting for the fighting between my parents to stop and hoping that my mom wouldn’t get hurt again. Even for a while after the fighting stopped I couldn’t sleep, and I felt shaky and tense.”
Trouble managing your emotions: This means that it is hard for us to control our feelings and emotions. We may feel very anxious, worried, nervous, or fearful, and not want to participate in daily activities like school or social events. We may get angry so fast that it feels like we can’t stop ourselves from yelling or acting out. Or we may feel very sad or depressed, and have problems like constant crying, trouble concentrating, irritability, feeling guilty or hurt, or having thoughts of wanting to die.

Trouble managing behavior: This means having problems controlling what we do. After experiencing threat or harm, we may still have a lot of anger and may want to get even or protect ourselves. This may lead us to act in aggressive or destructive ways that cause harm to others, such as frequent arguing, fighting, or damaging other people’s property. Going through a lot of stress can also lead us to stop trying to protect ourselves and start doing things that are dangerous, risky, or even harmful to us. This may include cutting or injuring ourselves, using drugs or alcohol even after experiencing negative consequences, or putting ourselves in unsafe situations like drinking while driving.

Teenagers sometimes turn to alcohol and other drugs to cope with negative feelings and emotional distress.

Long-Lasting Reactions...

After we have gone through a traumatic event, sometimes, our body’s alarm system begins to work even when there is no danger or threat anymore. These long-lasting reactions to traumatic experiences can include:

- **Re-experiencing:** This means we get memories of or feelings about what happened such as a flashback, which is when the body reacts as if we are living through the traumatic event again.

- **Avoidance and numbing:** This means avoiding the feelings, thoughts, people, places, and/or activities that might remind us of the event; and feeling like we are outside of ourselves or disconnected from others.

- **Increased arousal:** This means being easily scared or startled, having outbursts or fits of anger, having problems sleeping or concentrating, feeling more irritable or angry than usual, and being on-guard for danger all the time.

“When I was younger, I was always on edge, thinking about my problems constantly, wondering if my mom and I would be safe. Since I’ve had stress pretty much all my life, it feels like my brain has been trying to tune out all possible emotions, maybe as a way to protect myself from suffering all the time. It has taken a while for me to get my life back. I’ve been numb for so long, it’s only now that I’m able to start to feel again. It feels so good now to cry and know why I am sad, to get mad and know exactly what I am angry about, and especially to feel that there is something I can do about these feelings.”
Reasons You Might Use...

“I used to drink to feel more comfortable and relaxed when I hung out with people I didn’t know well. I felt like I could talk to anyone and didn’t feel shy like I normally do. When my friends are drinking, I worry what they’ll think if I say I don’t want any. But it wasn’t all about fitting in. If I felt stressed out or upset about something, having a few drinks made me stop worrying about things and forget all my problems.

But drinking started getting in the way of other things in my life. I felt hung over and sick a lot of days and didn’t want to get out of bed. I also did a lot of stupid things while I was drunk, and the next day I was embarrassed and regretted things I done or said. It just didn’t feel worth it anymore...feeling sick and bad about myself for a few hours of feeling good.”

Negative Effects of Using...

Many people use drugs to find temporary relief from their problems, to feel good about themselves and have fun with the people around them, and just to try it out and have a good time. After experiencing a stressful and traumatic event, some people use to avoid having to think about bad things that happened, or to stay away from anything that reminds them about the past. But there are a lot of problems that come with using drugs and alcohol, which are usually much greater than the reason for using in the first place. Some of these negative effects are immediate, and some last for a long time.

<table>
<thead>
<tr>
<th>Alcohol:</th>
<th>Feeling depressed, slow, sluggish</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Headaches, nausea, problems walking or moving normally</td>
</tr>
<tr>
<td></td>
<td>Blacking out (forgetting what you were doing, who you were with, or where you were)</td>
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<tr>
<td></td>
<td>Passing out, getting aggressive, getting in or causing accidents</td>
</tr>
<tr>
<td></td>
<td>Saying/doing things you would not do if you were sober</td>
</tr>
<tr>
<td></td>
<td>Making a fool of yourself in front of others</td>
</tr>
<tr>
<td></td>
<td>Death from alcohol poisoning</td>
</tr>
<tr>
<td>Cocaine:</td>
<td>Feeling angry, irritable, anxious, restless</td>
</tr>
<tr>
<td></td>
<td>Feeling paranoid (feeling people are after you or talking about you)</td>
</tr>
<tr>
<td></td>
<td>Having chest pain, heart palpitations, irregular heartbeat, problems breathing</td>
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<tr>
<td></td>
<td>Stroke or seizures</td>
</tr>
<tr>
<td></td>
<td>Death by overdose</td>
</tr>
<tr>
<td>Marijuana:</td>
<td>Poor judgment; poor coordination, blurred vision</td>
</tr>
<tr>
<td></td>
<td>Anxiety, paranoia</td>
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<tr>
<td></td>
<td>Losing your memory, problems paying attention or concentrating</td>
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<tr>
<td></td>
<td>Overeating</td>
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<tr>
<td>Nicotine:</td>
<td>Cancer, lung disease, heart problems</td>
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<td></td>
<td>Trouble catching your breath</td>
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<td></td>
<td>Bad breath</td>
</tr>
<tr>
<td></td>
<td>Death</td>
</tr>
<tr>
<td>Ecstasy:</td>
<td>Permanent brain damage</td>
</tr>
<tr>
<td></td>
<td>Paranoia, hallucinations, depression, anxiety, panic, sleeping problems</td>
</tr>
<tr>
<td></td>
<td>Nausea, fainting, muscle cramping, chills, shaking, problems moving</td>
</tr>
<tr>
<td></td>
<td>Death from overdose</td>
</tr>
</tbody>
</table>
“Smoking pot relaxed me and made everything seem more fun. I always heard that smoking pot isn’t even that dangerous, so what’s the big deal if I smoked a joint to make things a little less boring?

But I decided to quit because it started causing some problems that I didn’t expect. I was having trouble concentrating and started messing up at work. A few times, I almost got fired for the stupid mistakes I was making. I felt lazy all the time and was gaining weight because of how much we’d eat when we got high. Smoking pot made things more fun sometimes, but I didn’t like what it was doing to my body and mind. Eventually, a friend gave me some coke, and after a while smoking weed was not enough. When I got really into it, all I could think about was getting high, and I didn’t care if I got in trouble for it.”

