

Salmonellosis

Salmonellosis is a bacterial illness characterized by acute abdominal pain, diarrhea and often fever that usually begins one to five days after exposure. Excretion of *Salmonella* may persist for several days or even months beyond the acute phase of illness. Antibiotics are not needed by most patients (the exceptions being those at high risk of invasive infection), and they may increase the duration of excretion.

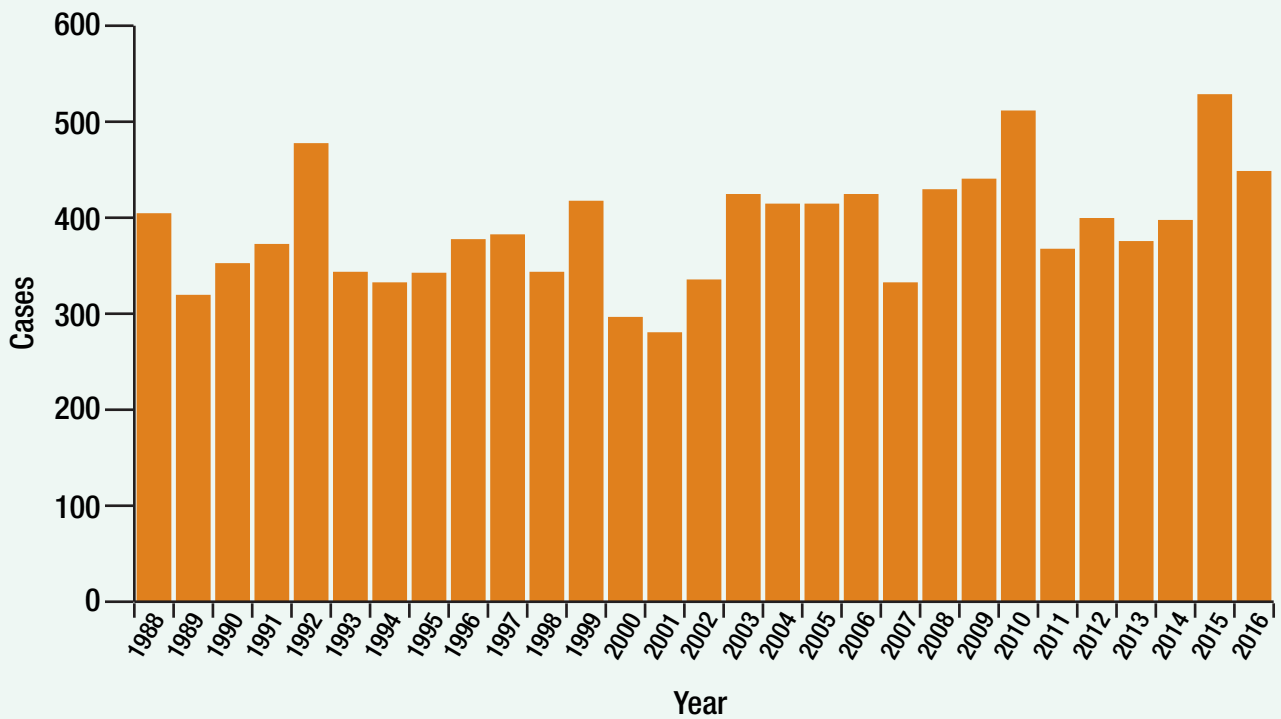
A wide range of domestic and wild animals are carriers of *Salmonella*, including poultry, swine, cattle, rodents, iguanas, tortoises, turtles, snakes, young poultry, dogs and cats. Most human infections are thought to come from consumption of fecally contaminated food or water, but other environmental exposures may be hard to document and therefore underappreciated. Raw or undercooked produce and products of animal origin — such as eggs, milk, meat and poultry — have been implicated as common sources of animal and human salmonellosis. Though not as common as *Escherichia coli* O157 infection, person-to-person transmission of salmonellosis is well documented. The incidence of reported infection is highest among children <5 years of age. In 2016, Oregon’s incidence among children <5 years of age was 17 per 100,000.

