

# Fever in mice linked to shorter life span

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Mice with shorter life spans use fever to fight infections more than longer living mice, said U.S. researchers who had expected the opposite finding.

"Fever is very costly energetically," said the study's lead author, Professor Lynn Martin of the University of South Florida. "Increasing the body temperature of a warm-blooded animal by less than 2 degrees Fahrenheit requires around a 10 percent increase in metabolic rate."

Martin tested his hypothesis that animals with short life spans commit fewer resources to fighting infections with fevers, preferentially devoting resources to breeding. He examined fever in five species of mice, some having short life spans, and others having longer life spans.

What he found was the opposite of his hypothesis. "We expected fast-living mice would be unable to invest heavily in fever given their already large investments in reproductive effort," he said.

Martin said the finding suggests the use of fever in a species might result from many factors, and that fever might only be effective in species that can withstand its high metabolic costs.

The research is reported in the British journal *Functional Ecology*.

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