“Heroin:
- Paranoia, depression, sleeping problems, nausea, vomiting, stomach cramps
- Problems having sex
- Constipation or diarrhea, sweating, overall body pain
- Risk of HIV/AIDS, hepatitis, or other infectious diseases through sharing needles
- Death from overdose

Inhalants:
- Severe headache, dizziness
- Brain damage
- Choking, suffocation
- Death

All substances hurt your ability to make good choices. Using them makes it much more likely that you will engage in risky sexual behavior, putting you at risk for getting pregnant (or getting someone pregnant) and catching HIV/AIDS or other sexually transmitted diseases.

“I remember everyone always asking me, why do you keep using drugs? Don’t you see you’re messing up your life? Honestly, at that time, it was the only thing that made me feel good. I knew I had a problem, but I couldn’t imagine what my life would be like if I stopped using. It was a big part of my life and I didn’t know any other way to cope with the stuff I was going through. Would my friends still want to hang out with me? Would I still want to hang out with them?”
In the Long Term...

The consequences of drugs are so strong they actually change the way your brain works. Over time your brain loses the ability to feel good from the things that used to make you happy, like eating your favorite food, hanging out with friends, etc. The drug craving becomes really strong, creating strong feelings of needing to find and use the drug. Basically, the brain wants the drug chemicals instead of the natural brain chemicals, and it becomes very hard to control this pattern of drug use.

Drugs lose their positive effect on the brain over time. You begin to develop tolerance. This means that taking the same amount does not give you the same pleasure. You need more and more of it to get the original effect. At the same time, your body begins to adjust to having the drug and you may notice you start to feel bad emotionally and physically if you stop using the drug. This is called withdrawal.

Over time, the brain spends a lot of energy figuring out how to find and get drugs because it wants to find a way to stop bad feelings and the bad physical sensations. This is what we call addiction, and once it develops it is very hard to stop. This is why people who get to this point continue to use even when they start to experience some of the other bad consequences of using drugs, like health problems, trouble with the law, failing at school, conflict with parents or friends. Once people become addicted, most lose control of their lives. Willpower alone is not enough to fight addiction. At this point you need professional treatment to stop using.

“If someone would have told me I was going to end up being a slave to the drug, be numb to all feelings, and do things like steal or jump people for watches just to get a little coke, not care about myself and be gross by doing lines off the toilet, I wouldn’t have started in the first place.”

“When you do drugs, people don’t want to have you in their house, you can get diseases, you may do nasty things just to get high, you will feel gross. I always heard people telling me that drugs are bad for me and that people do stupid things when they are high, but I never thought it would actually happen to me. At some point I stopped caring about myself or what I did to get high, and that’s when I realized I wasn’t in charge anymore.”
Problem Solved?

- Using drugs to feel good only works for a short time. Withdrawal, side effects, and long-term consequences can make you feel as bad as before, or worse than ever!

- Using drugs can result in trouble with your family, friends, school, and the law; increased risk of car accidents, pregnancy, HIV/AIDS and sexually transmitted diseases; addiction; dependence; overdose; hospitalization, or death.

“I knew I needed help, but I didn’t know where to go. Talking to a teacher or guidance counselor seemed so lame and I didn’t want to be like an after-school special. But I figured it was their job to help kids with this sort of stuff, and I didn’t know what else to do. Telling my story was really hard, but it felt good to get it all out and not be the only one dealing with it anymore. My therapist doesn’t judge me and understands that everyone makes mistakes. When you are lost and start using, you have nothing to hold onto. Kids who have changed their lives for the better actually feel part of something, proud of themselves. When you are drugged, you don’t see the light through the fog. When you see no help you don’t care about yourself.”

“It took me a while to realize I wanted to quit. When I first started getting help, I learned that I didn’t always have to drink or use drugs to deal with my feelings and my worries—I learned that I had other options. So, at first, I decided to stop using so much. Once I did that, I started feeling pretty good about myself, emotionally and physically. I was proud that I could actually take some control over my desire to use. I started to realize my own strength, and with that I decided to quit entirely. If you told me when I first started getting help that I would quit eventually, I would not have believed you. But, after a while, it felt like the right thing to do. I had learned other ways to cope with the problems and stress in my life without turning to drugs.”

“I never thought of ‘therapy.’ Agreeing to go the first time was the hardest thing to do. For so long I felt like I should be able to fix things on my own. I was afraid that needing help meant I was weak. But I was wrong—it actually takes a lot of strength and courage to know when it’s time to ask for help. Once I got started, it felt really nice to have support from people around me that cared and knew how to help. It takes work to stop using but I don’t have to do it all alone. I’m learning to make choices that are good for me, and going to therapy was really the first one.

“Of course there are some days I’d rather not talk to my counselor. I’d rather hang out with my friends or watch TV or just relax after a long day. And sometimes I don’t feel like I have anything to even talk to her about. But once I’m there I’m always glad I went. It feels really good to know someone cares about me and wants to listen, even if I don’t think I have that much to say.”
You Decide...

Here are some other ways you can feel good instead of using drugs:

**Therapy:**
- Talking to someone (other than friends and family) can help give you a fresh perspective and teach you new ways to cope with problems.
- Therapy can help make you feel understood. With therapy you can learn more about yourself.
- Therapy doesn't have to cost a lot. Talk to your parents, doctors, teachers, or other adults about options that are affordable (or free) in your school or neighborhood.

**Imagining situations in which you might be pressured to take drugs and think of creative ways to refuse:**
- Sometimes “just saying no” isn’t easy. But there are other ways to refuse, like saying you’re on probation and would get in trouble or that you have a test tomorrow and can’t risk failing.
- Think of creative ways of saying no that won’t lead to more questions or pressure.

**Exercise:**
- Going for a run or long walk can have amazing effects on how you feel.
- During exercise your body releases some chemicals (called endorphins), which reduce stress and make you feel better all over.
- In addition to the short-term benefits, in the long run you will have more energy and feel good about your body.

**Try a new hobby or sport:**
- Go to your local park and join a pick-up game of basketball or soccer.
- Make a list of things you’re interested in and go check out some books from the library to become an expert!
- Art projects can be an inexpensive way to relax and express your creativity...You need only paper and a pencil to become an artist, poet, or songwriter.
- Check out a free local newspaper to see what’s going on in your community this weekend. You’ll be amazed how much is going on that you never knew about!

