

Cocaine Addiction – Key Notes

Type of users	2.4% of 16-59 year olds have used cocaine in the last year  5.9% of 16-24 year olds have used cocaine in the last year  M:F ratio of cocaine users around 2:1, majority with GCSE's or higher, in employment and prosperous
Forms of the drug	Coca leaves Powder Crystal ("rock") of freebase variety ("crack")
Street Names	Blow, white, rock (crack)
Purity	Powder 25-29%, crack 44-47%
Cutting agents	Phenacetin, benzocaine
Legal status	Class A controlled drug under the Misuse of Drugs Act 1971
Modes of taking	Chewed Smoking Sniffing Injecting
Patterns of use	Coca leaves are often chewed where the plant grows indigenously, in South American countries, giving a very small constant dose of cocaine with a small effect  Infrequent use of chemical forms of cocaine - recreational Daily Binge use (continuous use followed by crash) Psychological, but not physical dependence Combination with heroin (speedball) Use of heroin / alcohol / benzodiazepines "to come down" Formation of cocaethylene when combined with alcohol

## Effects of the drug

Acute – wanted

Euphoria  
Energy  
Loss of appetite

Acute – unwanted

Paranoia  
Anxiety  
Acute psychotic episode  
(cocaine-induced psychosis)  
Insomnia  
Heart attack  
Post-use “crash”

Chronic – wanted

Sense of improved self-  
esteem and social standing  
(illusory)

Chronic – unwanted

A variety of physical,  
psychological and social  
problems (see Table)  
Nasal septum damage  
Chest problems

## Clinical presentations

Occasional use  
Intoxication (F14.0)  
Harmful use (F14.1)  
Dependent use (F14.2)

## Natural history

Usually starts in teens and ceases on the adoption of adult roles, particularly marriage and having children (Kandel & Raveis 1989)

3 trajectories (Addiction Research 1994, p3):

1. Most common trajectory is a period of experimentation followed by reduced use and often cessation.
2. Period of moderate regular use, associated with occasional binges, tending towards reduced use and eventual abstinence.
3. Compulsive use leading to personal and social harm in 2% of lifetime users.

Those in treatment will have a 21% abstinence rate at 1 year, which will be around 26% at 5 years

## Modes of presentation

Self-referral to drug treatment unit  
 Presentation at A&E department / general hospital  
 Presentation to family doctor

- Consultation about cocaine use
- Diagnosis of another medical condition associated with cocaine use
- Concern expressed by another family member or friend

Referral by employer or from occupational health service  
 Referral from criminal justice system following arrest or further involvement in CJS (trial, sentencing, community treatment in Drug Intervention Programme or prison)

## Assessment

## Clinical diagnosis

- History
  - longitudinal history of use and cross-sectional history (typical drug-using day, history of use over last week); amount used, type, cost of purchase and how funded (legal and illegal)
- Examination
  - Examine skin for sites of injection, nose for evidence of trauma, pulse and blood pressure. Weigh patient, who should be very thin. Pupils for evidence of recent use (dilatation).
- Rating scales
  - None
- Investigations
  - Urine testing for presence of cocaine (and other drugs of abuse)
  - Saliva testing for presence of cocaine (and other drugs of abuse)
  - Hair testing for presence of cocaine (and other drugs of abuse)
  - ECG, PEFr, CXR are not routinely performed
  - Blood tests to rule out other causes of abnormalities (e.g. thyroid function tests to rule out alternate causes of cardiac arrhythmias)

## Complications from drug use

- Physical
  - Examination of the cardiovascular and respiratory systems
- Psychological
  - Psychotic mental state, depressed mood, possibly with suicidal ideation in the crash
- Social
  - debt, finances, benefits, housing, occupation

## Motivational state

- motivated to continue using, ambivalent, motivated to cease use

Treatment options

*Self-help*

Cocaine Anonymous

*User support*

Mainliners (Hep C)

*Those continuing to use*

Street agency support

Needle exchange

Motivational interviewing

Bloodborne virus testing

Contingency management

*Those wishing to stop*

Detoxification not formally needed, as no physical withdrawal syndrome. However, some appreciate support

Post-detoxification pharmacotherapy

- ?disulfiram
- ?bupropion
- Adjunctive antidepressants sometimes useful, but will not treat or prevent relapse to cocaine use

Relapse prevention therapy

Day programme

Residential rehabilitation

Outpatient treatment – 1:1 support, group therapy

Family support / family therapy

Assistance with process of finding accommodation

Assistance with addressing financial problems

Assistance with further education

Assistance with occupation / employment

<p><i>Cardiovascular</i> Chest pain Myocardial infarction Arrhythmias Cardiomyopathy Myocarditis Infective endocarditis Fungal disseminated infection and endocarditis</p>	<p><i>Genital</i> Sexual dysfunction Sexually transmitted diseases, either because of libido enhanced by crack cocaine or because of prostitution to obtain funds Fournier's gangrene following intracavernosal injection</p>	<p><i>Head &amp; neck</i> Erosion of dental enamel Gingival ulceration Keratitis Corneal epithelial defects Chronic rhinitis Perforated nasal septum Aspiration of nasal septum Necrotizing infection of the face Midline granuloma Altered olfaction Optic neuropathy Osteolytic sinusitis</p>	<p><i>Skin</i> Crack hand Cocaine-associated pseudovasculitis Churg-Strauss vasculitis Henoch-Schönlein purpura Bullous skin disease Stevens-Johnson syndrome Necrotic livedo Psychogenic skin excoriation Cocaine-induced skin ulcer Multi-focal skin necrosis secondary to impairment of soft-tissue perfusion and invasive bacterial infection (<i>S.pyogenes</i> &amp; <i>S aureus</i>) Cutaneous fibrosis (scars) healed from cocaine use</p>
<p><i>Pulmonary</i> Pneumothorax Pneumomediastinum Pneumopericardium Pulmonary oedema Exacerbation of asthma Pulmonary haemorrhage Bronchiolitis obliterans "Crack lung" Pulmonary eosinophilia</p>	<p><i>Obstetric</i> Spontaneous abortion Poor pregnancy weight gain Placental abruption Lower infant weight Prematurity Premature rupture of membranes</p>		
<p><i>GI</i> Intestinal ischaemia Gastroduodenal perforations Colitis Hepatic amyloidosis</p>	<p><i>Pediatric</i> Microcephaly Cardiac malformations Subcutaneous fat necrosis in the newborn Stillbirth Respiratory distress Congenital syphilis Cocaine withdrawal Seizures Cognitive deficits, developmental but not motor delay High risk of have child taken into care</p> <p><i>nb. infant prenatal cocaine exposure not associated with mental, motor, or behavioural deficits after controlling for birth wt &amp; environmental risks (Pediatrics 2004;113:1677)</i></p>	<p><i>Neurologic</i> Headache Seizures Cerebral haemorrhage Cerebral infarctions Cerebral atrophy Cerebral vasculitis (with temporary blindness)</p>	<p><i>Endocrine</i> Hyperprolactinaemia</p>
<p><i>Renal</i> Rhabdomyolysis Renal failure due to rhabdomyolysis Renal failure not due to rhabdomyolysis Nephrotic syndrome Renal amyloidosis</p>		<p><i>Psychiatry</i> Anxiety Depression Paranoia Delusional parasitosis (Formication) Delirium Psychosis Suicide</p>	<p><i>Others</i> Sudden death Hyperpyrexia Cocaine platelet aggregation and thrombotic tendency Immersion foot in homeless, aggravated by cocaine</p>
<b>Table: Some Complications of Cocaine Use</b>			