

IN THE NEWS

Outbreak of Salmonella linked to Kratom

The CDC reported that as of April 5th, there is an ongoing outbreak of four (4) different strains of Salmonella infection, with 132 cases spread throughout the United States in 32 states. The greatest number of cases are in the Western states of Washington (13), California (9), Oregon and Idaho, each with 8; New York has 7, Florida, Minnesota, Oklahoma, and Wisconsin all have 6, Virginia and North Dakota each have 5; the remaining 21 states with confirmed cases have from 1 to 4 each. There are 18 states that have not reported any cases.

The CDC and State Public Health Authorities continue to investigate the outbreak. They expect more cases to be reported since the shelf life of Kratom is long, and Salmonella cases typically take 2-4 weeks to be reported to the State and CDC. Therefore, any cases that have occurred since March 14, may not have been reported yet.

Salmonella are bacteria that are responsible for some gastrointestinal illnesses. In this outbreak, which had the first case reported on January 11, 2018, there has consistently been 40% of the cases needing hospitalization; there have been no deaths.

Kratom is an herbal supplement that, although not approved by the FDA for any use, is used for pain (as an opiate substitute) or as a stimulant. Seventy-three percent (73%) of the cases have reported consumption of Kratom in powder, pills or tea form, with most consuming the powder; it also comes in leaf or capsule form. Several different Kratom samples from different sources have tested positive for Salmonella, but it has not currently been traced to any common brands or suppliers. It has been bought in retail stores in several different states as well as on-line. Other names for **Kratom** are **Thang**, **Kakuam**, **Thom**, **Ketom**, and **Biak**.

The CDC has recommended that no one consume any brand or form of Kratom since it may be contaminated with Salmonella and make anyone consuming it sick. Several companies have voluntarily recalled their product at the CDC's urging. The FDA had to force a recall on one company, *Triangle Pharmaceuticals*, which had products test positive for Kratom. This is the first time that the FDA has ever enforced a mandatory recall.

Typical signs and symptoms of Salmonella, which usually begin 12-72 hours from exposure to the bacteria, include fever, abdominal cramps and diarrhea. This typically lasts from 4 to 7 days and most people do not need treatment to get better. In this outbreak, 40% of those that have been followed for their illness, have needed to be hospitalized because of the severity of their symptoms (usually the diarrhea and too much loss of fluid and electrolytes) or because the Salmonella has moved into the blood and traveled to other parts of the body. Severe infection without treatment with an antibiotic can lead to death. At this time, there is no resistance found to any of the strains of Salmonella occurring in this outbreak. Those with the highest risk for complications include those older than 65, younger than 5 years, and those with compromised immune systems, such as those with HIV/AIDS or immunocompromised from medications like chemo, high dose or long duration steroids, or anti-rejection purposes.

General Info from the CDC about the outbreak:

<https://www.cdc.gov/salmonella/kratom-02-18/index.html>

Information from the FDA on the outbreak, plan for mitigation & the list of recalls:

<https://www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm597265.htm>

Map of US with states affected with Salmonella from Kratom:

<https://www.cdc.gov/salmonella/kratom-02-18/map.html>

Recommendations for First Responders

1. Consider questioning those with fever and diarrhea and/or abdominal cramps, whether they have ingested any Kratom-containing product. Other names for it are Thang, Kakuam, Thom, Ketom, and Biak. If the answer is yes, secure the product so it can be taken to the hospital with the patient if they are being transported.
2. **Whenever** there is fever and active GI symptoms (vomiting or diarrhea), contact precautions should be used by all First Responders. This includes at least gloves and face protection (cover eyes & mouth); a fluid resistant gown should be added if there is copious amounts or the individual requires assistance with containing the vomiting and/or diarrhea, or whenever clean up and disinfection is necessary. Try to contain all fluids in a double red bag or per biohazardous policy and procedures.
3. Recognize that the patient or other individuals around the patient, as well as their clothes, or items they may have been touching may also be contaminated. Always have appropriate barriers between them, any objects, and you.
4. Since 40% of those ingesting the Kratom product have required hospitalization, consider transporting those that show symptoms of dehydration (dry lips and mucous membranes, tenting skin, non-recent urination, slightly or greatly elevated pulse (upper limits of NSR or Sinus Tachycardia), AMS, etc. Transport should also be provided for those with inability to drink enough fluid to keep ahead of the loss from the diarrhea, if there is no one to care for them or to call 911 again if they get worse. Transport should also be considered if they are in one of the high-risk groups for complications: age greater than 65 or less than 5, or otherwise immunocompromised.
5. Give an early alert to the receiving facility so they can take the appropriate precautions as well.
6. Before returning to service, assure that proper terminal cleaning and disinfection has occurred per appropriate biohazardous policy and procedures, using the prescribed disinfectant and soak or dwell time.
7. Ask the designated Infection Control Officer to follow up if there are any possible exposures or if anyone on the crew develops symptoms such as fever, abdominal cramps, or diarrhea.

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