**Take care of yourself:**
- Eating your favorite foods, renting a great movie, or taking a hot bath can make you feel good about yourself and more relaxed.
- Think about what made you feel good as a little kid and try it again!

“Some friends may tell you there’s nothing to live for because your life is crazy anyway, so you might as well use and not care about the consequences. But nothing feels better than actually going to work, paying for your own things, doing a sport and feeling good about it, or doing an art project or performing and enjoying yourself. Those kinds of things don’t leave you feeling guilty and bad about yourself. They end up making you feel great.”
For More Information...

To learn more about substance use, traumatic stress, and many other related subjects, you may want to search the websites of the organizations listed below:

National Child Traumatic Stress Network
www.NCTSN.org

National Institute of Drug Abuse (NIDA) for Teens
teens.drugabuse.gov

Substance Abuse and Mental Health Services Administration
www.family.samhsa.gov

For more information, support, or to find a place to get help near you, call:

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Youth Crisis Hotline</td>
<td>1-800-448-4663</td>
</tr>
<tr>
<td>National Drug Information Treatment and Referral Hotline</td>
<td>1-800-662-HELP</td>
</tr>
<tr>
<td>Nationally Supported Lifeline</td>
<td>1-800-273-TALK</td>
</tr>
<tr>
<td>National Runaway Switchboard</td>
<td>1-800-621-4000</td>
</tr>
<tr>
<td>National Sexual Assault Hotline</td>
<td>1-800-656-HOPE</td>
</tr>
<tr>
<td>National Domestic Violence Hotline</td>
<td>1-800-799-SAFE</td>
</tr>
<tr>
<td>National Child Abuse Hotline</td>
<td>1-800-422-4453</td>
</tr>
</tbody>
</table>

In the event of an emergency, always call 911.

About the National Child Traumatic Stress Network

Established by Congress in 2000, the National Child Traumatic Stress Network (NCTSN) is a unique collaboration of academic and community-based service centers whose mission is to raise the standard of care and increase access to services for traumatized children and their families across the United States. Combining knowledge of child development, expertise in the full range of child traumatic experiences, and attention to cultural perspectives, the NCTSN serves as a national resource for developing and disseminating evidence-based interventions, trauma-informed services, and public and professional education.

This project was funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies, and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.
Recognizing Drug Use in Adolescents

A Quick Guide for Caregivers and Adults

NCTSN
The National Child Traumatic Stress Network
Concerned caregivers and adults play an important role in ensuring that youth receive adequate help. However, at times it is hard to tell that youth are developing a problem with alcohol and drugs. This guide summarizes the signs of intoxication, use, and abuse commonly reported by substance users. It is important to recognize, however, that some of the behaviors and experiences described in this booklet may also be present among adolescents who are not using substances. For this reason, when deciding on the best course of action to obtain help for your teenager, make sure to talk with your teenager, gather as much information as possible, and consult with health professionals available in your community.
Alcohol and drug use poses significant risks for the healthy development of adolescents, yet substances of abuse are often readily accessible at school, at home, and in the community. This guide has been developed to facilitate early identification of substance use problems in youth. Included is information about common drugs of abuse and key information to help identify youth at risk. Recognizing the signs of use includes how a teenager might look, act, and feel while intoxicated as well as drug paraphernalia and language associated with each drug.

Signs of intoxication vary by type of drug. Here are common signs a teen has recently used drugs or alcohol:

- Impaired judgment and motor skills
- Nausea and vomiting
- Lack of coordination
- More talkative than usual
- Rapid heartbeat and breathing
- Bloodshot eyes
- Visual or auditory hallucinations
- Marked difference in appetite
- Extreme moods, like euphoria or depression
- Slurred speech
- Agitation, irritability, anxiety, paranoia, or confusion
- Tremors, shaking
- Excessive energy or drowsiness

The following items are often used in connection with illicit drugs:

- Pipes and rolling papers
- Syringes
- Razor blades
- Small mirror or piece of glass
- Metal spoons or foil shaped into a bowl
- Small glass vials or plastic baggies
- Latex balloons
- Pacifiers, hard candy, lollipops
- Sugar cubes, Altoids
- Altered soda cans or bottles
- Empty medicine bottles/blister packs
- Excessive use of incense, cologne, or room deodorizers like Febreze®

If you suspect an overdose or see evidence of a bad reaction to substances of abuse, call 911 immediately.
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Other names for alcohol: Booze, liquor, hard A, sauce

Terms for intoxication: Drunk, wasted, tipsy, trashed, smashed, gone

Common settings for alcohol use: Alcohol is consumed in a variety of settings where supervision is limited (e.g., friends’ homes, secluded woods, or parks at night).

Paraphernalia: Shot or bar glasses, a funnel with a long tube attached, product advertising

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<tr>
<th>HOW SOMEONE CURRENTLY USING ALCOHOL MIGHT:</th>
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<tr>
<td>L O O K</td>
</tr>
<tr>
<td>Dilated (large) pupils</td>
</tr>
<tr>
<td>Flushed cheeks or ears</td>
</tr>
<tr>
<td>Staggering or off-balance</td>
</tr>
<tr>
<td>A C T</td>
</tr>
<tr>
<td>Giggly or talkative</td>
</tr>
<tr>
<td>Slurring words</td>
</tr>
<tr>
<td>Poorly coordinated or slow reactions</td>
</tr>
<tr>
<td>Aggressive</td>
</tr>
<tr>
<td>Making uncharacteristic judgments</td>
</tr>
<tr>
<td>F E E L</td>
</tr>
<tr>
<td>Less inhibited</td>
</tr>
<tr>
<td>Quickly changing moods</td>
</tr>
<tr>
<td>Disoriented and dizzy</td>
</tr>
<tr>
<td>Excessively calm or generally unconcerned</td>
</tr>
<tr>
<td>Nauseous</td>
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</table>

Lingering effects: Consuming large amounts of alcohol can result in a hangover. Symptoms include: headache, nausea, dehydration and thirst, grogginess and fatigue, and sensitivity to light and sound.

