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## NIDA Community Drug Alert Bulletin - Stress & Substance Abuse

***Stressful events can profoundly influence initiation, continuation, and relapse of drug, alcohol, and tobacco use.***

Friends, Colleagues and Parents;

The National Institute on Drug Abuse (NIDA) has developed this *Community Drug Alert Bulletin* to update you on current research about stress and its relationship to substance abuse. Given the recent spate of natural disasters in this country and their tragic human aftermath, our awareness of the effects of stress in increasing vulnerability to substance abuse must be especially keen.

Researchers have long recognized the strong correlation between stress and substance abuse, particularly in prompting relapse. Although exposure to stress is a common occurrence for many of us, it is also one of the most powerful triggers for relapse to substance abuse in addicted individuals - even after long periods of abstinence.

People can experience post-traumatic stress disorder (PTSD) - a diagnosable psychiatric disorder and a known risk factor for substance abuse and addiction - following direct or indirect exposure to severe traumatic events, such as war, the terrorist attacks of September 11, 2001, or natural disasters. NIDA is therefore encouraging more studies on the topic of stress and drug abuse and addiction prevalence. We are also focusing more attention on developing science-based interventions to help those who are particularly vulnerable better cope with stress.

We hope you will find this information useful as you continue to deal with drug abuse issues in your community. Identifying potential substance abuse problems early and referring patients to professionals with expertise in drug abuse counseling and treatment will be beneficial to all involved. We all must focus on restoring our emotional well-being, develop healthy ways to manage stress, and avoid turning to drugs or other substances to escape stressful realities of the day.

Sincerely,

***Nora D. Volkow, M.D.***

Director

National Institute on Drug Abuse

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## What is Stress?

- Stress is a term that is hard to define because it means different things to different people. Stress is a normal occurrence in life for people of all ages. The body responds to stress in order to protect itself from emotional or physical distress or, in extreme situations, from danger.
- Stressors differ for each of us. What is stressful for one person may or may not be stressful for another, and each of us responds to stress in different ways. How a person copes with stress - by reaching for a beer or cigarette or by heading to the gym - also plays an important role in the impact that stress will have on our bodies.
- By using their own support systems, some people are able to cope effectively with the emotional and physical demands brought on by stressful and traumatic experiences. However, individuals who experience prolonged reactions to stress that disrupt their daily functioning may require treatment by a trained and experienced mental health professional.

## The Body's Response to Stress

- The stress response is mediated by a highly complex, integrated network that involves the central nervous system, the adrenal system, the immune system, and the cardiovascular system.
- Stress activates adaptive responses. It releases the neurotransmitter norepinephrine, which is involved in memory. This may be one reason why people remember stressful events more clearly than they do nonstressful situations.
- Stress also increases the release of a hormone known as corticotropin-releasing factor (CRF). CRF is found throughout the brain and initiates our biological response to stressors. During all stressful experiences, certain regions of the brain show increased levels of CRF. Interestingly, almost all drugs of abuse have also been found to increase CRF levels, suggesting a neurobiological connection between stress and drug abuse.
- Mild or acute stress may cause changes that are useful. For example, stress can actually improve our attention and increase our capacity to store and integrate important and life-protecting information. But if stress is prolonged or chronic, the changes it produces can become harmful.

## Stress and Substance Abuse

- Stressful events can profoundly influence the abuse of alcohol or other drugs. Stress is a major contributor to the initiation and continuation of alcohol or other drug abuse, as well as to substance abuse relapse after periods of abstinence.
- Stress is one of the major factors known to cause relapse to smoking, even after prolonged periods of a smoke-free lifestyle.
- Children exposed to severe stress may be more vulnerable to drug abuse. A number of clinical and epidemiological studies show a strong association between psychosocial stressors early in life (e.g., parental loss, child abuse) and an increased risk for depression, anxiety, impulsive behavior, and substance abuse in adulthood.

## Stress, Drugs, and Vulnerable Populations

- Stressful experiences increase the vulnerability of an individual to relapse to drug use, even after prolonged abstinence.
- Individuals who have achieved abstinence from drugs must continue to sustain their abstinence by avoiding environmental triggers, recognizing their psychosocial and emotional triggers, and developing healthy behaviors to handle life's stresses.
- A number of relapse prevention approaches have been developed to help clinicians address relapse. Treatment techniques that foster coping skills, problem solving skills, and social support play a role in successful treatment.
- Physicians should be aware of which medications their patients are taking. Some people may need medications for stress-related symptoms or for treatment of depression and anxiety.

## **What is PTSD?**

- Post-traumatic stress disorder (PTSD) is an anxiety disorder that can develop in some people after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened.
- Generally, PTSD has been associated with the violence of combat. However, PTSD is not limited to battlefield soldiers. PTSD can result from tragic incidents in which people become witnesses, victims, or survivors of violent personal attacks, natural or human-caused disasters, or accidents.
- PTSD can develop in people of any age, including children and adolescents.
- Symptoms of PTSD can include re-experiencing the trauma; emotional numbness; avoidance of people, places, and thoughts connected to the event; and hyperarousal, which may involve sleeping difficulties, exaggerated startle response, and hypervigilance.
- It is not uncommon for people to experience some or all of these symptoms after exposure to a traumatic event; however, if the symptoms persist beyond 1 month and are associated with impaired functioning, then PTSD may be diagnosed.

## **PTSD and Substance Abuse**

- Emerging research has documented a strong association between PTSD and substance abuse. In some cases, substance use begins after the exposure to trauma and the development of PTSD, thus making PTSD a risk factor for drug abuse.
- Early intervention to help children and adolescents who have suffered trauma from violence or a disaster is critical. Children who witness or are exposed to a traumatic event and are clinically diagnosed with PTSD have a greater likelihood for developing later drug and/or alcohol use disorders.
- Among individuals with substance use disorders, 30 to 60 percent meet the criteria for comorbid PTSD.
- Patients with substance use disorders tend to suffer from more severe PTSD symptoms than do PTSD patients without substance use disorders.

## **Helping Those Who Suffer from PTSD and Drug Abuse**

- Healthcare professionals must be alert to the fact that PTSD frequently co-occurs with depression, other anxiety disorders, and alcohol and other substance abuse. Patients who are experiencing the symptoms of PTSD need support from physicians and healthcare providers to develop coping

skills and reduce substance abuse risk.

- The likelihood of treatment success increases when these concurrent disorders are appropriately identified and treated.
- For substance abuse there are effective medications and behavioral therapies.
- For symptoms of PTSD, some antianxiety and antidepressant medications may be useful.
- Several behavioral treatments can help individuals who suffer from PTSD. Improvements have been shown with some forms of group therapy and with cognitive-behavioral therapy, especially when it includes an exposure component for trauma victims. Exposure therapy allows patients to gradually and repeatedly re-experience the frightening event(s) under controlled conditions to help them work through the trauma. Exposure therapy is thought to be one of the most effective ways to manage PTSD, when it is conducted by a trained therapist.
- Although not widely used for comorbid PTSD and substance abuse, several studies suggest that exposure therapy may be helpful for individuals with PTSD and comorbid cocaine addiction.
- Seeking Safety is another example of a cognitive-based behavioral treatment, tested mainly among women with comorbid PTSD and drug abuse. It is currently being evaluated among different populations for its efficacy.
- Treatment of patients with comorbid PTSD and addictions will vary, and for some patients, successful treatment may require initial inpatient hospitalization.
- Finally, support from family and friends can play an important role in recovery from both disorders.

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