

HEART TO HEART

WWW.GOOTTER.ORG

Working to Conquer Sudden Cardiac Death

VOL. VI FALL 2013



The mission of the Steven M. Gootter Foundation is to save lives by defeating sudden cardiac death through increased awareness, education and scientific research.

The Steven M. Gootter Foundation works to increase awareness of sudden cardiac death among those who may be at risk, fosters education among the public and health care professionals, and funds scientific research into the causes of and treatments for sudden cardiac death.

FOUNDATION TO HONOR HUMBERTO AND CZARINA LOPEZ AT GOOTTER GRAND SLAM

The Steven M. Gootter Foundation will honor Humberto and Czarina Lopez with its Philanthropic Award at the 2014 Gootter Grand Slam. Bert's involvement in charitable organizations focuses on community building in his home state of Arizona. He supports causes related to education, health and welfare. His community service includes board memberships at the University of Arizona and throughout the community. His efforts have been recognized by numerous organizations including Father of the Year; City of Hope Man of the Year from the National Jewish Hospital Research Center; the Outstanding Tucson Citizen Award; and as Man of the Year by the Tucson Chamber of Commerce.

Czarina is also very passionate about the community and education. Her past involvements include Tucson/Mexico Sister Cities, Tucson Museum of Art League, Angel Charity for Children, La Frontera Center, Steele Memorial Children's Research Center, Parseghian Medical Research Foundation, Salpointe and St. Cyril's Foundation and the Center for Integrated Medicine. She currently serves on the following boards: San Miguel High School, Tu Nidito, Catholic Community Services and the Catholic Community Services Foundation.



SAVE THE DATE FOR THE 2014 GOOTTER GRAND SLAM

TENNIS GALORE WITH THE BROTHERS FOUR

The ninth annual Gootter Grand Slam will welcome back the Bryan Brothers and Murphy and Luke Jensen on March 16, 2014. Twin brothers Bob Bryan and Mike Bryan are American professional tennis doubles players who are the best tennis team in history. The twins have won multiple Olympic medals, including the Gold in 2012 and have won more games, matches, tournaments and grand slams than any team in history. They have held the World No. 1 doubles ranking longer than any other team in doubles history.

In 1993 Luke and Murphy Jensen won the French Open. The irreverent pair of brothers battled their way to being arguably the most popular players in the game at the time. The win by the Jensens came at a time when the popularity of tennis was on a downslide. So when media wanted to do tennis segments, most of the top pros would not participate. Enter the Jensens. "I got to live the dream," said Murphy, "If I could imagine what a rock stars life was like, I got to do that with a tennis racquet. Our whole success was based on daring to be different."





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HOW TO BE A LIFESAVER

Each day in the United States, about 1,000 lives are lost to sudden cardiac death (SCD). You can double a person's chance of survival from a sudden cardiac attack by learning the 3 C's of Chest-Compression-Only CPR.

"Be A Lifesaver Tucson" is a cooperative effort between the Steven M. Gootter Foundation, the Kaimas Foundation and the University of Arizona Sarver Heart Center. Chest-Compression-Only CPR, a method of CPR which does not require mouth-to-mouth, was developed by the University

of Arizona Sarver Heart Center Resuscitation Team. Recent statistics show that this method is much more effective and easily taught than the previous methods.

We have recently produced two new PSAs as well as a new training video featuring Erika Yee. Erika, who spoke at this year's Gootter Grand



Erika Yee, age 16, saved a classmate's life using Chest-Compression Only CPR

Slam Gala, is a 16 year-old who was trained in Chest-Compression Only CPR at Girl Scout camp by a UA Sarver Heart Center trainer. She was able to save her classmate using this technique because she recognized the signs of Sudden Cardiac Arrest. He survived because of her heroic efforts and training. We produced these videos to promote education and awareness of SCA as well as to provide instructions on how to perform Chest Compression Only CPR.

The PSAs are being shown all over Southern Arizona and the training video will be used in schools, and on websites -- to teach and train people how to save a life!

Erika recently won a Lifesaving Achievement Award from Girl Scouts for her heroic act. She was presented with the Girl Scout Gold Award for saving the life of her fellow student.

GOOTTER FOUNDATION WELCOMES NEW BOARD MEMBERS

DANA BRADFORD

We are very pleased to announce that Dana Bradford has recently joined the Gootter Foundation Advisory Board. Dana has close ties to Tucson and has known the Gootter family for many years. Dana Bradford is the



CEO of Waitt Company, an Omaha based investment company. In addition to his duties as CEO, Dana serves as executive chairman of Prince Global Sports and is on the boards of Waitt Company, Meritage Homes (NYSE: MTH), Southwest Value Partners, Vornado Air, Customer Service Profiles, Gold Circle Films, and Active Brands Company. Dana earned a bachelor's degree in business administration from the University of Arizona and a masters in business administration from Creighton University.

CURT REIMANN
We are delighted
to announce that
Curt Reimann
has joined the
Steven M. Gootter
Foundation Board
of Directors. Curt
is the President
of Blessings,
Inc., which is



a wholesale processor and supplier of seafood to retailers in the U.S., Mexico and China. Prior to July 2013, Curt served as a Partner with Snell & Wilmer, LLP in Tucson, Arizona. His practice was concentrated in commercial finance and real estate. He also served as Associate Attorney with Jones, