

Salmonella in garden birds responsive to antibiotics

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Scientists at the University of Liverpool have found that Salmonella bacteria found in garden birds are sensitive to antibiotics, suggesting that the infection is unlike the bacteria found in livestock and humans.

Salmonella is increasingly resistant to antibiotics and can sometimes go undetected in animals, which increases the risk of the infection being spread to humans. The team tested the strains found in birds in the laboratory and found that antibiotics were able to kill off the bacteria.

Scientists believed that wild birds carried a variety of Salmonella strains and passed the infection on to livestock through their faeces. Scientists at Liverpool, however, have found that only two Salmonella strains are common in garden birds, neither of which is prevalent in livestock or humans.

Research showed that these strains were a fairly distinct population of bacteria and well adapted in garden birds. They were particularly common in finches - such as greenfinch, siskins and goldfinches - as well as house sparrows.

Dr Paul Wigley, from the National Centre for Zoonosis at the University of Liverpool, said: "Salmonella is a bacterium that causes intestinal infection in humans and can cause illness such as vomiting and diarrhoea - usually through contaminated food like meat or eggs. Symptoms in birds include weight loss, feather ruffling and lethargy. We have witnessed a number of deaths due to Salmonella infection in garden birds and so it was important that we investigated how the disease was being spread.

"We thought that wild birds were incubators for Salmonella but have now found that garden birds carry two strains of a group of Salmonella microorganisms, called Salmonella Typhimurium, itself only one of over 2,500 types of Salmonella.

We screened Salmonella genes we knew to be involved in causing disease and found that they lacked a gene normally found in the human form of the infection.

"The work suggests that the infection will keep circulating in the same species, increasing the risk of further disease outbreaks. We now know that these Salmonella strains are not resistant to antibiotics but it would be inadvisable to use antibiotics in garden birds as this would inevitably lead to the development of antibiotic resistant bacteria within these populations. We also now need to explore other possible sources to understand the infection in livestock and humans."

Source: University of Liverpool

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