



NEWS

Ron J. Anderson, M.D. Chairman
Texas Board of Health
Robert Bernstein, M.D., F.A.C.P. Commissioner

contents:

- "Crack" Abuse
- Mexican Diet Drug
- Questionnaire

TEXAS STATE DOCUMENTS
COLLECTION

Bureau of Epidemiology, 1100 West 49th Street, Austin, Texas 78756-3180 (512-458-7207)

"CRACK" ABUSE

The abuse of cocaine is a national health problem that has no respect for age or socioeconomic boundaries.¹ The abuse of "crack," a highly concentrated form of cocaine, has increased dramatically over the last few months in Texas as well as across the nation. This form of cocaine differs from the traditional forms of the drug, cocaine hydrochloride and cocaine sulfate, in that it is the freebase form of the drug.

The traditional forms of cocaine are abused primarily by intranasal application ("snorting") or by dissolving the drug and injecting it intravenously. The mucosal vasoconstriction that occurs with intranasal application of the drug inhibits its absorption causing a delayed effect and lower peak levels when compared to intravenous injection. Cocaine hydrochloride cannot be smoked because heat decomposes the drug.

Cocaine freebase, on the other hand, is not destroyed by moderate heating. It vaporizes at high temperatures making it suitable for smoking. It is rapidly absorbed across the mucosal and alveolar membranes of the respiratory system, and the inhalation of this substance causes a very rapid rise in blood levels, resulting in immediate and intense gratification for the drug user similar to that experienced with intravenous injection of the drug. This intense euphoria, probably due to the drug's effect on the dopaminergic system of the brain, makes crack addiction very difficult to treat.

In the past, cocaine freebase usually was prepared by mixing street cocaine with an alkaline solution and adding a solvent such as ether. Recently, crack has emerged as a new, highly purified form of cocaine freebase that is made by mixing a solution of cocaine hydrochloride with an alkaline substance such as ammonia (with or without sodium bicarbonate). When dried, this form of the drug is highly concentrated. It gets its name from the cracking sound made by the drug when it is burned. Compared to the traditional preparation of cocaine freebase, it is less expensive and avoids the danger of flammable solvents, such as ether.

The effects of cocaine on the drug user are varied depending on the dose of the drug and the route of administration. Cocaine is a sympathomimetic drug that, at low blood concentrations, causes stimulation of the central nervous system resulting in euphoria, garrulousness, restlessness, excitement, and an increased capacity to do muscular work and avoid fatigue. Motor activity remains coordinated and headaches are common. The effects on the medulla oblongata result in an elevation in blood pressure, an increase in respiratory rate, sweating, and vomiting. With high blood levels, cocaine causes respiratory depression, hyperpyrexia, tremor, clonus, seizures, cardiovascular collapse, and death. Cardiac arrhythmias such as ventricular ectopic activity, ventricular tachycardia, ventricular fibrillation, and asystole can occur with both low and high doses, although they are more common with high blood levels. These arrhythmias are probably due to the fact that cocaine sensitizes the myocardium to the effects of endogenous catecholamines.^{3,4}

Many cases of myocardial infarction associated with the use of cocaine have now been reported, especially in those users who also smoke cigarettes.⁵ Persons with and without coexisting coronary artery disease have been reported with clinical and pathologic evidence of myocardial infarction, suggesting that coronary artery spasm and/or increased platelet adhesiveness play a role in the pathogenesis of infarction in these patients.^{6,7,8}

The abuse of crack, as well as other forms of cocaine, has increased markedly both in Texas and throughout the United States. In 1981, cocaine users accounted for approximately 5% of all drug-abuse related visits to the emergency department of Parkland Memorial Hospital in Dallas. In contrast, cocaine abuse accounted for 21% of drug-related visits (120/567) during a five-month period in 1986 at the same facility. Of the cocaine-related visits, crack abuse was responsible for at least 13%. The most common symptoms experienced by these patients were chest pain, palpitations, dyspnea, headache, abdominal pain, diaphoresis, and myalgias. Three patients died as a direct result of their cocaine use.

