

Animals conceal sickness symptoms in certain social situations

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Animals have the ability to conceal their sickness in certain social situations. According to a new review, when given the opportunity to mate or in the presence of their young, sick animals will behave as though they were healthy. The research has implications for our understanding of the spread of infectious diseases.

The review's sole author, Dr. Patricia Lopes from the Institute of Evolutionary Biology and Environmental Studies at the University of Zurich, says that animals from a number of different species will eat and drink less, reduce their activity and sleep more when they are sick in order to conserve energy for their recovery. However, this can all change depending on the social situation.

In a paper published this week in the journal *Proceedings of the Royal Society B*, Lopes reviewed a range of different [social situations](#) that affected the behavior of sick animals, including the presence of offspring, intruders or potential mates. Animals ranging from birds to monkeys have all been demonstrated to conceal their sickness behavior when other animals are present. For instance, Lopes' previous research has demonstrated that sick zebra finches will behave as though they are healthy in the presence of other zebra finches, particularly when there is the opportunity to mate.

Ability to use unique opportunities

According to Lopes, "The idea is that behaving sick helps animals recover from the disease and so this should be the default way to behave when sick. However, if being sick coincides with, for example, a unique opportunity to mate, then animals may adjust their priorities and behave as though they are not sick." Lopes goes on to suggest that such a change may have tradeoffs for an animal with limited energy to invest in recovering from illness versus mating or caring for young.

The review also considers the implications in the context of infectious disease. "Recognizing when animals are concealing their sickness is critical to how we both detect and control the spread of [infectious diseases](#)," says Lopes. Ultimately, improving our understanding of how the social situation affects a sick animal's behavior can improve our models of disease detection and transmission. This extends to the spread of disease in humans living in an increasingly crowded and connected world. According to the U.S. Center for Disease Control, over 60% of communicable diseases in humans originate from [animals](#).

More information: Patricia C. Lopes. When is it socially acceptable to feel sick? *Proceedings of the Royal Society B*.
<http://dx.doi.org/10.1098/rspb.2014.0218>

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