Dangers of starting young: The younger someone starts drinking, the more likely it is that he or she will develop alcohol problems at some point in life. Because the adolescent brain is still developing, drinking at a young age can have serious effects on the brain, especially to the prefrontal cortex, which is involved in decision making and impulse control. Heavy drinking in the teen years is also linked to learning and memory difficulties.
**Other information:** Sweet malt liquor beverages are often an adolescent’s first introduction to alcohol. Kegs (metal barrels containing 15 gallons of beer) are often found at large parties as they are relatively inexpensive and are a convenient mechanism for transporting large quantities of alcohol. A funnel with a long plastic tube attached, sometimes called a “beer bong,” can be used to consume alcohol very quickly.

**Overdose information:** Drinking too much alcohol, especially in a short amount of time, can result in alcohol poisoning, a potentially life-threatening condition. Symptoms include vomiting, slow or irregular breathing, pale or blue skin, seizures, and unconsciousness. How much alcohol is “too much” depends on a variety of factors including age, weight, sex, rate of alcohol consumption, and whether or not the person has recently eaten. In addition, taking alcohol in combination with other drugs (either prescription or illicit) can enhance the effects of alcohol and increase the danger of overdose. For information regarding drug interactions, consult your pharmacist.
Cocaine

Other names for cocaine:
Coke, dust, toot, snow, blow, sneeze, powder, lines, lady, nose candy (powder cocaine), and rock (“crack” cocaine)

Terms for intoxication:
Chalked up, amped up, chasing the dragon (inhaling vapors from tin foil), speed-balling (injecting a mixture of cocaine and heroin)

Common settings for drug use:
Cocaine is often snorted at nightclubs, dance parties, or other social situations where having high energy levels might be acceptable or desired.

Paraphernalia:
Small spoon-shaped items that can fit in the nostrils, rolled bills or straws for snorting, razor blades for making lines of powder cocaine, small bottles with screw-tops or small plastic packets with white residue, small pipes for smoking

HOW SOMEONE CURRENTLY USING COCAINE MIGHT:

<table>
<thead>
<tr>
<th>L O O K</th>
<th>A C T</th>
<th>F E E L</th>
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</thead>
<tbody>
<tr>
<td>Dilated pupils</td>
<td>Restless, excited, or agitated</td>
<td>Increased energy</td>
</tr>
<tr>
<td>Bloodshot eyes</td>
<td>Extremely talkative</td>
<td>Extremely alert and aware</td>
</tr>
<tr>
<td>White powder on face or clothing</td>
<td>Paranoid (especially at higher doses—see overdose information)</td>
<td>Warm or hot due to increased body temperature</td>
</tr>
<tr>
<td>Runny or bloody nose</td>
<td></td>
<td>Racing heart</td>
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<tr>
<td>Red or irritated nostrils</td>
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Lingering effects: The high from cocaine is relatively short-lived (approximately 15–30 minutes when snorted, and 5–10 minutes when smoked), and many users experience a depressed mood after using, known as a “crash,” that includes irritability, fatigue, and depression. Frequent users who snort may have a chronic runny nose or frequent nosebleeds as a result of damage to their nasal tissues. Prolonged use of crack cocaine can lead to aggressive and paranoid behavior.
Other information: The word “cocaine” refers to the drug in both powder form (previous page) and more potent crystalized form, known as “crack,” (top left), which is smoked. Individual units of crack cocaine are known as “rocks.”

Cocaine is made from the coca plant and causes a short-lived high that is immediately followed by feelings of depression, edginess, and a craving for more of the drug. Cocaine may be snorted as a powder, converted to a liquid form and injected with a needle, or processed into a crystal form to be smoked with a pipe (right). Some of the items used to convert the powder to a crystal form are depicted at the lower left.

Users frequently develop tolerance to cocaine and have to continue to increase their use to achieve the feeling obtained at their first use.

Overdose information: The chemical properties of cocaine cause blood vessels to decrease in size and cause the heart to beat more rapidly. The combination of these two effects can result in a heart attack, burst blood vessel, or a seizure. At high doses, users may exhibit paranoia and aggressive or violent behavior. Additionally, the combination of cocaine and alcohol can result in sudden death.
What is DXM: DXM is an ingredient commonly found in over-the-counter cough medication that produces hallucinogenic and dissociative effects when taken in large doses.

Other names for DXM: Robo, tussin, robomax (for Robitussin™), skittles, triple-C (for Coricidin Cough & Cold™), Drix (for Drixoral™)

Terms for DXM intoxication: Tripping, robo-copping, tussing; DXM users also refer to “plateaus” of use (see reverse side for more information)

Common settings for drug use: Teens report use in both public party settings and in private settings such as the home or a friend’s home.

Paraphernalia: Ammonia, citric acid, and lighter fluid can all be used to “extract” DXM from cough syrups. Evidence of home-based chemistry experiments, empty bottles, boxes, or blister packs of cough medicine should be cause for concern.

<table>
<thead>
<tr>
<th>HOW SOMEONE CURRENTLY USING DXM MIGHT:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOOK</strong></td>
</tr>
<tr>
<td>Dilated pupils</td>
</tr>
<tr>
<td>Facial redness</td>
</tr>
<tr>
<td>Lethargic, “slowed down,” or disoriented</td>
</tr>
<tr>
<td>Doubled over with abdominal cramps</td>
</tr>
</tbody>
</table>

Lingering effects: Lethargy, sadness, or depression are common after use. Unpleasant “hangover” effects are noticeable with increased use.
Other information: DXM users report four levels of intoxication, referred to as “plateaus,” associated with increased dosages. Symptoms and dangers of each are outlined below:

1st — A feeling similar to alcohol or marijuana intoxication, as well as the ability to operate in social situations (associated with drinking the equivalent of 2–3oz of maximum strength cough syrup)

2nd — Visual hallucinations, impaired physical coordination, and some vomiting (3–5oz of maximum strength cough syrup)

3rd — Overwhelming feelings of disorientation, including highly impaired vision, hallucinations, delusions, and lack of muscular coordination (5–8oz of maximum strength cough syrup)

4th — Extreme “out of body” experiences, inability to move or communicate, profuse sweats, extreme nausea, blackouts (more than 8oz of maximum strength cough syrup)

Overdose information: While there is a danger of poisoning from DXM itself, there is an even greater danger from overdosing on a medication with DXM combined with other active medications such as acetaminophen, which can cause liver failure. For more information about possible interactions and overdose information, talk to your pharmacist.
Ecstasy (MDMA)

Other names for ecstasy: E, X, XTC, hug drug, Adam

Terms for ecstasy intoxication: Tripping, rolling

Common settings for drug use: Ecstasy is commonly referred to as a “club drug” and is often found at nightclubs or underground parties called raves.

