

Study Finds Possible Explanation for Dangerous Heart Complications in Flu Patients

Common gene mutation allows flu virus to infect the heart

The Ohio State University Wexner Medical Center

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| <p>Produced by: MediaSource www.mediasourcetv.com</p> <p>Package Length: 1:57</p> | <p>To download broadcast-quality video and other multimedia elements: http://bit.ly/2HQ33Yd</p> <p>Content provided by: The Ohio State University Wexner Medical Center</p> |
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NEWS PACKAGE

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| <p>SUGGESTED TEASE</p> <p>ANCHOR LEAD</p> <p>(PACKAGE START) -----</p> <p>CG: Courtesy: The Ohio State University Wexner Medical Center :00 - :03 Shots of Jen walking dog</p> <p>CG: Jen Ludwin Had complications from the flu</p> <p>Shots of Jen working at home. Closeup of Jen's hands, showing amputations</p> <p>Shots doctor checking patient heart Shot of heart imaging</p> | <p>FLU SEASON IS UPON US, AND WHILE WE ALL KNOW THE VIRUS CAN BE DANGEROUS, A NEW STUDY REVEALS WHY SOME PEOPLE COULD BE AT RISK FOR LIFE-THREATENING HEART COMPLICATIONS.</p> <p>DETAILS, COMING UP NEXT.</p> <hr/> <p>AS MANY AS SEVENTY-NINE-THOUSAND AMERICANS DIE AFTER CONTRACTING THE FLU EACH YEAR, BUT THE REASONS BEHIND WHY SOME DEVELOP LIFE-THREATENING HEART COMPLICATIONS HAS LARGELY BEEN A MYSTERY.</p> <p>BUT A NEW STUDY¹ IS THE FIRST TO REVEAL A POSSIBLE GENETIC EXPLANATION FOR WHY SOME PEOPLE COULD BE AT RISK FOR POTENTIALLY DEADLY HEART ISSUES FROM THE FLU.</p> <p>BARB CONSIGLIO HAS THE DETAILS.</p> <hr/> <p>(Nats - Sound) :02</p> <p>AS A HEALTHY TWENTY-THREE-YEAR-OLD, JEN LUDWIN DIDN'T WORRY TOO MUCH WHEN SHE CAME DOWN WITH THE FLU. :04</p> <p><i>"I figured, 'You know what, I'll spend seven days in bed and just fight it off and I'd be okay.' But I was totally wrong."</i> :07</p> <p>THE VIRUS CAUSED JEN'S ORGANS TO BEGIN TO FAIL. IT DAMAGED HER LUNGS AND CAUSED BLEEDING THAT RESULTED IN AMPUTATIONS. AFTER SPENDING MONTHS FIGHTING FOR HER LIFE, JEN IS GRATEFUL TO BE ALIVE.</p> <p>WHEN OTHERWISE HEALTHY PEOPLE DEVELOP SEVERE COMPLICATIONS FROM FLU, THE EXPLANATION CAN BE A MYSTERY.</p> <p>UNDERSTANDING WHY PEOPLE WITHOUT</p> |
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| <p>Shots of Yount doing lab work</p> | <p>CARDIOVASCULAR DISEASE DEVELOP HEART PROBLEMS HAS BEEN A PARTICULAR CHALLENGE. BUT A NEW STUDY BY RESEARCHERS AT THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE REVEALS A LINK BETWEEN CARDIAC COMPLICATIONS OF THE FLU AND A PROTEIN THAT'S CRITICAL TO FIGHTING IT. :33</p> |
| <p>CG: Jacob Yount, PhD Ohio State College of Medicine</p> | <p><i>"We make this protein and it inhibits viruses from entering our cells." :03</i></p> |
| <p>Graphic showing infected heart and fibrosis</p> | <p>A RELATIVELY COMMON GENETIC MUTATION IMPEDES THE PRODUCTION OF THE PROTEIN, AND WITHOUT IT, THE FLU IS MORE LIKELY TO INFECT THE HEART AND CAUSE WHAT'S CALLED FIBROSIS, ACCORDING TO A NEW STUDY IN MICE. :07</p> |
| <p>CG: Dr. Eric Adkins Ohio State Wexner Medical Center</p> | <p><i>"Think of it in terms of just like a scar. So if you've ever had a cut and you get a scar afterwards, there's some fibrosis there in the skin. The same type of thing can happen in the lung or in the heart." :11</i></p> |
| <p>Jacob Yount (CG'd earlier)</p> | <p><i>"It can actually block the electrical current that's trafficking through, that's traveling through the heart." :05</i></p> |
| <p>Shots of emergency sign at hospital</p> | <p>THIS COULD BE WHAT CAUSES SOME CARDIAC EVENTS IN SEVERE CASES OF THE FLU.</p> |
| <p>Shots of Yount reviewing heart images on computer</p> | <p>THE STUDY FOUND THAT MICE WITHOUT THIS GENE WERE MORE LIKELY TO HAVE HEART COMPLICATIONS AND FAIL TO RECOVER AFTER BEING INFECTED WITH THE VIRUS.</p> |
| <p>Shots of Dr. Adkins talking to colleagues</p> | <p>THIS LINK MAY LEAD TO IMPROVEMENTS IN HOW DOCTORS CARE FOR FLU PATIENTS IN THE FUTURE. :15</p> |
| <p>Dr. Adkins (CG'd earlier)</p> | <p><i>"If you know that they're missing the gene ahead of time, then you may tailor your medical therapy differently." :05</i></p> |
| <p>Shots of people getting the flu show</p> | <p>UNTIL EXPERTS CAN STUDY THIS CONNECTION IN PEOPLE, IDENTIFY THOSE AT RISK AND DEVELOP NEW TREATMENTS, THE BEST DEFENSE IS PREVENTION.</p> |
| <p>Shots of Jen walking dog</p> | <p>SOMETHING JEN TRULY UNDERSTANDS THE IMPORTANCE OF. :08</p> |
| <p>Jen Ludwin (CG'd earlier)</p> | <p><i>"Since then I have gotten the flu shot every single year. I'm probably the first person in line to get it." :06</i></p> <p>AT THE OHIO STATE WEXNER MEDICAL CENTER,</p> |