Patients presenting with symptoms of cocaine overdose or abuse should be monitored for the presence of arrhythmias, and those with chest pain should have a myocardial infarction ruled out. Although some patients with cocaine overdose require hospitalization, many can be managed in the emergency department because of the very short half-life of the drug. This is especially true of those using a freebase form of the drug such as crack. Serious hyperthermia, severe hypertension, seizures, myocardial infarction, and cardiac arrhythmias should be treated in an inpatient setting.

PDN Editorial Note: This article documents the rapid emergence of crack as an important drug of abuse. Serious concerns with this form of cocaine include its relatively low cost per unit dose, its availability, and its rapid addiction potential. Other effects which are less easily documented by measureable, objective evidence (eg, blood pressure, pulse, respiration, and electro-cardiography) include paranoid ideation and other behavioral observations which can lead to serious injuries to the user or others in the environment. At one time, cocaine enjoyed a reputation of being free from the harmful adverse effects and addiction potential associated with other drugs of abuse such as heroin and the barbiturates. Cocaine was the status drug or drug of choice for those well-to-do people who could afford it. The emerging evidence now documents that cocaine abuse involves all socioeconomic classes; that it can have a devastating psychological, social, and legal impact on those who use it; and that it has been associated with the deaths of several well-known athletes and entertainers, as well as many who are not in the public's view.

REFERENCES:

1. Cocaine use kills boy, 9. Dallas Times Herald. Sept 24, 1986.
2. Gay GR, Inaba DS, Sheppard CW, et al. Cocaine: history, epidemiology, human pharmacology, and treatment. A perspective on a new debut for an old girl. Clin Toxicol 1975; 8:149.
3. Ritche JM, Cohen PJ, Dripps RD. Cocaine, procaine, and other synthetic local anesthetics. In Goodman and Gilman (eds): The pharmacological basis of therapeutics. New York, Macmillan, 1970: 367-80.
4. Kolhtop DE, Laio J, Van Bergen FH. Effects of pharmacologic alterations of adrenergic mechanisms by cocaine, tropolane, aminophylline, and ketamine on epinephrine-induced arrhythmias during halothane-nitrous oxide anesthesia. Anesthesiology 1977; 46:83.
5. Kossowsky WA, Lyon AF. Cocaine and acute myocardial infarction. Chest 1984; 86:729.
6. Schachne JS, Roberts BH, Thompson PD. Coronary artery spasm and myocardial infarction associated with cocaine use. N Engl J Med (letter) 1984; 310:1665.
7. Pasternack PF, Colvin SB, Baumann FG. Cocaine-induced angina pectoris and acute myocardial infarction in patients younger than 40 years. Am J Card 1985; 55:847.
8. Simpson RW, Edwards WD. Pathogenesis of cocaine induced ischemic heart disease. Arch Pathol Lab Med 1986; 110:479.

MEXICAN DIET DRUG QUESTIONNAIRE

The TDH Division of Food and Drugs has learned that an increasing number of overweight Texans are seeking treatment in Mexico for their obesity. Mexican "doctors" reportedly are prescribing a potentially harmful combination of drugs for weight loss (Table 1), while providing only limited physical examinations and supervision. Anecdotal information from dieters indicates an extensive and rapid weight loss while using these medications. Their success has led to a booming new industry along the Mexican border, which poses a potentially serious threat to the health of individuals taking the drugs.

Adverse reactions to the Mexican diet drugs have been reported to TDH by both consumers and physicians. The reactions include: nervousness, irritability, loss of consciousness, psychiatric episodes, gastric disorders, abdominal pain, headaches, numbness in the extremities, time displacement, and chest pains. The full extent of these side effects is unknown at this time.