Of approximately 2,500 known serotypes, only about 200 are detected in the United States in any given year. In Oregon, *S. Enteritidis* and *S. Typhimurium* have historically been the two most commonly reported serotypes, comprising 25% and 11% of all lab-confirmed isolates in 2016, respectively. Fifty-nine percent of cases were sporadic, 10% associated with an outbreak, and 5% documented transmission within a household.

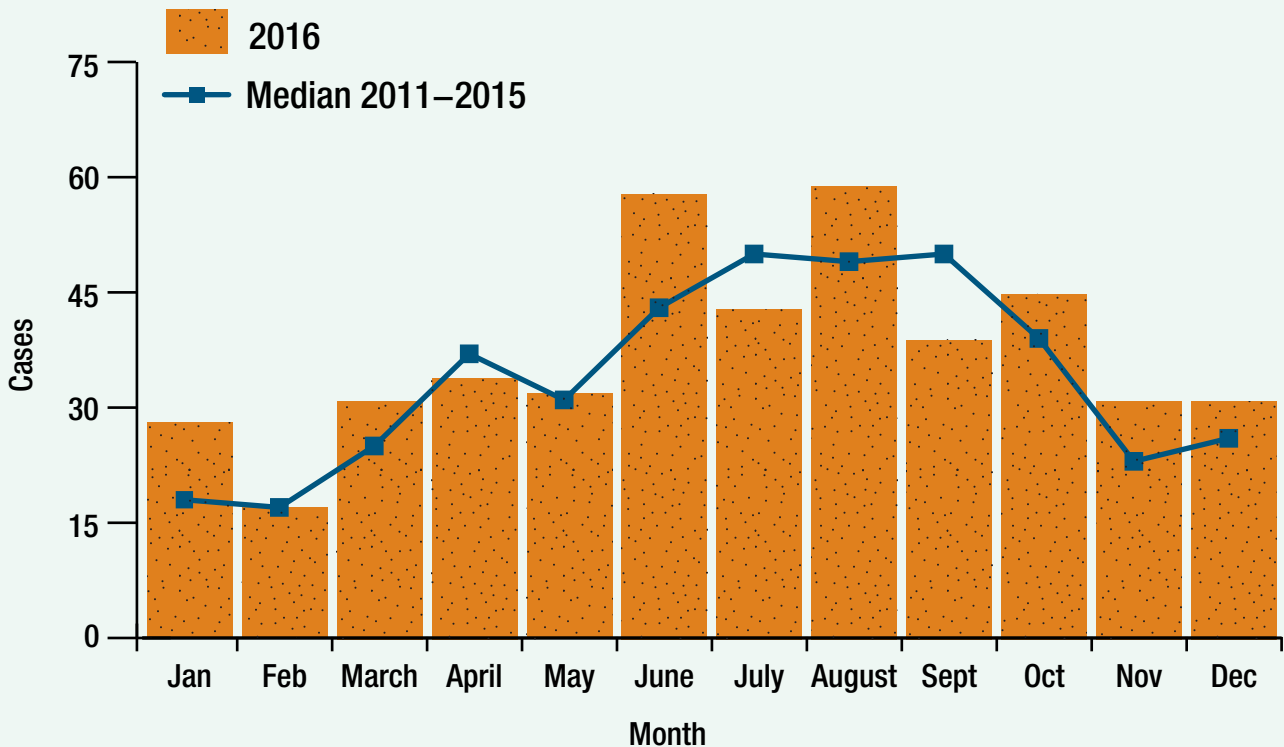
In 2016, 448 salmonellosis cases were reported in Oregon. Eleven outbreaks of salmonellosis were reported. These outbreaks accounted for 46 cases. One large outbreak with 13 Oregon cases was associated with a Mexican-style “fast casual” restaurant chain. Another outbreak involved six cases and was associated with consuming raw hazelnuts sold on a single farm in Oregon; consumers were warned to discard any hazelnuts purchased from the farm. Another six Oregon salmonellosis cases were implicated as part of four separate national outbreaks that were associated with exposure to live baby poultry, specifically chicks and ducklings; serotypes included Braenderup, Infantis, Indiana and Hadar. Smaller outbreaks involved a private birthday party, alfalfa sprouts from Sprouts Extraordinaire, and “Garden of Life RAW Meal Organic Shake & Meal Products.”

