Breaks in hibernation help fight bugs

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U.S. scientists say a habit in some animals to periodically awake during hibernation might be an evolutionary mechanism to fight bacterial infection.

Penn State researchers note many warm-blooded animals slip into an inert sleep-like state to get past harsh winters. Their immune system goes into sleep mode as well.

"The production of antibodies and white blood cells is stopped. Basically all cell reproduction shuts off," said Angela Luis, a doctoral candidate in ecology at Penn State.

However, animals regularly awake and become fully active but it's not clear why they do so.

Some scientists believe the answer lies in bacterial infections that could run rampant in the face of an immune system that is essentially asleep.

"Animals cannot tell when they need to wake up, or if they are infected," says Luis. But if the animals hibernate for long periods of time, they risk serious infection.

In other words, animals with an optimal time of torpor will win out over others, says Luis, who presented her findings during the 91st annual meeting of the Ecological Society of America last week in Memphis.

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