

Amphetamines (Part 4)

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Social Impact on Society :

Methamphetamine addiction has a well-deserved reputation as the scourge of the Western United States. In the first half of 2012, methamphetamine ranked first in drug related treatment admissions in Hawaii and San Diego, second in San Francisco, and third in Denver and Phoenix. According to the 2012 National Survey on Drug Use and Health (NSDUH), approximately 1.2 million people (0.4% of the population) reported using methamphetamine in the past year, and 440,000 (0.2%) reported using it in the past month. A British documentary, "The City Addicted to Crystal Meth" (aired in 2009), profiled Fresno as having one of the highest populations of persons addicted to methamphetamine. Over 85% of methamphetamine production occurs in "super labs" found in California and Mexico. Police in Contra Costa County, California, report that nearly 90% of the domestic violence calls they investigate are methamphetamine related.

The cost in personal suffering and loss is more dramatic with methamphetamine addiction than almost any other drug of abuse. This high impact is illustrated at the CBS website linked below of "Before and After" pictures of methamphetamine abusers. Beyond the physical changes, the side effects can be all encompassing, including: potentially permanent psychiatric symptoms of hallucinations and paranoia, economic destitution, violence, arrest, contraction of HIV, loss of family and friends, and death.

<http://www.cbsnews.com/pictures/meths-devastating-effects-before-and->

after/

Treatment:

Traditionally, methamphetamine/amphetamine addiction has been treated with psychosocial models such as 12 step participation, residential treatment and intensive outpatient treatment. These basic approaches remain the mainstay, due to the lack of medications available to treat amphetamines dependence. Studies of these approaches continue to validate their effectiveness, but in particular, those that make use of cognitive-behavioral therapy (CBT). The CBT approach, which focuses on how the way we think affects our feelings and actions, helps patients identify and plan for the triggers associated with substance abuse. The Matrix model is a comprehensive behavioral treatment approach that combines behavioral therapy, family education, individual counseling, 12-Step support, drug testing, and encouragement for non-drug-related activities. This model is one such validated intensive short term outpatient modality that has been found evidence based.

Contingency management is another treatment that has been validated and used for cocaine addiction which is now being evaluated for addiction to amphetamines. This modality rewards the participant for urine tests that are drug free with vouchers or prizes. The key in this treatment is to make sure the reward quickly follows the test result and, therefore, immediate turnaround time by using in house urine testing is preferred.

The development of medication treatment that is effective for the addiction of amphetamines, has remained elusive. Over the years, there have been many

studies involving antidepressants. The more traditional ones, such as desipramine, imipramine and bupropion that increase the effect the norepinephrine and/or the dopamine neurotransmitters, have shown a varying degree of positive response; however well controlled large studies have not borne out their efficacy. The SSRIs have also been studied with disappointing outcomes. Some of the newer antidepressants which include atomoxetine (Strattera) and duloxetine (Cymbalta), (both also affecting the noreadrenergic systems) have yet to be fully studied and may be expected to have mixed results as the older tricyclics have.

There are some novel chemotherapeutic approaches being explored. One such approach is through immunizing the person to develop neutralizing antibodies to the drug, and thereby take the drug out of the body before it can have significant biological effects (getting "high"). Another, even more recent trial that has shown promise in rats, is attempting to use a drug that targets the activity of brain glial cells to suppress their neuroinflammatory actions.

Outcomes, regardless of the type of therapy, become better with an increase in the length of time of treatment. This observation makes it particularly important to help the addicted individual striving for recovery to develop a lifelong program. Since most people have limited insurance, money and ability to remain in long term formal therapy, it then becomes very important to help the individual to integrate into the community of recovering individuals where they live. The most ubiquitous, omnipresent and available at little to no cost recovery program remains the 12 step programs Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).