In total, six outbreaks were foodborne, four were associated with animal contact and, despite investigation, one other remained indeterminate.

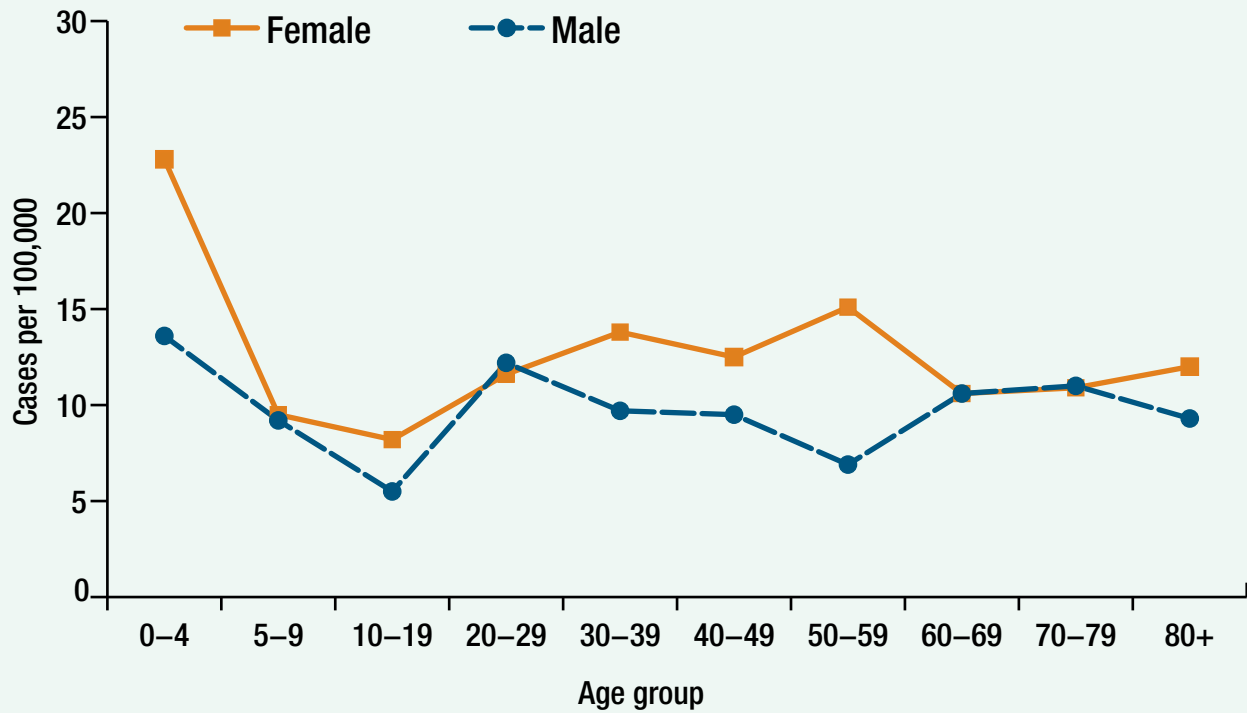
Salmonellosis by year: Oregon, 1988–2016