Paraphernalia: Ecstasy users often use hard candy, lollipops, pacifiers, candy necklaces, or other objects to combat the common side effects of jaw-clenching or teeth-grinding. Candy and mints can also be used to conceal ecstasy tablets. Fluorescent light sticks are also popular accessories.

**HOW SOMEONE CURRENTLY USING ECSTASY MIGHT:**

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilated pupils</td>
<td>Heightened emotional responses</td>
<td>Heightened perception to color,</td>
</tr>
<tr>
<td>Sweaty and thirsty</td>
<td>(more empathetic than usual)</td>
<td>texture, touch, and sound</td>
</tr>
<tr>
<td>Hyper-alert</td>
<td>Fatigued</td>
<td>Thirsty and parched</td>
</tr>
<tr>
<td>Clenched jaw</td>
<td>Agitated (see “Overdose Information”)</td>
<td>Calmness and well-being</td>
</tr>
<tr>
<td>Overheated while reporting feeling cold</td>
<td></td>
<td>Desire to be close to others</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nauseous</td>
</tr>
</tbody>
</table>

**Lingering effects:** After using, an individual is likely to feel lethargic, sad, or depressed. These unpleasant “morning after” effects intensify with increased use. Longer-term effects can include depression, trouble sleeping, paranoid or confused thoughts, and anxiety weeks after taking the drug.
**Other information:** Ecstasy is usually found in the form of a tablet with a symbol or “brand” stamped on one or both sides (below right) but can also be found as a powder. The image below left shows the relative size of various drugs.

**Overdose information:** Excessive agitation can indicate an overdose, which often occurs when users “stack” doses, taking more than one dose at a time or within a short period. An MDMA overdose is characterized by high blood pressure, faintness, panic attacks, and, in more severe cases, loss of consciousness, seizures, and a drastic rise in body temperature. MDMA overdoses can be fatal, as they may result in heart failure or extreme heat stroke.
Other names for heroin: Smack, H, skag, junk, horse, brown sugar

Terms for heroin use: Mainlining (injecting), chasing the dragon (smoking)

Common settings for drug use: Heroin is now frequently smoked or snorted as well as injected, increasing its attractiveness to young people. The drug is most commonly used in private settings due to its sedative effects.

Paraphernalia: Balloons, metal spoons, straws, syringes, needles, string or elastic cord, aluminum foil, lighters

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flushed skin</td>
<td>Nodding head (&quot;on the nod&quot;)</td>
<td>Heaviness in arms and legs</td>
</tr>
<tr>
<td>Constricted (small) pupils</td>
<td>Slow or slurred speech</td>
<td>Surge of euphoria followed by sense of satiety</td>
</tr>
<tr>
<td>Droopy eyelids</td>
<td>Slow gait</td>
<td>Dry mouth</td>
</tr>
<tr>
<td></td>
<td>Slowed breathing</td>
<td>Constipation</td>
</tr>
<tr>
<td></td>
<td>Vomiting</td>
<td></td>
</tr>
</tbody>
</table>

Special health concerns: Users who inject heroin are at higher risk for infectious diseases including hepatitis and HIV/AIDS. They may also experience complications such as collapsed veins, abscesses at injection sites, bacterial infections, and infection of the lining of the heart. Additionally, users who smoke or snort, rather than inject, are at just as much risk for overdose as those who inject the drug.
**Other information:** Heroin is bought in powder form and ranges in color from white to brown. It may be compressed into pills or packaged in small balloons (left). The powder is mixed with water and heated over a flame, often using a spoon. Cord or elastic may be used to tie off an arm before the heroin is injected using a syringe.

**Overdose information:** Because the purity of street heroin varies, there is no “safe dose.” Impurities in the batch can cause complications and overdose. In addition, users develop tolerance quickly, and a normal dose for a regular user can be fatal for a novice. Tolerance can drop after a period of non-use, and users have been known to die upon returning to their “regular dose” after an abstinence period of a few weeks.

Symptoms of overdose include muscle spasms, slow and labored breathing or no breathing, pinpoint pupils, cold and clammy skin, bluish fingernails and lips, low blood pressure, weak pulse, disorientation, delirium, and coma.
Inhalants

Other names for inhalants: Laughing gas, whippets (nitrous oxide), poppers or snappers (amyl nitrate), rush, bolt, locker room, bullet, climax (butyl nitrite), poor man’s pot

Terms for inhalant use and intoxication: Huffing, sniffing, bagging, glading

Common settings for drug use: Basement, garage, bedroom or bathroom, the woods or secluded areas of parks, areas with no adult supervision

Paraphernalia: Spray cans, paint cans, gasoline, cleaning solutions, office supplies (e.g., correction fluid, permanent markers, glues and other adhesives), saturated clothing, paper and plastic bags, balloons

HOW SOMEONE CURRENTLY USING INHALANTS MIGHT:

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilated pupils</td>
<td>Disoriented</td>
<td>Lightheaded</td>
</tr>
<tr>
<td>Watery eyes</td>
<td>Uncoordinated</td>
<td>Nauseous</td>
</tr>
<tr>
<td>Runny nose</td>
<td>Slurred speech</td>
<td>Headache</td>
</tr>
<tr>
<td>Drowsy or in a stupor</td>
<td>Vomiting</td>
<td>Buzzing in the ears</td>
</tr>
<tr>
<td>Stains around mouth or nose</td>
<td>Moody</td>
<td>Numbness</td>
</tr>
<tr>
<td>Slowed breathing</td>
<td>Agitated</td>
<td>Euphoric</td>
</tr>
<tr>
<td>Fumes on clothing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lingering effects: Inhalant intoxication is considerably briefer than that of other drugs, typically lasting between 15 and 30 minutes, which may add to its appeal. Users can prolong intoxication to several hours by using repeatedly, but they typically exhibit no symptoms the following day.
Inhalants

**Specific signs of inhalant use:** Caregivers may notice missing or hidden empty containers of paint, cleaning solutions, gasoline, and office supplies including correction fluid, adhesives, and permanent markers. Users may have stains around the mouth, nose, or on their hands, and fumes on their clothing.

**Other information:** Inhalants can be ingested in a variety of ways, including inhaling directly from a container (e.g., aerosol can, rubber cement, etc.), sniffing fumes from a paper or plastic bag held over the mouth and nose, inhaling from a balloon filled with the gas, or sniffing a fabric soaked in the substance.

