

Study: Behavior affects infectious disease

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British scientists have used a mathematical model to show the coexistence of multiple infectious disease strains result from monogamous populations.

Although simple models predict only one strain of an infectious disease can exist at one time, scientists say observation suggests otherwise. Now, Ken Eames and Matt Keeling of the University of Warwick used a mathematical model to help explain multiple strains, showing that the way humans interact is all-important.

"When people are serially monogamous -- with interactions occurring one at a time -- groups with different behavior favor strains with different properties," the scientists said. "When new interactions occur frequently, rapidly transmitted strains are most successful, but when new interactions take place infrequently there is extra pressure on strains to have a long infectious period."

The study appears in the August issue of *The American Naturalist*.

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