

HEALTH WARNING: Crack or Powder Cocaine Use

Agranulocytosis and Neutropenia: Skin necrosis and/or opportunistic infections

Toronto emergency department doctors continue to see cases of agranulocytosis, neutropenia, and vasculitis related to cocaine use. These illnesses are due to an adulterant, levamisole, a chemical compound used to treat intestinal worms in animals, rather than from the cocaine itself.

Individuals in Toronto, and across North America, have developed immune system suppression after using cocaine. Cases have been found across age and gender, although more female cases have been found.

Presentations include fever, opportunistic infections, and/or skin necrosis.

- In a cocaine user or suspected cocaine user, any symptoms of rapidly developing infection, including fevers, warrant an urgent CBC and differential to look for neutropenia.
- The neutropenia is acute and profound, commonly with a neutrophil count of zero. The total white blood cell count may only be slightly below normal as the lymphocytes and other white blood cells can be normal.
- Urine toxicology can be sent simultaneously looking for cocaine and levamisole. However, levamisole has a short detection “window” in urine (specimen should be collected within 24 h of last use).

Neutrophil count generally recovers within 10 days after cocaine use is discontinued.

If clinicians become aware of any Toronto cases, Toronto Public Health would greatly appreciate being notified. Please contact Dr. Rita Shahin at 416-338-7924 or rshahin@toronto.ca.

A large percentage of cocaine coming into North America continues to be cut with levamisole. It is unknown why some people have severe reactions to this drug, while others do not.



More information, including case reports, is available at the following links:

- Annals of Internal Medicine: Bilateral necrosis of earlobes and cheeks
<http://www.annals.org/content/152/11/758.extract>
- CMAJ: Cocaine adulterant linked to neutropenia:
http://www.cmaj.ca/cgi/rapidpdf/cmaj.090286v1?ijkey=14ed086152bb0507096eb4a029e6ee0c8c7bb2ab&keytype2=tf_ipsecsha
- British Columbia Medical Journal: Agranulocytosis (neutropenia) associated with levamisole in cocaine in British Columbia
<http://www.bcmj.org/bc-centre-disease-control/agranulocytosis-neutropenia-associated-levamisole-cocaine-british-columbia>