

Outbreak of *Salmonella* Infections Linked to Pet Bearded Dragons

Final Update



Investigation Notice

Posted November 24, 2020 at 2:00 PM ET

This outbreak investigation is over. However, people can still get a *Salmonella* infection from pet bearded dragons. Always take steps to stay healthy around pet bearded dragons.

CDC and public health officials in several states investigated a multistate outbreak of *Salmonella* Muenster infections linked to pet bearded dragons.

Final Outbreak Information

At A Glance

- [Reported Cases](#): 18
- [States](#): 11
- Hospitalizations: 11
- Deaths: 0



- As of November 20, 2020, 18 people infected with the outbreak strain of *Salmonella* Muenster were reported from 11 states.
 - 11 ill people were hospitalized, and no deaths were reported.
 - 6 ill people were children under 5 years of age.

- [Epidemiologic and laboratory evidence](#) showed that contact with pet bearded dragons was the likely source of this outbreak.
 - In interviews, 11 (69%) of 16 ill people reported contact with a bearded dragon before getting sick.
 - Ill people reported purchasing bearded dragons from pet stores in multiple states. A common supplier was not identified.
 - The outbreak strain making people sick was identified in samples collected from a bearded dragon and its environment from the home of an ill person in Virginia.
- This outbreak investigation is over. CDC will continue to work with state public health partners to monitor for *Salmonella* infections linked to contact with pet bearded dragons.

Advice to Pet Owners

Bearded dragons can carry *Salmonella* germs in their droppings even if they look healthy and clean. These germs can easily spread to their bodies, habitats, and anything in the area where they live.

You can get sick from touching your bearded dragon or anything in its environment and then touching your mouth or face and swallowing *Salmonella* germs.

Take these steps to [stay healthy around bearded dragons](#):

- **Wash your hands**
 - Always wash hands thoroughly with soap and water right after touching or feeding your bearded dragon and after touching or cleaning the area where it lives and roams.
 - Adults should make sure young children are washing their hands properly.
- **Play safely**
 - Don't kiss or snuggle your bearded dragon, or eat or drink around it. These actions can spread *Salmonella* germs to your mouth and make you sick.
 - Keep your bearded dragon out of your kitchen and other areas where you eat, store, or prepare food.

- **Keep things clean**

- Clean items you use to care for your bearded dragon outside the house, if possible. Items you use to care for it may include tanks, food and water containers, and toys.
- If you clean these items indoors, don't clean them in the kitchen or other areas where you eat or prepare food. Use a laundry sink or bathtub, and thoroughly clean and disinfect the area right after.

- **Pick the right pet for your family**

- Bearded dragons and other reptiles are not recommended for children under 5, adults aged 65 and older, and [people with weakened immune systems](#) because they are more likely to get serious illness from germs that reptiles can carry.

Advice to Stores that Sell or Display Reptiles

- Educate customers about how to stay healthy around reptiles
- Learn more about how to protect your customers and employees from *Salmonella* infection and other diseases shared between animals and humans
 - Read the 2017 Compendium of Measures to Prevent Disease Associated with Animals in Public Settings.

Symptoms of *Salmonella* Infection

- Most people infected with *Salmonella* germs develop diarrhea, fever, and stomach cramps 6 hours to 6 days after being exposed to the bacteria.
- The illness usually lasts 4 to 7 days, and most people recover without treatment.
- In some people, the illness may be so severe that the patient needs to be hospitalized. *Salmonella* infection may spread from the intestines to the bloodstream and then to other places in the body.
- Children younger than 5, adults 65 years and older, and people with weakened immune systems are more likely to have a severe illness.
- For more information, see [Symptoms of Salmonella Infection](#).

Investigation Details

November 24, 2020

CDC and public health officials in several states investigated a multistate outbreak of *Salmonella* Muenster infections linked to bearded dragons.

Public health investigators used the [PulseNet](#) system to identify illnesses that may be part of this outbreak. PulseNet is the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC. DNA fingerprinting is performed on *Salmonella* bacteria isolated from ill people by using a standardized laboratory and data analysis method called [whole genome sequencing](#) (WGS). CDC PulseNet manages a national database of these sequences that are used to identify possible outbreaks. WGS gives investigators detailed information about the bacteria causing illness. In this investigation, WGS showed that bacteria isolated from ill people were closely related genetically. This means that people in this outbreak were more likely to share a common source of infection.

As of November 20, 2020, a total of 18 people infected with the outbreak strain of *Salmonella* Muenster were reported from 11 states.

Illnesses started on dates ranging from [January 29, 2020, to October 17, 2020](#). Ill people ranged in age from less than 1 year to 76 years, with a median age of 26 years. Six ill people are children under 5 years of age. Fifty-six percent of ill people were female. Of 17 ill people with information available, 11 were hospitalized. No deaths were reported.

WGS analysis of 14 bacterial isolates from ill people did not predict any antibiotic resistance. Standard [antibiotic susceptibility testing](#) by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) of three isolates also showed no resistance.

Investigation of the Outbreak

[Epidemiologic and laboratory evidence](#) showed that contact with pet bearded dragons was the likely source of this outbreak.

In interviews, people answered questions about animal contact in the week before they got sick. Of the 16 people interviewed, 11 (69%) reported contact with bearded dragons before getting sick. Ill people reported buying bearded dragons from various pet stores in multiple states. A common supplier was not identified.

The outbreak strain making people sick was identified in samples collected from a bearded dragon and its environment from the home of an ill person in Virginia.

Bearded dragons can carry *Salmonella* germs that can make people sick even if they look healthy and clean. Bearded dragon owners should always follow [steps to stay healthy around their pet](#).

This outbreak investigation is over. CDC will continue to work with state public health partners to monitor for *Salmonella* infections linked to contact with pet bearded dragons.