

## Deadly COVID mutation wild card: Frightening lessons from the 1918 Spanish flu recovery

The [influenza](#) virus that caused the 1918 pandemic mutated into variants, much like the novel [coronavirus](#) has done in the current pandemic, century-old virus samples reveal.

The discovery could help explain why later waves of the 1918 flu [pandemic](#) were worse than the first.

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“Those [viral infections] in the second wave look like they were better adapted to humans,” said study lead author [evolutionary biologist] Sébastien Calvignac-Spencer... “Just like today, we wonder whether the new variations behaved differently or not than the original.”

To answer that question, Calvignac-Spencer and his colleagues found six human lungs that dated to the pandemic years of 1918 and 1919 and had been preserved in formalin in pathology archives in Germany and Austria.

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[F]indings suggest that the virus mutated to become more effective between the first and later waves, by evolving to better overcome cellular defenses against infection, Calvignac-Spencer said.

The genetic mutations that popped up between the first and second waves may have made the virus better adapted to spreading among humans, rather than between birds, its natural hosts. Another mutation may have changed how the virus interacts with a human protein known as MxA, which helps orchestrate the body’s immune response to new pathogens.

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