

A Weekly FAX from the Center for Substance Abuse Research

University of Maryland, College Park

## *Buprenorphine Treatment for Opioid Dependence*

*Buprenorphine is a synthetic opioid that is used for pain management and was approved in 2002 to treat opioid dependence. This issue of the CESAR FAX answers frequently asked questions about buprenorphine. Future issues will provide more detailed information on buprenorphine retail distribution, potential diversion, and adverse effects of misuse.*

**What are the forms of buprenorphine?** Although there are several forms of buprenorphine (including Buprenex®, an injectable liquid used for pain treatment), only Subutex® and Suboxone® have been approved for opioid addiction treatment. Subutex, which is also available in a generic form, contains buprenorphine alone and is usually given during the first few days of treatment. Suboxone contains both buprenorphine and naloxone, and is typically used during the maintenance phase of treatment. Naloxone is included to discourage abuse; when this drug is injected or snorted it blocks the effects of opioids and precipitates withdrawal symptoms.

**What does buprenorphine look like?** Subutex is an oval white tablet and the generic version is a round white tablet. Suboxone is available as an hexagonal orange tablet and as a film. Both products are dissolved under the tongue.

**How does buprenorphine compare to methadone?** Both methadone and buprenorphine are approved to treat opioid addiction. However, buprenorphine has weaker opioid effects, is less likely to result in overdose, and produces a lower level of physical dependence. Methadone must be dispensed by a federally regulated Opioid Treatment Program (OTP), while buprenorphine is currently the only opioid medication that can be prescribed for opioid treatment outside the OTP setting (e.g., in a certified physician's office). A patient can receive a 30-day take home dose of buprenorphine shortly after beginning treatment. In contrast, methadone patients must visit an OTP for daily dosing and must comply with treatment for two years to be eligible to receive a 30-day take home dose.

**Who can prescribe buprenorphine?** Physicians who have received buprenorphine training and obtained a federally approved waiver can prescribe Subutex and Suboxone or approved generic equivalents. The number of patients receiving a prescription for Subutex or Suboxone from U.S. outpatient retail pharmacies increased from slightly less than 20,000 in 2003 to more than 600,000 in 2009. In 2009, 97% of these prescriptions were for Suboxone, up from 77% in 2003.

**Is buprenorphine being diverted?** Numerous data sources indicate that buprenorphine, known on the street as Bupe, Subs, Subbies, and Orange Guys, is being diverted for use by those who do not have a prescription. Law enforcement authorities in Maine, Massachusetts, New York, and West Virginia are reporting an increase in seizures of buprenorphine together with other controlled prescription drugs. The estimated number of buprenorphine drug items analyzed by state and local forensic law enforcement labs in the U.S. has increased from 21 in 2003 to 8,172 in 2009. Buprenorphine has been smuggled into state prisons, including those in Maine, Massachusetts, New Jersey, New Mexico, Pennsylvania, and Vermont. The number of emergency department visits related to the nonmedical use of buprenorphine has increased from 4,440 in 2006 to 14,266 in 2009.

**How is buprenorphine abused?** Buprenorphine is abused by injecting or snorting the crushed tablets. While the naloxone in Suboxone provides some protection from abuse, the DEA reports that Suboxone is being abused by snorting.

**What are the adverse effects of buprenorphine abuse?** According to the manufacturer's safety information for Suboxone, buprenorphine "can cause serious life-threatening respiratory depression and death, particularly when taken by the intravenous (IV) route in combination with benzodiazepines or other central nervous system (CNS) depressants (i.e., sedatives, tranquilizers, or alcohol)." They also note that "intravenous misuse or taking [Suboxone] . . . before the effects of full-agonist opioids (e.g., heroin, hydrocodone, methadone, morphine, oxycodone) have subsided is highly likely to cause opioid withdrawal symptoms." In addition, "chronic use of buprenorphine can cause physical dependence."