The chemicals in inhalants can be extremely dangerous and potentially damage the lungs, liver, kidneys, heart, and brain. Inhalant use can also cause permanent damage to the nervous system. Long-term use can lead to hearing loss, limb spasms, and bone marrow damage. Because inhalants are highly volatile substances, even a small spark can cause a fire or explosion in enclosed areas. Users may suffer burns as a result.

**Overdose information:** Inhalant use can result in sudden death in several ways. Users may die from lack of oxygen caused by inhaling the chemicals, suffocate on the bag used to inhale, choke on vomit, or suffer sudden cardiac arrest known as “sudden sniffing death syndrome.” There is no “safe dose” of an inhalant. Overdose is unpredictable and can occur at any time.
**LSD (lysergic acid diethylamide)**

**Other names for LSD:** Acid, blotters, tab, orange sunshine, window pane.

**Terms for LSD intoxication:** Tripping, trippin’. Many terms refer to method of “delivery” (i.e., microdots or tabs), or to the pattern on the blotter paper (i.e., Bart Simpson, planets).

**Common settings for drug use:** LSD can be easily hidden and can thus be used in many different settings. It is often used in calm, quiet settings, or settings viewed as conducive to hallucinogenic effects.

**Paraphernalia:** The use of LSD doesn’t require additional objects.

### How Someone Currently Using LSD Might:

<table>
<thead>
<tr>
<th><strong>Look</strong></th>
<th><strong>Act</strong></th>
<th><strong>Feel</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilated pupils&lt;br&gt;Sweaty&lt;br&gt;Tremors&lt;br&gt;Odor on clothes/in the room&lt;br&gt;Wearing or displaying items that promote LSD use (e.g., clothing, posters, jewelry)</td>
<td>Bizarre rambling or strange speech&lt;br&gt;Rapid mood changes&lt;br&gt;Panicked or anxious&lt;br&gt;Disoriented</td>
<td>Out of control&lt;br&gt;Increase in body temperature&lt;br&gt;Delusions or visual hallucinations&lt;br&gt;Increase in heart rate&lt;br&gt;“Feeling” colors or “seeing” sounds&lt;br&gt;Nauseous&lt;br&gt;Fearful of dying or going insane&lt;br&gt;Paranoid&lt;br&gt;Loss of appetite</td>
</tr>
</tbody>
</table>

**Lingering effects:** The effects of LSD are long-lasting, and typically take over 12 hours to dissipate, depending on the dose. Other outward signs are not common. Users run the risk of re-experiencing portions of the hallucinogenic experience suddenly and without warning or during other drug use.
**Other information:** The photograph to the left shows LSD in several forms: from top down, in “microdot” form, on a sugar cube, and on blotter paper. Each square of blotter paper typically represents one “dose,” though the amount of drug in a dose is not standard. Liquid LSD can also be dropped on candy or mints, as depicted in the bottom left.

Below are several examples of different images printed on the absorbent paper used to distribute LSD. These patterns tend to vary by region.

**Overdose information:** Some users experience a severe loss of control, including having overwhelming and horrifying hallucinations, thoughts, and feelings, as well as an intense fear of death or losing one’s mind. While this experience alone, known as “having a bad trip,” is not known to be lethal, fatal accidents have occurred during states of LSD intoxication.
Marijuana

Other names for marijuana: Weed, pot, herb, ganja, bud, grass, Mary Jane, kif, chronic, skunk, boom, or gangster

Terms for marijuana use and intoxication: Smoking up, down, or out; being stoned, high, or blown out

Common settings for drug use: Marijuana can be easily hidden and can thus be used in many different settings. It is often used in calm, quiet settings, or settings viewed as conducive to hallucinogenic effects, or in settings where the odor of smoke will not be detected.

Paraphernalia: Rolling papers, pipes, water-filled pipes (“bongs”), plastic bags, small clips that may be made from tweezers, electrical clips, etc. (“roach clips”), decorative boxes designed to conceal and store the drug. Other signs of use include odor on clothes and in the bedroom, the use of incense or deodorizers, the use of eye drops, or wearing or displaying clothing, posters, jewelry, etc., promoting drug use.

HOW SOMEONE CURRENTLY USING MARIJUANA MIGHT:

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red, bloodshot eyes</td>
<td>Silly and giggly</td>
<td>Hungry</td>
</tr>
<tr>
<td>Dilated pupils</td>
<td>Dizzy</td>
<td>Impaired short-term memory</td>
</tr>
<tr>
<td>Sleepy appearance</td>
<td>Sluggish</td>
<td>Difficulty thinking or problem-solving</td>
</tr>
<tr>
<td>Uncoordinated and off-balance</td>
<td></td>
<td>Less motivated</td>
</tr>
<tr>
<td>Wearing or displaying items that promote marijuana use (e.g., clothing, posters, jewelry)</td>
<td></td>
<td>Temporarily less anxious or stressed</td>
</tr>
</tbody>
</table>
Marijuana

**Lingering effects:** The immediate effects of marijuana typically take between 2 and 3 hours to subside. User may feel sleepy as the effects wear off. Users may experience symptoms similar to those of tobacco smokers including coughing, asthma, wheezing, and increased incidence of respiratory problems.

**Other information:** Marijuana is a mixture of dried, shredded leaves, stems, seeds, and flowers from the hemp plant. It is typically green, brown, or grayish in color. Marijuana is most typically rolled into a cigarette called a “joint,” pictured left. Marijuana is also sometimes smoked by slicing a cigar open and replacing the tobacco with marijuana, creating what is called a “blunt.” The drug can also be smoked in pipes or out of a water pipe called a “bong” (also pictured left). Marijuana is also sometimes mixed in food or used to make tea. Use of marijuana has been associated with memory loss and deficits in learning and attention.

**Addiction:** Despite common misconceptions, people can become addicted to marijuana. A person is considered dependent or addicted to a drug if they compulsively seek out and take the drug.

**Signs of a bad reaction:** It is possible to have a bad reaction to marijuana. Users can experience acute anxiety and have paranoid thoughts. In rare cases, typically when very high doses are ingested, a user can have severe psychotic symptoms and may need emergency medical treatment. Other types of bad reactions can occur when marijuana is mixed with other drugs.
Mescaline (peyote)

What is mescaline:
Mescaline is a hallucinogenic drug that comes from several species of cactus including the peyote cactus. The drug comes from button-like nodules located on the top of the plant. The effects are similar to, but not as strong as, LSD.