To evaluate the potential threat to the public health and the possible need for enforcement actions, the Division of Food and Drugs is attempting to catalog adverse reactions or deaths attributable to the Mexican diet drugs. Health-care providers who have patients who have taken, or are taking, these drugs are asked to complete the following questionnaire for each patient and return it to: Division of Food and Drugs, Texas Department of Health; telephone (512) 458-7248.

Table 1. Mexican diet drugs

Drug	Manufacturer	Ingredients
Redotex*	Medix	75 µg tri-iodothyronine 50 mg norpseudoephedrine 16.2 mg aloin 0.36 mg atropine sulfate 8 mg diazepam
Ponderex 40	Robins	40 mg fenfluramine hydrochloride
Moduretic	Merck Sharp & Dohme	5 mg amiloride hydrochloride 50 mg hydrochlorothiazide
Ionamin 15,30	Penwalt	15 & 30 mg phentermine resin
Asenlix*	Roussell	30 mg clobenzorex hydrochloride

*Redotex and Asenlix have not been approved for use in the US by the Food and Drug Administration.

All questions relate to the person (ie, client) taking the diet medication:

1. Age (in years) _____ 2. Sex _____ 3. Ethnicity _____ 4. City/State of Residence _____

Questions 5-7 relate to the client's status immediately before taking the diet medications:

5. Prior to taking the diet pills, was the client on any other prescription medications? ___ Yes ___ No
If yes, please list: _____

6. Did the client have any of the following health problems?

Problems	Yes	No	Unknown
High Blood Pressure?	_____	_____	_____
Thyroid disease?	_____	_____	_____
Heart disease?	_____	_____	_____
Diabetes?	_____	_____	_____
Any other problems?	_____	_____	_____

Please specify: _____

7. What is the client's height? _____ Starting weight? _____ Current weight? _____

Questions 8-15 relate to the Mexican diet drugs:

8. Which diet preparations or medications are/were being taken? (give daily dose in each blank)
_____ Redotex _____ Moduretic _____ Ponderex _____ Other, please list _____

9. On what date were these preparations first taken? _____
mo / yr

10. How many times are/were these preparations taken? _____ a week _____ a month

11. How many calories a day do you estimate the client consumes/consumed while on the pills? _____

12. Has the client had any of the following side effects or adverse reactions since taking the diet pills?

	Yes	No	Unknown	Description
Cardiovascular				
chest pains	_____	_____	_____	_____
high blood pressure	_____	_____	_____	_____
rapid pulse	_____	_____	_____	_____
palpitations	_____	_____	_____	_____
Nervous System				
irritability	_____	_____	_____	_____
anxiety	_____	_____	_____	_____
apprehension	_____	_____	_____	_____
mental depression	_____	_____	_____	_____
headaches	_____	_____	_____	_____
dizziness	_____	_____	_____	_____
loss of consciousness	_____	_____	_____	_____
convulsions	_____	_____	_____	_____
hallucinations	_____	_____	_____	_____
"time lapses" in memory	_____	_____	_____	_____
Gastrointestinal System				
increased thirst	_____	_____	_____	_____
loss of appetite	_____	_____	_____	_____
abdominal pain	_____	_____	_____	_____
diarrhea	_____	_____	_____	_____
constipation	_____	_____	_____	_____

13. How was the client treated for these symptoms? _____

14. Was the client hospitalized? Yes No For what reason? _____

15. What was the client's outcome?
 recovered currently hospitalized died
 other, please specify: _____

TEXAS PREVENTABLE DISEASE NEWS (ISSN 8750-9474) is a free, weekly publication of the Texas Department of Health, 1100 West 49th Street, Austin, TX 78756-3180. Second-class postage paid at Austin, TX. POSTMASTER: Send address changes to TEXAS PREVENTABLE DISEASE NEWS, 1100 West 49th Street, Austin, TX 78756-3180. ©

TEXAS PREVENTABLE DISEASE NEWS
 Texas Department of Health
 1100 West 49th Street
 Austin, TX 78756-3180

**SECOND CLASS POSTAGE
 PAID AT AUSTIN, TX**

RETURN POSTAGE GUARANTEED

