

Name \_\_\_\_\_

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# Reproductive Strategies

## Animal Profile:

### **SALMONELLA** (*Salmonella typhimurium*)

There are times when we eat something and our stomachs hurt badly, and then there are times when they hurt REALLY badly. When it hurts dreadfully bad, it could be from food poisoning, which leads to fever, nausea and diarrhea. Yick. And that's a mild case of food poisoning! Some of the more life-threatening cases can send a person to the hospital.



Rocky Mountain Laboratories, NIAID, NIH

*Salmonella* (rod-shaped) invading human cells.

The interesting thing is, it's not poisoning at all, but the result of a sinister bacteria known as *Salmonella*. This one-celled, rod-shaped bacteria is fairly common, and can be found naturally in raw eggs, raw meats, on the bodies of some reptiles, and in animal feces. It's when *Salmonella* finds itself in the warm growth chambers of our bodies that it hits pay dirt.

When *Salmonella* from infected food reaches our small intestine, it divides rapidly, producing copies of itself through simple division. These bacteria continue to rapidly divide, increasing in number and infecting other cells. This causes our immune system to respond, but *Salmonella* does a good job of fending it off. It takes about 12-72 hours to feel the effects of a *Salmonella* invasion. Our bodies can fight off some *Salmonella* infections, but we generally need the help of antibiotics to overcome them.

Thankfully, *Salmonella* is not one of those extreme bacteria that can survive the freezing temperatures of the Arctic or the boiling heat of volcanic thermal vents. Humans have adapted to *Salmonella's* existence by cooking, pasteurizing, and freezing our foods and drinks, which does a good job of killing the bacteria. Still, *Salmonella* infection is common enough and turns up where people aren't washing their hands or cooking meat thoroughly.