Other names for mescaline:
Peyote, buttons, mescalito, mesc, STP

Common settings for drug use:
Mescaline is typically used in group settings, such as parties or raves, or in more calm or tranquil settings conducive to its hallucinogenic effects.

Paraphernalia:
Aspirin-like pills/capsules, brown powder, brown dried-up disc-shaped cactus buttons, live cactus plants

HOW SOMEONE CURRENTLY USING MESCALINE MIGHT:

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flushed due to increased body temperature</td>
<td>Panicked or anxious</td>
<td>Faster heart rate</td>
</tr>
<tr>
<td>Tremors</td>
<td>Violent behavior</td>
<td>Muscle tension</td>
</tr>
<tr>
<td>Dilated pupils</td>
<td>Rambling, sparse, mangled speech</td>
<td>Sleeplessness</td>
</tr>
<tr>
<td>Sweaty</td>
<td>Uncoordinated</td>
<td>Disoriented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paranoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sense of distance and estrangement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Euphoric</td>
</tr>
</tbody>
</table>

Lingering effects: The effects of mescaline begin anywhere from 30 minutes to an hour after ingestion and can last up to 12 hours.
Other information: Mescaline has been part of spiritual and social rituals in the southwestern United States, Mexico, and South America for hundreds of years. Mescaline is typically ingested orally or smoked. Peyote buttons can be chewed, soaked in water to produce a liquid, or ground into a powder. The drug can also be produced synthetically and put into capsule form.

Overdose information: Injury and death resulting from mescaline overdose is uncommon. However, high doses can result in respiratory depression, slow pulse, and low blood pressure. Additionally, users may experience a “bad trip” including frightening visual hallucinations, a feeling of being disconnected from reality, anxiety, and panic. Because the user’s perception of reality is distorted, he or she is more at risk for fatal accidents.
Methamphetamine

Other names for methamphetamine: Meth, speed, chalk, or crank. The crystals that are smoked can be known as ice, crystal, glass, tina.

Terms for methamphetamine intoxication: Tweaking, being amped

Common settings for drug use: Methamphetamine is more common in rural and small-town areas that offer more space for hidden labs. It is also used at all-night dance parties, called raves, and in the club scene. Adolescents may also use it to lose weight.

Paraphernalia: Glass pipes, metal spoons, tinfoil formed into a bowl

| HOW SOMEONE CURRENTLY USING METHAMPHETAMINE MIGHT: |
|---------------------------------|--------------------|--------------------|
| **L O O K**                      | **A C T**           | **F E E L**         |
| Dry skin                        | Anxious            | Restless           |
| Acne or sores, especially on the face and arms | Incessant talking | Euphoric           |
| Dilated pupils                  | Decreased appetite | Paranoid           |
| Poor oral hygiene               | Jerky movements    | Irritable          |
| Decayed teeth after extended use | Insomnia           | Nervous            |
|                                 | Excessive teeth grinding | Unpredictable emotions |
|                                 |                     | Insomnia           |

Lingering effects: A period of recovery, called a “crash,” may last up to three days, with the user needing many hours of sleep. After several days of no use, the user may experience withdrawal symptoms including sleeplessness, anxiety, confusion, depression, and severe craving.
Other information: Methamphetamine comes in many forms and can be taken orally, snorted, smoked, or injected. Crystals that are smoked (middle and right) may also vary in color (including clear, white, yellow, and even pink) depending on the specific chemicals used in the particular batch. Methamphetamine is highly addictive, and users can become addicted after only one use.

Overdose information: Because each person has a different sensitivity and the potency of methamphetamine varies from batch to batch, there is no way to calculate a “safe” dose. Symptoms of overdose include a sudden increase in blood pressure and body temperature, sweating and a high fever, seeing spots, rapid breathing, dilated pupils, and convulsions. Overdose can result in cardiovascular failure, and increases in body temperature and convulsions can result in death.
**Mushrooms** (psilocybin)

<table>
<thead>
<tr>
<th>Other names for mushrooms:</th>
<th>‘Shrooms, magic mushrooms, caps and stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terms for mushroom intoxication:</td>
<td>Tripping</td>
</tr>
<tr>
<td>Common settings for drug use:</td>
<td>Parties, private use, group settings, often used in calm settings or those conducive to visual hallucinations</td>
</tr>
<tr>
<td>Paraphernalia:</td>
<td>Mushrooms are consumed orally, but users often grow their own mushrooms. Small plastic or metal tubs, bricks of nutrient-rich soil, gardening supplies, and mushroom imagery should be cause for concern.</td>
</tr>
</tbody>
</table>

### HOW SOMEONE CURRENTLY USING MUSHROOMS MIGHT:

<table>
<thead>
<tr>
<th><strong>L O O K</strong></th>
<th><strong>A C T</strong></th>
<th><strong>F E E L</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilated pupils</td>
<td>Giggly</td>
<td>Sense of connection to others and the universe</td>
</tr>
<tr>
<td>Clammy hands</td>
<td>Quick-changing emotions</td>
<td>Heightened perception of color and shapes</td>
</tr>
<tr>
<td>Wearing or displaying items that promote mushroom use (e.g., clothing, posters, jewelry)</td>
<td>Somewhat uncoordinated</td>
<td>Slightly nauseous</td>
</tr>
<tr>
<td></td>
<td>Anxious and paranoid</td>
<td>Butterflies in stomach</td>
</tr>
</tbody>
</table>

**Lingering effects:** Lethargy and sleepiness are common after-effects of psilocybin use.

Print Card in Color
Print Card in B & W
Other information: Mushrooms are usually dried before ingestion (right). They may be eaten alone, with food, or brewed as a tea. One danger of ingesting mushrooms is the possibility of accidentally consuming one of the many poisonous varieties that may resemble a recreational type.

Although it is illegal in all states to possess mushrooms, laws regarding the possession of mushroom spores vary by state and country. In states where it is not illegal, some people grow them from kits (bottom), which are widely available via the Internet.