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| <p>Shots of Jen walking dog</p> <p>(PACKAGE END) -----</p> <p>ANCHOR TAG</p> | <p>THIS IS BARB CONSIGLIO REPORTING. :03</p> <hr/> <p>RESEARCHERS SAY MILLIONS OF PEOPLE WORLDWIDE LIKELY HAVE A GENE MUTATION THAT COULD PUT THEM AT RISK FOR SEVERE FLU-RELATED HEART COMPLICATIONS. ABOUT TWENTY PERCENT OF THOSE OF CHINESE DESCENT AND FOUR PERCENT OF EUROPEANS ARE BELIEVED TO HAVE MUTATIONS IN THE GENE.</p> <p>NOW THAT RESEARCHERS BETTER UNDERSTAND WHAT MIGHT BE CAUSING THE PROBLEM, THEY ARE TESTING TREATMENTS THAT COULD ONE DAY PREVENT OR REVERSE THESE HEART ISSUES IN FLU PATIENTS.</p> |
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SOCIAL MEDIA

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| <p> Share it! Suggested tweet:</p> <p> Suggested post:</p> | <p>Flu season is upon us, and while we all know the virus can be dangerous, a new study by researchers at @OhioStateMed reveals what may put people at risk for life-threatening heart complications. http://bit.ly/2HQ33Yd</p> <hr/> <p>The reasons otherwise healthy people develop life-threatening heart complications from the flu have largely been a mystery. But in a new study, researchers at The Ohio State University College of Medicine have identified a potential explanation for why flu causes life-threatening heart issues and who may be at risk. http://bit.ly/2HQ33Yd</p> |
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EXTRA BITES

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| <p>CG: Jacob Yount, PhD Ohio State College of Medicine</p> | <p>Yount says the flu shot is the best way to prevent complications: <i>“Currently there are no specific drug treatments tailored for cardiac complications of the flu, and so really the best thing that we can do right now is to try to prevent these complications with the flu vaccine.” :11</i></p> <p>Yount says the study is the first to show how the flu infects the heart: <i>“What our research is showing for the first time is that these deficiencies in IFITM3 are also linked to dissemination of the virus to the heart.” :08</i></p> <p>Yount says those without the gene are more likely to have heart issues from the flu: <i>“What this probably means is that the people who have these genetic deficiencies are probably more likely to have these cardiac complications of flu infections.” :08</i></p> <hr/> |
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CG: Dr. Eric Adkins
Ohio State Wexner Medical Center

Adkins says infections can cause problems in various organs:
“The body’s response to infection is basically a big inflammatory response that can cause all kinds of problems in the various organs. So whether it’s the heart, the lungs, the kidney, even the gut.” :12

Adkins explains how fibrosis can cause heart issues:
“That fibrosis may be large enough in the heart where it could impact the way the heart muscle may function or the electrical currents that flow through the heart to help with heartbeats.” :11

CG: Jen Ludwin
Had complications from the flu

Jen describes the complications she had from the flu:
“I was already in septic shock, and that my organs were starting to fail. On top of that I had ARDS, which is a respiratory distress syndrome, and then DIC, which caused me to bleed internally and clot in my extremities.” :18

Jen says the flu can affect anyone, so the flu shot is crucial:
“It does not discriminate against anybody. It doesn’t matter your age, race, gender. I say, ‘Get your flu shot as early as possible.’ A lot of people think of the flu just coming in January or February, but I got sick in October.” :14

Jen says it’s getting the shot helps protect yourself and others:
“Even when people say, ‘I don’t ever get the flu.’ I say, ‘Well, there’s other people that are at risk that need to be protected, and so get your flu shot to protect your loved ones and the community.’” :13

References

¹*IFITM3 protects the heart during influenza virus infection, Proceedings of the National Academy of Sciences of the United States of America, Aug. 26, 2019.* Online:
<https://www.pnas.org/content/early/2019/08/23/1900784116.abstract>

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