



Centers for Disease Control and Prevention
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Salmonella

Multistate Outbreak of Human *Salmonella* Typhimurium Infections Linked to Hedgehogs

Posted January 31, 2013 02:30 PM ET

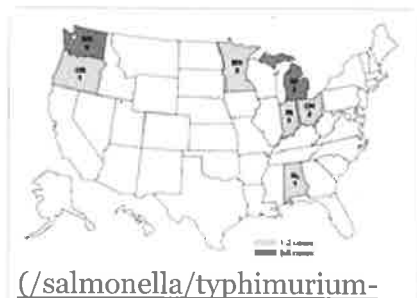
At a Glance:

- **Case Count: 20** (</salmonella/typhimurium-hedgehogs-09-12/epi.html>)
- **States: 8** (</salmonella/typhimurium-hedgehogs-09-12/map.html>)
- **Deaths: 1**
- **Hospitalizations: 4**

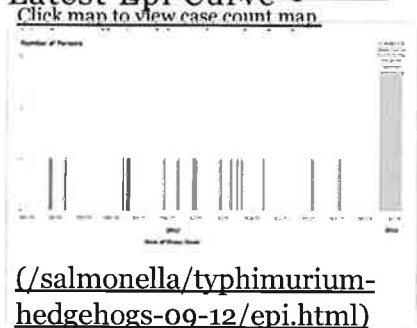
More Information:

- Advice to Pet Owners (</salmonella/typhimurium-hedgehogs-09-12/advice-consumers.html>)
- Signs & Symptoms (</salmonella/typhimurium-hedgehogs-09-12/signs-symptoms.html>)
- Key Resources (</salmonella/typhimurium-hedgehogs-09-12/key-resources.html>)

Latest Case Count Map



Click map to view case count map.



Click graph to view epi curve graph.

Highlights

- **Read the Advice to Pet Owners »** (</salmonella/typhimurium-hedgehogs-09-12/advice-consumers.html>)

- A total of 20 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 8 states.
 - The number of ill persons identified in each state is as follows: Alabama (1), Illinois (1), Indiana (1), Michigan (3), Minnesota (3), Ohio (3), Oregon (1), and Washington (7).
 - 31% of ill persons have been hospitalized. One death associated with *Salmonella* infection has been reported in Washington.
 - 45% of ill persons are children 10 years of age or younger.
- Epidemiologic, laboratory, and traceback findings have linked this outbreak of human *Salmonella* infections to contact with pet hedgehogs purchased from multiple hedgehog breeders in different states.
- It is very important to wash your hands thoroughly with soap and water right after touching hedgehogs or anything in the area where they live and roam. Adults should supervise hand washing for young children.
 - Additional advice on how to protect yourself and others from illness is available. (/healthypets/salmonella_pocketpets.htm)

January 31, 2013

Case Count Update

A total of 20 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 8 states. Since the last update, 4 cases have been reported from Illinois (1), Ohio (1), Minnesota (1), and Washington (1).

Among the persons who reported the date they became ill, illnesses began between December 26, 2011 and December 31, 2012. Ill persons range in age from less than 1 year to 91 years, with a median age of 13 years. Forty-five percent of ill persons are 10 years of age or younger. Fifty-five percent of ill persons are female. Among 13 ill persons with available information, 4 (31%) have been hospitalized. One death associated with *Salmonella* infection has been reported in Washington.

Illnesses that occurred after January 4, 2013 might not be reported yet due to the time it takes between when a person becomes ill and when the illness is reported.

Investigation Update

In interviews, ill persons answered questions about contact with animals and foods consumed during the week before becoming ill. Fourteen (93%) of 15 ill persons interviewed reported contact with hedgehogs or their environments before becoming ill. Some ill persons specifically mentioned contact with African Pygmy hedgehogs. Investigations are ongoing to determine the type and source of hedgehogs that might be linked with illness. Ill persons with available purchase information reported purchasing pet hedgehogs from multiple breeders in several states.