Overdose information: Psilocybin, the active substance in mushrooms, has a very low toxicity. There are no known cases of death from psilocybin ingestion alone. However, when taken in combination with other drugs or during times of emotional instability, it can cause negative experiences, often called “bad trips.” The user may experience frightening hallucinations, anxiety, a deep feeling of disconnection from the self, or a sense of confronting internal conflicts, all of which can cause intense feelings and even panic.
**PCP (phencyclidine)**

**Other names for PCP:** Angel dust, ozone, wack, rocket fuel, hog, squeeze, dust, zoot, peace pill, killer joints or crystal supergrass (when mixed with marijuana), space base (when mixed with crack)

**Terms for mushroom intoxication:** Smoking wet or wetting up (when smoking cigarettes or joints dipped in PCP)

**Paraphernalia:** Tablets, pills, gelatin capsules, dark-colored cigarettes, paper or cellophane packets, and clear liquid in small glass vials

<table>
<thead>
<tr>
<th>LOOK</th>
<th>ACT</th>
<th>FEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweaty</td>
<td>Speech difficulties</td>
<td>Sleepy</td>
</tr>
<tr>
<td>Poor muscle coordination</td>
<td>Restless</td>
<td>Numb</td>
</tr>
<tr>
<td>Increased breathing</td>
<td>Panicked or anxious*</td>
<td>Changes in body awareness (similar to alcohol)</td>
</tr>
<tr>
<td>Rapid and involuntary eye movement</td>
<td>Hallucinating*</td>
<td>Anxious and irritable*</td>
</tr>
<tr>
<td>Blank stare</td>
<td>Delusional*</td>
<td>Paranoid*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delirious*</td>
</tr>
</tbody>
</table>

* Associated with higher doses of PCP. The effects of PCP vary depending on many factors such as dose, purity, and user’s state of mind. It is extremely hard to predict how someone will react to PCP, as it simultaneously acts like a hallucinogen, stimulant, depressant, and anesthetic.
How is PCP taken: PCP comes in tablet, liquid, and powder form (pictured on the reverse side). It can be ingested orally, snorted, injected, or smoked (typically by lacing marijuana or tobacco cigarettes; sometimes by lacing herbs such as mint or parsley). PCP can also be absorbed through the skin.

Bad reaction/overdose information: PCP is associated with many risks and is considered by some to be one of the most dangerous drugs of abuse. PCP is known for inducing violent behavior and negative physical reactions such as seizures and coma. Its use can lead to death from respiratory repression. Altered perception of the mind and body can lead to reckless behavior and/or loss of touch with reality which can lead to self-mutilation, injury, or death.

Many PCP users are brought to the emergency room due to the drug’s negative psychological effects or because of an overdose.
Tobacco

Other names for tobacco: Cigarettes are also called cigs, smokes, and butts; smokeless tobacco is also called dip, chew, snuff, and pinch.

Common settings for initial drug use: Older children and teenagers may start using as a result of peer pressure, wanting to fit in with friends who smoke or chew, to imitate adults they admire, or as an act of rebellion.

Paraphernalia: Ashtrays, lighters, metal cigarette cases, rolling papers

<table>
<thead>
<tr>
<th>HOW SOMEONE CURRENTLY USING TOBACCO MIGHT:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOOK</strong></td>
</tr>
<tr>
<td>Protrusion in the cheek/lip from chewing tobacco</td>
</tr>
<tr>
<td>Spitting mucus/discolored saliva</td>
</tr>
<tr>
<td>Discolored teeth/fingernails</td>
</tr>
<tr>
<td>Smoky-smelling clothes</td>
</tr>
</tbody>
</table>

Protrusion in the cheek/lip from chewing tobacco
Spitting mucus/discolored saliva
Discolored teeth/fingernails
Smoky-smelling clothes

More alert
Use room or fabric deodorizer
Sneak out of the house for short periods of time

Light-headed
Depressed appetite
Relaxed
Craving upon awakening
Other information: About 1 in 10 (11.8%) boys in high school use smokeless tobacco. Twenty-five percent of users started smoking in 6th grade, 75% in 9th grade. In 2003, 3.6 million young people age 12 to 17 reported using tobacco in the past month. Cigarette smokers are fourteen times more likely to use marijuana than are non-smokers. The average age of first cigarette use is 12–13 years. About 90% of adult smokers started smoking before their 19th birthday. After the onset of intermittent smoking, tobacco users typically become dependent on nicotine quite rapidly. Furthermore, compared to boys, girls tend to develop symptoms of dependence faster.

Nicotine is a stimulant and users experience an initial “rush.” Most users report using tobacco products to relax. Users experience this feeling of relaxation when the new dose of nicotine alleviates withdrawal symptoms, which can start as soon as an hour after last use. People who smoke or chew regularly experience a craving upon waking, due to the lowered level of nicotine in their system.

Overdose information: Nicotine is a poison and in high doses can be very toxic. However, overdose most commonly occurs when a person tries to stop smoking or chewing with the aid of nicotine gum or patches. The gum or patch may deliver too-high a dose, resulting in overdose.

Symptoms include dizziness, headache, upset stomach, vomiting, cold sweats, difficulty breathing, seizures, and heart rhythm disturbances.
How you can help...

- If you believe that your teenager is using drugs and alcohol, act quickly. Talk to your teenager and seek help. For tips on how to talk to your teen, visit the National Clearinghouse for Alcohol and Drug Information at www.health.org. To find referrals for local substance abuse treatment facilities, visit SAMHSA’s substance abuse treatment locator at http://dasis3.samhsa.gov.

- Much of the information contained in this guide was obtained from the following sources:

Drug Enforcement Administration  |  www.usdoj.gov
National Cancer Institute  |  www.cancer.gov
National Clearinghouse for Alcohol and Drug Information (public domain)  |  www.health.org
National Institute on Alcohol Abuse and Alcoholism  |  www.niaaa.nih.gov
National Institute on Drug Abuse  |  www.nida.nih.gov
Office of National Drug Control Policy  |  www.whitehousedrugpolicy.gov/publications
The National Youth Anti-Drug Media Campaign  |  www.theantidrug.com
About the National Child Traumatic Stress Network

Established by Congress in 2000, the National Child Traumatic Stress Network (NCTSN) is a unique collaboration of academic- and community-based service centers whose mission is to raise the standard of care and increase access to services for traumatized children and their families across the United States. Combining knowledge of child development, expertise in the full range of child traumatic experiences, and attention to cultural perspectives, the NCTSN serves as a national resource for developing and disseminating evidence-based interventions, trauma-informed services, and public and professional education. For more information, go to www.NCTSNet.org

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