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| **Cocaine/Crack-Cocaine** | |
| **Common Names:** Coke, Coca, Joy dust, Stardust, Bianca, Perico, Nieve, Soda, Blow, Bump, Candy, Rock, Snow, Speedball (cocaine combined with heroin)2  http://s.hswstatic.com/gif/crack-5.jpg | |
| **Characteristics**  **(Stimulant)** | **Cocaine**   * Inhibits dopamine and serotonin reuptake, stimulating the brain’s reward pathway3 * Onset of action and plasma half-life varies depending on route of use (i.e IV peaks in 30 sec, half-life 54 min; snorting peaks in 15-30min, half-life 75 min).3 * Cocaine’s metabolite benzoylecgonine can be found in the urine for 2-5 days after a binge. The metabolite remains detectable in the urine of heavy users for up to 10 days 4   **Crack-Cocaine**   * Free based and a more potent form of cocaine (volatilized and inhaled)3 * May be used with heroin (“dynamite”, “speedballs”), morphine (“whizbang”), or cannabis (“cocoa puffs”) for increased intensity3 * Powerful psychological dependence occurs; dysphoria can last for weeks or months |
| **Presentation during Intoxication** | **Common signs and symptoms of intoxication may include3:**   |  |  |  | | --- | --- | --- | | * Rapid euphoria | * Insomnia | * Delusions | | * Increased energy | * Anxiety | * Hallucinations | | * Anorexia | * Agitation | * Nausea | | * Vomiting | * Headaches | * Tachycardia | | * Hypertension | * Chest Pain | * Pyrexia | | * Diaphoresis | * Mydriasis | * Ataxia | | * Increased alertness | * Tactile hallucinations | * Depression |   **Extreme intoxication signs and symptoms may include**3,6:   * Toxic effects include hypertension, paroxysmal atrial tachycardia, hyperreflexia, irregular respiration, hyperthermia, seizures, unconsciousness, and death * Fatalities are more common with IV use. |
| **Monitoring and support during intoxication**  **Monitoring and support during intoxication**  *(Continued)* | **Monitor 6,11**   * Assess level of disorientation and if possible time of last ingestion and amount consumed * Monitor for falls risk * Monitor vitals every 15 minutes initially and less frequently as acute symptoms subside * Monitor respiratory pathways * Monitor risk for seizures * Monitor mental status   **Supportive Interventions**3,11   * Provide reassurance and comfort * Ensure a quiet room with minimal stimulation * Provide privacy if possible to preserve dignity and ensure safety * Institute seizure precaution strategies * Control of elevated body temperature if warranted with hydration, sedation, cold water, ice packs or in extreme cases a hypothermic blanket * Treat sustained hypertension to prevent CNS haemorrhage * Seizures may be controlled with doses of IV diazepam of 5 to 20mg injected very slowly and repeated as required * CT scans and lumbar puncture may be performed in the confused or unconscious patient to rule out cerebral haemorrhage * Excretion of cocaine can be hastened through acidification of the urine with 500mg ammonium chloride orally every 3-4 hours * Low doses of an antipsychotic such as haloperidol may be used to manage psychosis (extra monitoring required due to increased seizure risk) |
| **Withdrawal presentation**  (Withdrawal effects peaks in 2-4 days 3, 6  Dysphoric symptoms may persist for up to 10 weeks 6) | **Withdrawal Symptoms may include3,6:**   |  |  |  | | --- | --- | --- | | * Anxiety | * Chronic fatigue | * Craving | | * Distorted Sleep | * Irritability | * Depression | | * Vivid, unpleasant dreams | * Difficulty concentrating | * Suicidal or homicidal ideation | | * Paranoia | * Anorexia | * Myalgia | | * Nausea | * Hunger/Increased appetite | * Diaphoresis | | * Diarrhea | * Insomnia/hyperinsomnia | * Convulsions 3, 6 | |
| **Monitoring and support during withdrawal** | **Goal11**   * Reduce drug cravings and manage depression   **Monitor**11   * Mental status (including suicide risk and agitation) * Physical status (including vital signs, hydration, electrolytes, seizures and possible serotonin syndrome)   **Interventions**3,10   * Provide a calm and quiet environment * Allow client to eat and sleep as much as desired * Use calming techniques/ reassurance/ supportive measures * Suicide precautions may need to be established * Supportive care of excessive sympathomimetic stimulation may be required * Benzodiazepines have been used for severe agitation and seizure prevention * High potency antipsychotics have been used for psychotic symptoms * Antidepressants have been used to treat depression following withdrawal, and to decrease craving. |
| **Potential Complications** | * Chronic use can lead to panic disorder, paranoia, dysphoria, irritability, agitation, and delirium3 * Snorting can lead to stuffy nose, runny nose, eczema around nostrils, atrophy of nasal mucosa, bleeding, and perforated septum.3 * Sexual dysfunction is common3 * Chronic use of crack can lead to microvascular changes in the eyes, lungs and brain. * Respiratory symptoms include asthma, pulmonary hemorrhage and edema3. * Dehydration can occur due to effect on temperature regulation, with possible hyperpyrexia.3 |