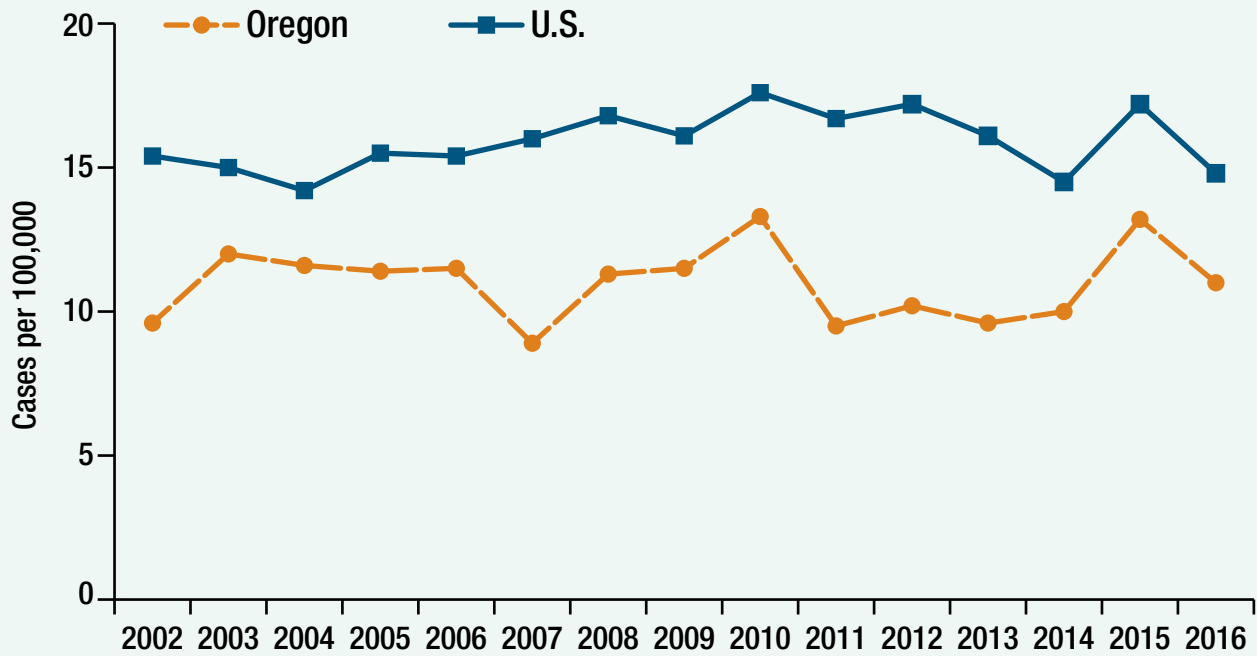
Salmonellosis by onset month: Oregon, 2016



