

# Outbreak of Multidrug-Resistant *Salmonella* Infections Linked to Contact with Pig Ear Dog Treats



## Investigation Notice

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CDC, public health and regulatory officials in several states, and the [U.S. Food and Drug Administration \(FDA\)](#) external icon are investigating a multistate outbreak of multidrug-resistant *Salmonella* infections linked to contact with pig ear dog treats.

Latest Outbreak Information

At A Glance

- [Reported Cases](#): 93
  - [States](#): 27
  - Hospitalizations: 20
  - Deaths: 0
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- Since the last update on July 3, 2019, 48 ill people and three additional *Salmonella* serotypes have been added to this investigation. Additional *Salmonella* serotypes include Infantis, London, and Newport.
  - A total of 93 people infected with the outbreak strains of *Salmonella* have been reported from 27 states.
    - Twenty ill people have been hospitalized. No deaths have been reported.
  - [Epidemiologic evidence](#) indicates that contact with pig ear dog treats is the likely source of this outbreak.
    - In interviews, 63 (90%) of 70 ill people reported contact with a dog before getting sick.
      - Of 49 people with available information, 34 (69%) reported contact with pig ear dog treats or with dogs who were fed pig ear dog treats.

Recall

- On July 3, 2019, [Pet Supplies Plus recalled](#) external icon bulk pig ears stocked in open bins because they might be contaminated with *Salmonella*.
- Do not feed recalled pig ears to your dog. Throw them away in a secure container so that your pets and other animals can't eat them.
- Even if some of the recalled pig ears were fed to your dog and no one got sick, do not continue to feed them to your dog.
  - Wash containers, shelves, and areas that held the recalled pig ear dog treats with hot, soapy water.
- A common supplier of pig ear treats in this outbreak has not been identified. Pet owners can take [steps to keep their families healthy while feeding pets](#).
- This investigation is ongoing, and CDC will provide updates when more information is available.

### Advice to Dog Owners

- **How do I know if my dog has *Salmonella* infection?**
  - Some dogs may have *Salmonella* infection but may not look sick. Dogs with a *Salmonella* infection usually have diarrhea that may contain blood. Affected animals may seem more tired than usual, and may have a fever or vomit.
  - If your dog or cat has these signs of illness or you are concerned that your pet may have *Salmonella* infection, please contact your pet's veterinarian.
- **How can I report my dog's illness if I think its related to pig ears?**
  - FDA encourages consumers to report complaints about pet food products electronically through the [Safety Reporting Portal](#) external icon.
- **Shop safely**
  - Always wash your hands thoroughly with soap and water after touching unpackaged dog food or treats, including pig ears in bulk bins or on store shelves.
- **Tips to stay healthy while feeding your dog**
  - Always wash your hands thoroughly with soap and water right after handling dog food or treats, including pig ears.
  - When possible, store dog food and treats away from where human food is stored or prepared and away from the reach of young children.
  - Don't use your dog's food bowl to scoop food. Use a clean, dedicated scoop, spoon, or cup.
  - Always follow any storage instructions on dog food bags or containers.
- **Play safely after your dog eats**
  - Don't let your dog lick your mouth or face after it eats food or treats.
  - Don't let your dog lick any open wounds or areas with broken skin.
  - If you do play with your dog after it has just eaten, wash your hands and any part of your body it licked with soap and water.

- **Take extra care around young children**
  - Children younger than 5 years old should not touch or eat dog food or treats.
  - Young children are at risk for illness because their immune systems are still developing and because they are more likely than others to put their fingers or other items into their mouths.
  - Adults should supervise handwashing for young children.
- **See our [Pet Food Safety Infographic](#) for more tips on staying healthy while caring for pets.**

### Symptoms of *Salmonella* Infection

- Most people infected with *Salmonella* develop diarrhea, fever, and stomach cramps 12 to 72 hours 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 years, adults 65 years and older, and people with weakened immune systems are more likely to have a severe illness.

### Investigation Details

July 17, 2019

CDC, public health and regulatory officials in several states, and the [U.S. Food and Drug Administration \(FDA\)](#) external icon are investigating a multistate outbreak of *Salmonella* serotypes I 4,[5],12:i:-, Infantis, Newport, and London infections linked to contact with pig ear dog treats.

Public health investigators are using the [PulseNet](#) system to identify illnesses that may be part of this outbreak. PulseNet is the national subtyping network of public health laboratories coordinated by CDC. DNA fingerprinting is performed on *Salmonella* bacteria isolated from ill people by using standardized laboratory and data analysis techniques called [pulsed-field gel electrophoresis](#) (PFGE) and [whole genome sequencing](#) (WGS). CDC PulseNet manages a national database of these DNA fingerprints to identify possible outbreaks. WGS gives a more detailed DNA fingerprint than PFGE. WGS showed that bacteria isolated from ill people were closely related genetically. This means that people in this outbreak are more likely to share a common source of infection.

As of July 17, 2019, a total of 93 people infected with the outbreak strains of *Salmonella* have been reported from 27 states. A list of the states and the number of cases in each can be found on the [Map of Reported Cases page](#).

Illnesses started on dates ranging from [October 1, 2018 to June 20, 2019](#). Ill people range in age from less than 1 year to 90 years, with a median age of 38 years. Forty-three (46%) ill people are female. Of 67 ill people with information available, 20 (30%) have been hospitalized. No deaths have been reported.

Illnesses might not yet be reported due to the time it takes between when a person becomes ill and when the illness is reported. This takes an average of 2 to 4 weeks. Please see the [Timeline for Reporting Cases of Salmonella Infection](#) for more details.

Whole genome sequencing analysis of *Salmonella* isolates from 33 ill people predicted antibiotic resistance or decreased susceptibility to ampicillin, ciprofloxacin, gentamicin, nalidixic acid, streptomycin, sulfisoxazole, and tetracycline. Testing of one clinical isolate using standard [antibiotic susceptibility testing](#) methods by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) provided comparable results. If antibiotics are needed, infections related to this outbreak may be difficult to treat with some commonly recommended antibiotics, and may require a different antibiotic choice.

#### Investigation of the Outbreak

[Epidemiologic, laboratory, and traceback evidence](#) indicates that contact with pig ear dog treats is the likely source of this outbreak.

In interviews, ill people answered questions about animal contact in the week before they became ill. 63 (90%) of 70 ill people reported contact with a dog before getting sick. Of 49 people with available information, 34 (69%) reported contact with pig ear dog treats or with dogs who were fed pig ear dog treats. Both of these proportions are significantly higher than the results from a [survey pdf icon \[PDF – 787 KB\]](#) of healthy people who reported contact with dogs (61%) or handling dog treats, such as pig ears (16%), in the week before interview.

During the investigation, officials from the [Michigan Department of Agriculture and Rural Development external icon](#) gathered pig ear dog treats at retail locations where ill people reported buying the products. They sampled pig ears for *Salmonella*. As additional strains of *Salmonella* were identified in pig ear products, a search of the CDC PulseNet database identified ill people infected with some of these strains, including *Salmonella* Infantis, *Salmonella* London, and *Salmonella* Newport. These ill people were added to the outbreak investigation.

On July 3, 2019, [Pet Supplies Plus recalled external icon](#) bulk pig ears stocked in open bins because they might be contaminated with *Salmonella*. Consumers should not feed recalled pig ears to their dog. Throw them away in a secure container so that your pets and other animals can't eat them. Even if some of the recalled pig ears were fed to dogs and no one got sick, do not continue to feed them to pets. Wash

containers, shelves, and areas that held the recalled pig ear dog treats with hot, soapy water.

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