| **Notable Interactions**  **Notable Interactions**  (Continued) | |  |  | | --- | --- | | **With Cannabis8**   * Using cannabis with cocaine may lead to tachycardia * Cannabis-induced vasodilation of nasal mucosa may increase cocaine absorption   **With Beta-Blockers (Propranolol especially)8**   * Greater coronary vasoconstriction in combination with cocaine, may lead to myocardial infarction   **With Dihydroergotamine9**   * Increases blood pressure   **With Carbamazepine8,9**   * Combination may lead to large elevations in blood pressure and heart rate (increase cardiac side effects)   **With MAOIs8**   * May lead to hypertensive crisis   **With St. John's Wort8**   * May lead to serotonin syndrome   **With Hyaluronidase8**   * Anesthetic hyperreactivity   **With Amphetamines, MDMA8**   * Blood pressure elevation   **With TCAs9**   * Arrhythmia -> Avoid!   **With Trazodone9**   * Minor physiological effects   **With Citalopram/Escitalopram, Sertraline, Fluvoxamine, Paroxetine9**   * May lead to serotonin syndrome | **With Aripiprazole, Risperidone, Paliperidone9**   * May lead to dystonia   **With Clozapine9**   * May increase concentration of cocaine leading to syncope   **With Haloperidol9**   * May lead to cardiac toxicity   **With Methadone9**   * Reduce concentration of methadone * May increase QTc prolongation, when used in combination   **With Buproprion9**   * May lead to seizures   **With Buprenorphine9**   * May reduce buprenorphine concentration   **With Disulfiram9**   * Increase concentration of cocaine and lead to paranoia   **With Benzodiazepines, Zopiclone, Zolpidem2**   * Lead to increased sedation   **With Alcohol3**   * Co-occurring use leads to tachycardia, increase in plasma levels of cocaine and elevated blood pressure. May increase risk of cardiovascular toxicity. | |
| **Psychiatric effects** | * Stimulants can cause euphoria, exhilaration, alertness, improved task performance, and exacerbation of obsessive-compulsive symptoms3 * During cocaine intoxication, individuals can present with delusions, paranoia, hallucinations (especially tactile), delirium and severe anxiety. Symptoms may persist for months after the person has stopped using cocaine. * Paranoid delusional disorders and other types of psychoses have been linked with chronic cocaine use. * Cocaine can also induce severe depression and increase the risk of suicide. * Concurrent cocaine and alcohol use increase the risk of depression1 |

**References**

1. Kahan, M. (2014). Physical Effects of Alcohol and Other Drugs. In M.Herie & W. Skinner (Ed.), *Fundamentals of Addiction: A Practical Guide for Counsellors* (4th ed., pp. xiii-xviii). Canada: Centre for Addiction and Mental Health.
2. Publishers Group West. (2015). Streetdrugs: a drug identification guide. Long Lake: Publishers group West, LLC.
3. Bezchlibnyk-Butler, K., Jeffries, J., Procyshyn, R., Virani, A. (2014). Clinical Handbook of Psychotropic Drugs (20th ed). Hogrefe Publishing
4. O'Brien C.P. O'Brien, Charles P.(2011). *Goodman & Gilman's The Pharmacological Basis of Therapeutics.* Retrieved February 10, 2015 from http://accessmedicine.mhmedical.com/content.aspx?bookid=374&Sectionid=41266230.
5. Molina, D. K., & Hargrove, V. M. (2011). Fatal cocaine interactions: a review of cocaine-related deaths in Bexar County, Texas. *The American journal of forensic medicine and pathology*, *32*(1), 71-77.
6. National Centre for Education and Training on Addiction (NCETA) Consortium. (2004). *Alcohol and Other Drugs: A Handbook for Health Professionals.* Retrieved on March 25, 2015, from http://www.health.gov.au/ internet/main/publishing.nsf/Content/E5203E6D5CBAA696CA257BF0001E02ED/$File/aodgp.pdf
7. Centre for Addiction and Mental Health. (2012). *Understanding Psychiatric Medication*. Retrieved on March 30, 2015 from: http://knowledgex.camh.net/amhspecialists/resources\_families/benzodiazepines\_upm /Pages/driving.aspx
8. Lindsey, W.T., Stewart, D., Childress, D. (2012). Drug interactions between common illicit drugs and prescription therapies. *Am J Drug Alcohol Abuse*. 38(4):334-43.
9. Sussex Partnership NHS Foundation Trust. (2014). *Psychotropic Drug Interactions With Illegal Drugs/Non-Drugs*. Retrieved on March 30, 2015, from http://www.sussexpartnership.nhs.uk/sites/default/files/documents/ psychotropics\_and\_non\_drug\_interactions\_-\_feb\_14\_0.pdf.
10. Farré, M., De la torre, R., Llorente, M., et al. Alcohol and cocaine interactions in humans. *J Pharmacol Exp Ther.* 1993;266(3):1364-73.
11. Townsend, M.C. (2015). *Psychiatric Nursing: Assessment, Care Plans, and Medications.* Oklahoma: F.A. Davis Company.