

County of Erie

CHRIS COLLINS
COUNTY EXECUTIVE

DEPARTMENT OF HEALTH

ANTHONY J. BILLITTIER IV, M.D., FACEP
COMMISSIONER OF HEALTH

HEALTH ADVISORY #232

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AGRANULOCYTOSIS ASSOCIATED WITH EXPOSURE TO COCAINE CONTAMINATED WITH LEVAMISOLE

Please distribute immediately to the Emergency Department, Director of Nursing, Medical Director, Laboratory Service, and all acute and primary care patient areas.

SUMMARY

- Agranulocytosis is an acute blood condition which leaves patients unable to fight off infections due to a decrease in granulocytes.
- Agranulocytosis may be associated with the use of cocaine contaminated with levamisole.
- The presence of levamisole in cocaine is becoming a national and international phenomenon. Levamisole has been detected in cocaine in Erie County.
- Exposure to levamisole should be considered in patients who use cocaine and present with unexplained agranulocytosis and/or unusual infections.

BACKGROUND AND HISTORY

The U.S. Department of Justice Drug Enforcement Agency (DEA) reported that between January and April 2008, levamisole found in tested cocaine had increased from 9 percent to 19 percent. Health officials in Canada are investigating a number of cases of agranulocytosis in people who use cocaine. They have also identified levamisole in one of their cases.

The DEA has identified levamisole in cocaine samples in New York, Illinois, Florida, Kansas, Missouri, and in cocaine kilogram bricks seized in South America. Health officials in Denver, Colorado recently confirmed a case of levamisole-associated agranulocytosis and further retrospective review of medical records identified an additional nine possible cases in the past year. The New Mexico Department of Health has also issued an alert about 11 cases in January 2009 and Northern Alberta published a case series of levamisole poisoning last month.

Levamisole is used as an antihelminthic (deworming) agent in sheep, pigs, and cattle. Historically, it was used as an adjuvant chemotherapy agent for colon cancer and also as

an immunomodulator in rheumatoid arthritis. Levamisole is no longer available in North America for human use, but remains available in the United States and South America for veterinary administration.

SYMPTOMS ASSOCIATED WITH LEVAMISOLE

In some patients, levamisole exposure induces autoantibody formation, leading to agranulocytosis. Symptoms of agranulocytosis may include:

- Worsening or persistent sore throat
- Persistent or recurrent fever
- Swollen glands
- Painful sores (oral and anal)
- Skin infection (especially if associated with painful swelling)
- Thrush
- Other unusual infections

RECOMMENDATIONS

The Erie County Department of Health and the Western New York Poison Center of recommend that health care providers consider levamisole exposure in patients who use cocaine and have unexplained agranulocytosis and/or unusual infections. Physicians should contact the Western New York Poison Center at (800) 222-1222 or (716) 878-7654 to report suspect cases.

ADDITIONAL INFORMATION

If you have questions regarding this advisory, please contact the Erie County Department of Health at (716) 858-7697, Monday thru Friday, 8:30am to 4:30pm or the Western New York Poison Center at (800) 222-1222 or (716) 878-7654.

- The New Mexico Department of Health alert: <http://www.nmhealth.org/documents/agranulocytosis1-16-09.pdf>
- Northern Alberta case series: <http://www.annals.org/cgi/content/full/150/4/287>
- <http://www.cal-tox.org/Downloads/Monographs/Levamisole.pdf>

Health Category Definitions:

Health Alert FLASH: conveys the highest level of importance due to a large-scale, catastrophic public health emergency; warrants immediate action or attention

Health Alert Priority: conveys the highest level of importance; warrants immediate action or attention to a health problem or situation

Health Advisory: provides important information for a specific incident or situation; may not require immediate action

Health Update: provides updated information regarding an incident or situation; no immediate action necessary