

Scientists Keep Human Hearts Alive in Lab to Track Abnormal Beats

Researchers 'reanimate' parts of human hearts to find elusive sources of arrhythmia

The Ohio State University Wexner Medical Center

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NEWS PACKAGE

SUGGESTED TEASE	STILL TO COME, REAL LIFE RESEARCH THAT SEEMS MORE LIKE SCIENCE FICTION. WHAT DOCTORS ARE LEARNING BY BRINGING PARTS OF HUMAN HEARTS BACK TO LIFE IN THE LAB, NEXT IN HEALTH NEWS.
ANCHOR LEAD	AS MANY AS SIX MILLION AMERICANS MAY SUFFER FROM IRREGULAR HEARTBEATS. ¹ IN ONE FORM, KNOWN AS PERSISTENT ATRIAL FIBRILLATION, THE HEART BEATS ERRATICALLY 24-HOURS A DAY. THOSE ARE THE HARDEST CASES TO TREAT, AND HAVE A LOWER RATE OF SUCCESS. BUT THAT MAY SOON CHANGE - THANKS TO SCIENTISTS WHO BRING PARTS OF HUMAN HEARTS BACK TO LIFE TO LOOK FOR NEW ANSWERS. CLARK POWELL HAS DETAILS.
(PACKAGE START) -----	
CG: Courtesy: The Ohio State University Wexner Medical Center :00 - :03	(Nats - Sound) :02
Shots of Steve going in hospital	STEVE HINES HAS SPENT MORE TIME GOING TO DOCTOR APPOINTMENTS THAN HE EVER IMAGINED.
Shot of Steve walking by	HE NEVER KNEW ANYTHING WAS WRONG UNTIL A ROUTINE PHYSICAL SHOWED HIS HEART WAS BEATING ERRATICALLY. :09
CG: Steve Hines Had irregular heartbeat	<i>"There will be 2 or 3 regular beats then it'll be a real low one or it'll be real quick."</i> :08
Shots of Steve getting prepped	IT WAS PERSISTENT A-FIB, AND TWICE DOCTORS HAVE PERFORMED ABLATIONS - MAKING TINY SCARS ON HIS HEART TO STOP THE IRREGULAR BEATS. BUT AFTER BOTH TREATMENTS, THE A-FIB CAME BACK. :10
Shots of Dr. Hummel looking at images	
CG: Dr. John Hummel Ohio State Wexner Medical Center	<i>"He is really a poster child for challenge we have with persistent atrial fibrillation."</i> :07

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<p>Shot of Fedorov at desk</p> <p>Shot of team walking into lab</p> <p>Shots of hands putting heart in dish</p>	<p>NOW, THAT CHALLENGE IS BEING MET HEAD-ON INSIDE A LAB AT THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER.</p> <p>VADIM FEDOROV (vuh-DEEM FED-ehr-ov) AND HIS TEAM BRING THE ATRIA, OR UPPER CHAMBERS OF DONATED HUMAN HEARTS, BACK TO LIFE TO LOOK FOR ANSWERS. :14</p>
<p>CG: Vadim Fedorov, Ph.D. Ohio State Wexner Medical Center</p>	<p><i>"It's amazing. You can see the heart beating back again. Of course the diseased heart doesn't beat appropriately."</i> :07</p>
<p>Shot of team in lab</p> <p>Shot of hands with heart</p> <p>Shots of cameras</p> <p>3-D images from cameras</p>	<p>BUT IT DOES GIVE SOME INSIGHT INTO <i>WHY</i> IT'S NOT BEATING APPROPRIATELY.</p> <p>THE HEART IS PLACED IN A DISH SURROUNDED BY 4 CAMERAS AND INJECTED WITH DYE TO DETECT ELECTRICAL ACTIVITY.</p> <p>NORMAL IMAGING CAN CAPTURE ABOUT TWO HUNDRED RECORDINGS OF THE HEART. <i>THIS</i> RECORDS 40-THOUSAND IN 3-D. :17</p>
<p>Vadim Fedorov (CG'd earlier)</p>	<p><i>"We can see through the heart. We can see at many different depths."</i> :05</p>
<p>Shot of Hummel with images</p> <p>Shot of Steve in procedure</p>	<p>THAT ALLOWS MAPPING OF THE HEART LIKE NEVER BEFORE. AND GIVES DOCTORS NEW TARGETS IN COMPLEX CASES LIKE STEVE'S. :06 /</p>
<p>Dr. Hummel (CG'd earlier)</p>	<p><i>"I don't think that we would have been able to fix his atrial fibrillation without Vadim's work."</i> :06</p>
<p>Dr. Hummel (cover w/video)</p>	<p><i>"You don't really see this being done anywhere else because it's not easy."</i> :04</p>
<p>Steve Hines (CG'd earlier)</p>	<p><i>"I'm pretty fortunate because I've been able to be with people that (cut out pause) think outside the box and that's cool. I like thinking outside the box."</i> :09</p>
<p>Shot of heart in dish</p>	<p>AT OHIO STATE WEXNER MEDICAL CENTER, THIS IS CLARK POWELL REPORTING. :03</p>
<p>(PACKAGE END) -----</p> <p>ANCHOR TAG</p>	<hr/> <p>THE DONATED HEARTS COME FROM PEOPLE WHO ARE GETTING NEW HEARTS THROUGH TRANSPLANT.</p> <p>SCIENTISTS SAY THEY CAN KEEP THE HEART TISSUE ALIVE FOR UP TO 12 HOURS TO CONDUCT THEIR EXPERIMENTS.</p>

SOCIAL MEDIA

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CG: Steve Hines
Had irregular heartbeat

Hines talks about his reasons for volunteering:
"It's pretty exciting because you know win or fail, they're going to learn something from it, whether this works or this doesn't work; it's all going to help one way or the other."

References

¹*Atrial Fibrillation Fact Sheet, Centers for Disease Control and Prevention, August 2015.*
Online: https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_atrial_fibrillation.htm

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