SOURCE: A complete list of sources is available by accessing the PDF version of this issue online at [www.cesar.umd.edu](http://www.cesar.umd.edu). For more information, contact Erin Artigiani at [erin@cesar.umd.edu](mailto:erin@cesar.umd.edu) or 301-405-9794.

**CESAR FAX Volume 20, Issue 22 (June 13, 2011)**  
**“Buprenorphine Treatment for Opioid Dependence”**

**Source List**

- American Academy of Addiction Psychiatry (AAAP), the American Osteopathic Academy of Addiction Medicine (AOAAM) and the American Psychiatric Association (APA), *Physicians’ Clinical Support System – Buprenorphine (PCCSS-B) Training Website*, [www.pcassb.org](http://www.pcassb.org), accessed June 13, 2011.
- Drug Enforcement Administration, Office of Diversion Control, Drug and Chemical Evaluation Section, *Buprenorphine (Trade Names: Buprenex®, Suboxone®, Subutex®)*, February 2011. Available online at [www.deadiversion.usdoj.gov/drugs\\_concern/buprenorphine.pdf](http://www.deadiversion.usdoj.gov/drugs_concern/buprenorphine.pdf).
- Drug Enforcement Administration, Office of Diversion Control, National Forensic Laboratory Information System (NFLIS), *Special Report: Methadone and Buprenorphine, 2003-2008*, 2009. Available online at [www.deadiversion.usdoj.gov/nflis/methadone\\_buprenorphine\\_srpt.pdf](http://www.deadiversion.usdoj.gov/nflis/methadone_buprenorphine_srpt.pdf).
- Drug Enforcement Administration, Office of Diversion Control, National Forensic Laboratory Information System (NFLIS), *Year 2009 Annual Report*, 2010. Available online at [www.deadiversion.usdoj.gov/nflis/2009annual\\_rpt.pdf](http://www.deadiversion.usdoj.gov/nflis/2009annual_rpt.pdf).
- Goodnough, A. and Zezima, K., “When Children’s Scribble Hide a Prison Drug,” *New York Times*, A1, May 26, 2011.
- Reckitt Benckiser Pharmaceuticals Inc., “Suboxone Important Safety Information,” undated. Available online at [www.suboxone.com/patients/safety/Default.aspx](http://www.suboxone.com/patients/safety/Default.aspx) (accessed 6/13/11).
- Substance Abuse and Mental Health Services Administration, “Opioid Drugs in Maintenance and Detoxification Treatment of Opiate Addiction,” Final Rule, *Federal Register* 66(11):4076-4102, January 1, 2011.
- Substance Abuse and Mental Health Services Administration, *SAMHSA Update*, Presentation given by Nicholas Reuter at the January 19, 2011 CEWG Conference, Scottsdale, AZ.
- Substance Abuse and Mental Health Services Administration, *Buprenorphine Website*, [buprenorphine.samhsa.gov](http://buprenorphine.samhsa.gov) (accessed 6/9/11).
- Substance Abuse and Mental Health Services Administration, Drug Abuse Warning Network (DAWN), National Estimates of Drug-Related Emergency Department Visits, 2004 – 2009, undated. Available online at [dawninfo.samhsa.gov](http://dawninfo.samhsa.gov) (accessed 6/9/11).
- U.S. Department of Justice, National Drug Intelligence Center (NDIC), “Buprenorphine: Potential for Abuse,” NDIC Intelligence Bulletin, September 2004. Available online at [www.justice.gov/ndic/pubs10/10123/index.htm](http://www.justice.gov/ndic/pubs10/10123/index.htm).
- U.S. Department of Justice, National Drug Intelligence Center (NDIC), “Misuse of Buprenorphine-Related Products, SENTRY Drug Alert Watch, February 22, 2011. Available online at [www.justice.gov/ndic/pubs44/44054/sw0009p.pdf](http://www.justice.gov/ndic/pubs44/44054/sw0009p.pdf).
- U.S. Food and Drug Administration, Subutex and Suboxone Questions and Answers, undated. Available online at [www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm191523.htm](http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm191523.htm) (accessed 6/13/11).