Incidence of salmonellosis by age and sex: Oregon, 2016

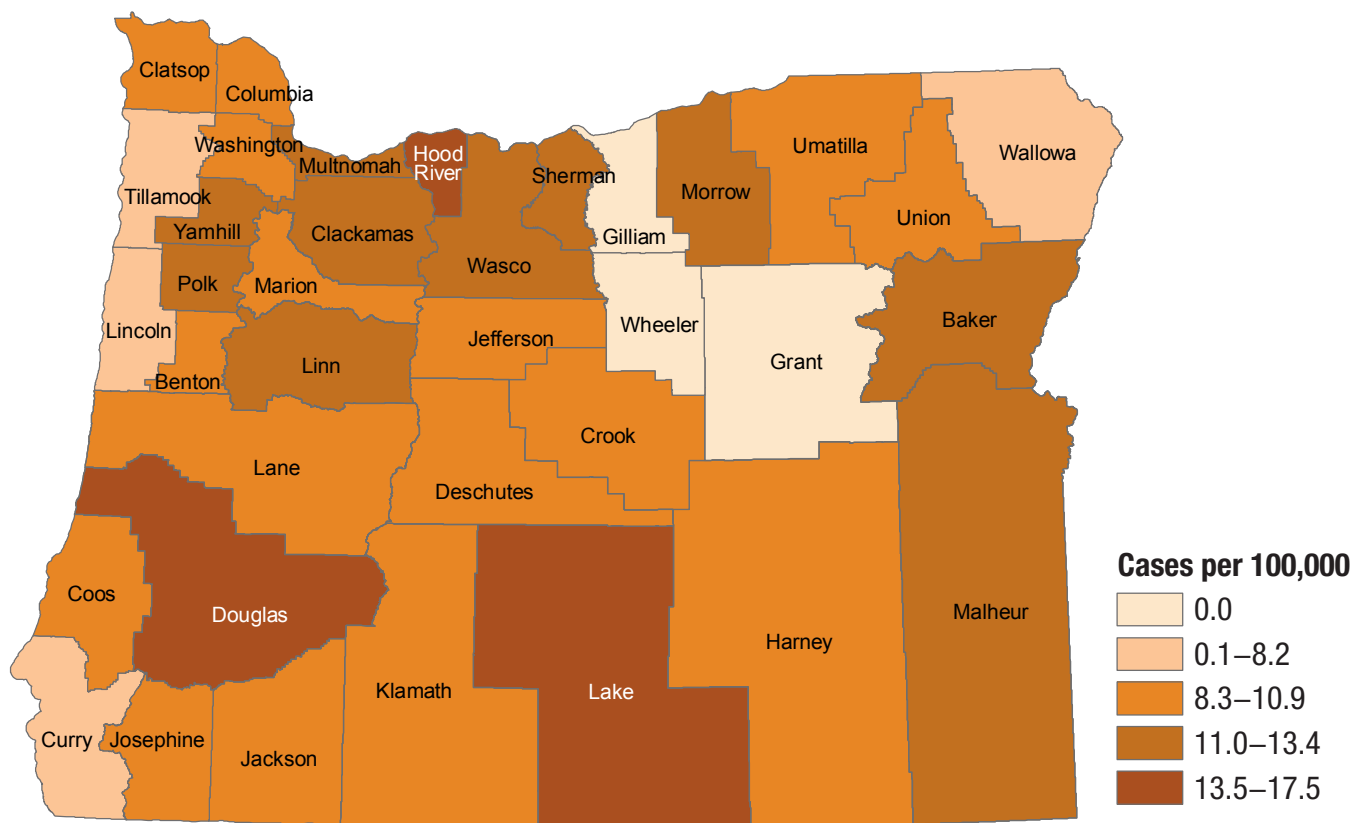


Incidence of salmonellosis: Oregon vs. nationwide: 2002–2016



Oregon	9.6	12.0	11.6	11.4	11.5	8.9	11.3	11.5	13.3	9.5	10.2	9.6	10.0	13.2	11.0
U.S.	15.4	15.0	14.2	15.5	15.4	16.0	16.8	16.1	17.6	16.7	17.2	16.1	14.5	17.2	14.8

Incidence of salmonellosis: Oregon vs. nationwide: 2002–2016



Selected* salmonellosis cases by serotype, Oregon, 2007–2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Braenderup	8	1	21	36	9	10	7	12	9	9
Enteritidis	50	75	61	123	67	74	80	103	128	111
Hadar	1	3	7	8	7	11	6	4	14	3
Heidelberg	26	24	44	28	13	57	23	21	8	10
Infantis	5	8	9	9	13	15	10	6	11	7
Javiana	1	1	1	10	2	4	4	5	10	13
Montevideo	12	16	22	12	17	13	5	4	20	13
Muenchen	9	9	10	9	5	5	3	5	8	13
Newport	17	15	15	24	13	8	15	18	14	30
Oranienburg	8	8	6	8	11	8	9	12	13	13
Poona	2	7	2	0	2	3	3	2	29	3
Saintpaul	3	23	10	13	8	3	12	10	19	12
Thompson	4	5	12	14	14	9	12	18	6	13
Typhimurium	52	65	81	53	47	50	82	61	80	48
I 4,[5],12:i:-	28	9	11	8	9	9	18	22	40	21

*Selected because at least one case was reported in 2016 and it is a more common serotype.

Prevention

- Cook poultry, ground beef and eggs thoroughly.
- Do not eat or drink foods containing raw eggs or raw (unpasteurized) milk.
- If you are served undercooked meat, poultry or eggs in a restaurant, send it back to the kitchen for further cooking.
- Wash hands, kitchen work surfaces and utensils with soap and warm water immediately after they have been in contact with raw meat or poultry.
- Be particularly careful with foods prepared for infants, the elderly and the immunocompromised.
- Wash hands with soap and warm water after handling reptiles, birds or baby chicks, and after contact with pet feces.
- Avoid direct or even indirect contact between reptiles (turtles, iguanas, other lizards, snakes) and infants or immunocompromised persons.
- Don't work with raw poultry or meat and an infant (e.g., feeding or changing diaper) at the same time.