Treating Drug Dependency

Dependence on drugs can have devastating effects on individual lives and relationships. Once you realize that you or someone you love may be addicted to the effects of a drug, such as alcohol, nicotine, cocaine, or heroin, seek help right away. As with other diseases, getting treatment as soon as possible can prevent further complications and may even save a life. Your doctor can explain the options for treating substance abuse and addiction.

An article in the March 8, 2000, issue of JAMA reports on a study of patients diagnosed with opiate dependence (dependence on such drugs as opium, heroin, and morphine) who volunteered to participate in treatment programs that used methadone. The study compared methadone detoxification (gradual dose reduction) to maintenance therapy (more long-term continuing treatment with methadone) and found that outcomes were generally better with maintenance therapy.

WHAT IS METHADONE:
Methadone is a synthetic opiate that has less severe withdrawal symptoms than other opiate drugs. Methadone blocks the effects of other opiates, so that persons who take methadone do not experience cravings for the effects of the drugs. Patients given this treatment are able to function well during methadone therapy and can become productive members of their communities by returning to their jobs and other activities without experiencing the more debilitating withdrawal symptoms.

Since methadone is taken by mouth, it eliminates the risk of contracting many of the infectious diseases associated with injection drug use. Methadone treatment is usually combined with drug abuse counseling and other supportive services.

DANGERS OF OPIATE ABUSE:
- Using opiates puts a person at risk for convulsions, respiratory failure, pneumonia, coma, shock, and death from an overdose.
- Using injected drugs puts a person at high risk for HIV, hepatitis (inflammation of the liver), and other blood-borne diseases when one shares needles and other drug-injecting equipment.
- Even if you don’t share needles, injected drugs can introduce bacteria directly into the blood system, causing such complications as endocarditis (infections of the heart and heart valves), tetanus (a serious disease of the central nervous system), and lung abscesses (collections of pus caused by an infection that damage lungs).
- If you are pregnant, your baby is at increased risk for being born prematurely. Your baby will also be born addicted to whatever drug you are using and therefore have to spend the first days of his or her life experiencing painful withdrawal symptoms.
- Street drugs often have additives that can cause damage to such vital organs as the lungs, liver, kidneys, and brain.

WITHDRAWAL SYMPTOMS FROM OPIATE ABUSE:
- Muscle and bone pain
- Abdominal cramps
- Diarrhea
- Vomiting
- Sleeplessness and restlessness

SUPPORT FOR FRIENDS AND RELATIVES:
If you have a friend or family member who is addicted to drugs you can receive information and support by contacting a local Al-Anon chapter (for those affected by alcoholism) or Nar-Anon (for those affected by other drugs).

FOR MORE INFORMATION:
- National Institute on Drug Abuse: www.drugabuse.gov
- National Clearinghouse on Alcohol and Drug Information: 800/729-6686 or www.health.org
- Al-Anon Family Groups, Inc.: 888/4-AL-ANON (Mon. – Fri. 8 a.m. to 6 p.m. ET) or www.al-anon.org
- Nar-Anon Family Groups, Inc.: 310/547-5800 (Mon. – Thurs. 9 a.m. to 4 p.m. PT)

INFORM YOURSELF:
To find this and previous JAMA Patient Pages, check out the AMA’s Web site at www.ama-assn.org/consumer.htm. Previous JAMA Patient Pages were published on alcohol abuse (April 14, 1999 and January 6, 1999).


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Alaskan Natives, and Native Hawaiians. Many objects, such as full head masks, have already been returned. However, concerns have arisen about risk of exposure to museum-applied pesticides (eg, arsenic, mercury, organophosphates, carbamates, organochlorines, and volatiles).

We evaluated 3 ceremonial objects repatriated under NAGPRA. The tribe's cultural preservation office requested that we neither describe the objects nor provide details of their cultural use. To our knowledge, this is the first report of a chemical analysis of repatriated artifacts.

**Methods.** Three objects were analyzed. Each was made of leather, with attached grasses, corn husks, feathers, horsehair, yarn, and paint. Associated museum catalog records were reviewed for evidence of pesticide use.

Samples were taken of adherent debris and representative surface material. Metal content, including arsenic, was measured by energy-dispersive x-ray analysis. Total object arsenic levels were estimated by weighted sample averaging applied to the total surface area. Organic pesticide residue was determined by in-line pyrolysis gas chromatography–mass spectroscopy (GC-MS). Volatiles were analyzed by GC-MS of 4-hour ambient-temperature air samples from a Mylar bag enclosing the object.

**Results.** There was no visible evidence of contamination on any object. Object 1 had arsenic on all surfaces, with the highest concentrations around eye holes, surface paint, and feathers. Total object arsenic level was 1.3 g. Catalog records confirmed that the object had been treated with sodium arsenite. Object 2 had trace amounts of naphthalene on interior surfaces, but none was detected in head-space air. There were no records of pesticide treatment. Object 3 had moderate amounts of arsenic on exterior surface paint. Total object arsenic level was 60 mg. There were no records of pesticide treatment.

**Comment.** Museums apply pesticides to preserve perishable objects, and arsenic was widely used as a museum pesticide from the 1800s through the 1970s. Objects 2 and 3, containing naphthalene and arsenic, respectively, had no documentation of pesticide treatment. Thus, museum documentation cannot be relied on to identify contaminated specimens.

Arsenic on these objects poses a potential health threat. Daily ingestion of as little as 3 to 4 mg can result in long-term toxicity, and an acute ingestion of 1 to 3 mg/kg may be lethal. The greatest acute danger would be to a young child who chewed on a significantly contaminated object. Long-term exposure may occur via dust in storage and usage areas, from food stored with ceremonial objects, or during ceremonial use in which objects are handled or worn.

Nationwide, hundreds of thousands of artifacts are subject to repatriation, including more than 400 similar objects to this tribe. Wipe sampling of similar objects in museums has demonstrated the presence of arsenic and mercury (Leigh Kuwanwisiwma, written communication, 1999), and other museum items carry residues of arsenic, mercury, DDT, and strychnine. Our preliminary results suggest that all museum objects subject to repatriation should be tested for pesticide residues.

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**CORRECTIONS**


Error in Table Footnote: In the Original Contribution entitled “Risk of Meningococcal Infection in College Students” published in the May 26, 1999, issue of THE JOURNAL (1999;281:1906-1910), there was incorrect wording in the table footnote. On page 1908, the second footnote to the Table should read “Aged 18 to 22 years, excluding the 4-year college population (see “Methods” section).”