

# Breastfeeding and Medication



## Breastfeeding and Cocaine use

**Avoid during breastfeeding. If mother uses she should pump and discard her milk for a minimum of 72 hours – a breastfed infant may still have positive urine test results due to the transfer of inactive metabolites.**

It is not rare on a Monday morning for me to take a call on the Drugs in Breastmilk Helpline from a breastfeeding mother (or her “friend”), admitting that she has snorted cocaine on Saturday night. In these cases the mothers have usually not breastfed their babies since they used, but want to know when they can return to breastfeeding normally. There are very few publications on maternal use of cocaine.

Cocaine is the second most commonly used illicit drug. Use in pregnancy and breastfeeding may have severe consequences for the baby due to its pharmacokinetic properties. Euphoric highs are brief but breastmilk and urine remain positive for long periods. Infant urine following exposure to cocaine via breastmilk may remain positive for up to 60 hours. **Mothers who snort cocaine should pump and dump breastmilk for I would argue 72 hours.** Passive inhalation of crack cocaine smoke may also result in infants with positive toxicology screens. Cocaine powder should never be applied to the nipples of breastfeeding mothers.

### **The effect of cocaine and pharmacokinetics**

Cocaine is a local anaesthetic but also a powerful central nervous system stimulant. It is absorbed from the stomach, nasal passages, via inhalation and eye drops. Adverse effects include agitation, nervousness, euphoria, hallucinations, tremors, tonic-clonic seizures and myocardial arrhythmias. The duration of a euphoric high is only 20-30 minutes but the metabolism and excretion takes place over a much longer period with urine remaining positive for metabolites for up to 7 days. The euphoric effect is due to the release of dopamine but when this is depleted a crash is experienced leading to the user wanting to repeat the experience. It also facilitates the release of serotonin. The high is said to be a feeling of power, vigour, increased self-esteem and feeling of sexual prowess.

Because of its pharmacokinetic effects, significant amounts pass to breastfeeding infants who may remain positive to toxicology screens for even longer. So, the mother may assume that as she now

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feels “normal” that the cocaine has left her system and that it is safe to breastfeed. This is very far from accurate. The baby remains at serious risk from the amount passing through breastmilk.

### **Consequences of exposure to freebase crack cocaine by passive inhalation**

Four children were hospitalised after exposure to freebase crack cocaine smoked by their adult caregivers. Two of the children had transient drowsiness and two experienced seizures (Bateman and Heagarty 1989).

### **Pharmacokinetics of cocaine in breastmilk**

- High milk plasma ratio – quoted as 7.8 in rats (Wiggins 1989) High capacity to bind to albumin which explains why the level in breastmilk is higher than in blood.
- It is easily absorbed and likely to become trapped in the milk compartment (Winecker 2001)
- Half-life 1.25 hours
- Highly lipid soluble and readily crosses biological membranes

### **Reports on cocaine use by breastfeeding mothers**

There are few case studies of mothers who have used cocaine in the literature.

However, a detailed study by Chasnoff (1987) is very informative. A 26-year-old mother took her 2-week-old daughter to the emergency room with symptoms of extreme irritability over the previous 4 hours. She admitted that she had snorted “large amounts” of cocaine in the first 2 months of pregnancy but had then stopped. She had however continued to binge drink large volumes of alcohol and to smoke cigarettes throughout her pregnancy. The baby was born at 38 weeks weighing 3.136Kg with no abnormalities reported at delivery. They were discharged home at 3 days exclusively breastfeeding.

When the baby was one week of age the mother stated that she had applied a “dab” of cocaine to her lower gum and then breastfed as normal. She noted no changes in the baby’s behaviour or sleep.

At 2 weeks she had snorted 0.5g cocaine between 10am and 2 pm and during this time breastfed around five times. At 1pm the baby girl became markedly irritable and began to vomit and have diarrhoea. Her pupils became dilated and the mother noted that she “wouldn’t focus on her face”. She took the baby to the hospital at 5pm.

On admission the baby was well hydrated and well nourished. She was tremulous and irritable with frequent startling to minimal noise. Her weight was 3.55Kg and she showed no signs of neglect or abuse. There were some signs of exposure to high levels of alcohol in utero.

She was admitted and put on an intra-venous drip whilst being monitored. She took bottles of artificial formula but was still irritable with a high-pitched cry 12 hours after the last breastfeed (exposure to cocaine). This continued to 24 hours but at that time was more easily consoled. Irritability and tremulousness persisted throughout the first 48 hours and it wasn’t until 72 hours

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post-exposure that the heartbeat returned to a more normal 130 beats per minute from the peak at 160 beats.

Results of toxicological studies showed cocaine and its metabolite in the mother's milk and the infant's urine initially. Milk samples were negative at 36 hours after the mother's last cocaine use and the infant's urine was negative at 60 hours after the last breastfeed.

The case was reported to the department of children and family services and was discharged home with the parent's under court supervision. No mention is made of how the infant was fed at that stage and there is no long-term follow-up data other than that physical and neurological findings were normal on discharge.

Extracts taken from Jones W Cocaine use and the breastfeeding mother. Pract Midwife. 2015 Jan;18(1):19-22.

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