The United States Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS) Animal Care is currently conducting traceback investigations of hedgehogs purchased from USDA-licensed breeders linked to ill persons. In addition, state health departments have tested environmental and hedgehog samples collected from ill persons' homes. The outbreak strain of *Salmonella* Typhimurium was isolated from a Minnesota environmental sample of a container and sink in which a pet hedgehog was bathed. The

outbreak strain was also isolated from a second hedgehog purchased after the first hedgehog and case-patient in Minnesota became ill.

January 9, 2013

Case Count Update

A total of 16 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 7 states. Since the last update, two cases have been reported from Oregon (1) and Washington (1).

Among the persons who reported the date they became ill, illnesses began between December 26, 2011 and November 2, 2012. Ill persons range in age from less than 1 year to 62 years, and 50% of ill persons are 10 years of age or younger. Sixty-four percent of ill persons are female. Among 10 ill persons with available information, 3 (30%) have been hospitalized. No deaths have been reported.

Illnesses that occurred after December 17, 2012 might not be reported yet due to the time it takes between when a person becomes ill and when the illness is reported.

Initial Announcement

September 6, 2012

CDC is collaborating with public health and agriculture officials in many states and the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, Animal Care Program (USDA-APHIS-AC) to investigate an outbreak of human *Salmonella* Typhimurium infections linked to hedgehogs purchased from multiple breeders. Public health investigators are using the [PulseNet \(/pulsenet/\)](http://pulsenet/) system to identify cases of illness that may be part of this outbreak. In PulseNet, the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC, DNA "fingerprints" of *Salmonella* bacteria are obtained through diagnostic testing with pulsed-field gel electrophoresis, or PFGE.

These outbreaks can be visually described with a chart showing the number of persons who became ill each day. This chart is called an [epidemic curve or epi curve \(/salmonella/typhimurium-hedgehogs-09-12/epi.html\)](http://salmonella/typhimurium-hedgehogs-09-12/epi.html). Illnesses that occurred after August 14, 2012 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 3 weeks. Please see the [Salmonella Outbreak Investigations: Timeline for Reporting Cases \(/salmonella/outbreaks/reporting_timeline.html\)](http://salmonella/outbreaks/reporting_timeline.html) for more details.

Contact with hedgehogs can be a source of human *Salmonella* infections. *Salmonella* germs are shed in their droppings and can easily contaminate their bodies and anything in areas where these animals live and roam. You should always wash hands thoroughly with soap and water right after touching hedgehogs or anything in the area where they live and roam. Adults should supervise hand washing for young children.

Investigation of the Outbreak

As of September 5, 2012, a total of 14 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 6 states. The number of ill persons identified in each state is as follows: Alabama (1), Indiana (1), Michigan (3), Minnesota (2), Ohio (2), and Washington (5). The outbreak strain has been rarely seen in the past.

Among the persons who reported the date they became ill, illnesses began between December 26, 2011 and August 13, 2012. Infected individuals range in age from less than 1 year to 62 years, and 50% of ill persons are 10 years of age or younger. Sixty-two percent of ill persons are female. Among 10 ill persons with available information, 3 (30%) have been hospitalized. No deaths have been reported.

In interviews, ill persons answered questions about contact with animals and foods consumed during the week before becoming ill. Ten (100%) of 10 ill persons interviewed reported contact with hedgehogs or their environments before becoming ill. Some ill persons specifically mentioned contact with African Pygmy hedgehogs. Investigations are ongoing to determine the type and source of hedgehogs that might be linked with illness. Ill persons with available purchase information reported purchasing pet hedgehogs from multiple breeders in several states.

USDA-APHIS-AC is currently conducting traceback investigations of hedgehogs purchased from USDA-licensed breeders linked to ill persons. In addition, state health departments have tested environmental and hedgehog samples collected from ill persons' homes. Two environmental samples from areas where hedgehogs lived or were bathed in patient households yielded the outbreak strain of *Salmonella* Typhimurium.

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Content source: Centers for Disease Control and Prevention

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

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