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]

Characteristics (Stimulant)

Cocaine

- Inhibits dopamine and serotonin reuptake, stimulating the brain's reward pathway[3]
- 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 intensity[3]
- Powerful psychological dependence occurs; dysphoria can last for weeks or months

Presentation during Intoxication

Common signs and symptoms of intoxication may include[3]:

- Rapid euphoria
- Increased energy
- Anorexia
- Vomiting
- Hypertension
- Diaphoresis
- Increased alertness
- Insomnia
- Anxiety
- Agitation
- Headaches
- Chest Pain
- Mydriasis
- Tactile hallucinations
- Delusions
- Hallucinations
- Nausea
- Tachycardia
- Pyrexia
- Ataxia
- 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

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

Monitoring and support during intoxication *(Continued)*	• 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 include[3,6]:** • Anxiety • Distorted Sleep • Vivid, unpleasant dreams • Paranoia • Nausea • Diarrhea • Chronic fatigue • Irritability • Difficulty concentrating • Anorexia • Hunger/Increased appetite • Insomnia/hyperinsomnia • Craving • Depression • Suicidal or homicidal ideation • Myalgia • Diaphoresis • Convulsions [3, 6]
Monitoring and support during withdrawal	**Goal[11]** • 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 delirium[3] • Snorting can lead to stuffy nose, runny nose, eczema around nostrils, atrophy of nasal mucosa, bleeding, and perforated septum.[3] • Sexual dysfunction is common[3] • Chronic use of crack can lead to microvascular changes in the eyes, lungs and brain. • Respiratory symptoms include asthma, pulmonary hemorrhage and edema[3]. • Dehydration can occur due to effect on temperature regulation, with possible hyperpyrexia.[3]
Notable Interactions	**With Cannabis[8]** • 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 **With Aripiprazole, Risperidone, Paliperidone[9]** • May lead to dystonia **With Clozapine[9]** • May increase concentration of cocaine leading to syncope **With Haloperidol[9]** • May lead to cardiac toxicity **With Methadone[9]** • Reduce concentration of methadone

Notable Interactions (Continued)	myocardial infarction **With Dihydroergotamine[9]** • Increases blood pressure **With Carbamazepine[8,9]** • Combination may lead to large elevations in blood pressure and heart rate (increase cardiac side effects) **With MAOIs[8]** • May lead to hypertensive crisis **With St. John's Wort[8]** • May lead to serotonin syndrome **With Hyaluronidase[8]** • Anesthetic hyperreactivity **With Amphetamines, MDMA[8]** • Blood pressure elevation **With TCAs[9]** • Arrhythmia -> Avoid! **With Trazodone[9]** • Minor physiological effects **With Citalopram/Escitalopram, Sertraline, Fluvoxamine, Paroxetine[9]** • May lead to serotonin syndrome • May increase QTc prolongation, when used in combination **With Buproprion[9]** • May lead to seizures **With Buprenorphine[9]** • May reduce buprenorphine concentration **With Disulfiram[9]** • Increase concentration of cocaine and lead to paranoia **With Benzodiazepines, Zopiclone, Zolpidem[2]** • Lead to increased sedation **With Alcohol[3]** • 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 symptoms[3] • 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 depression[1]

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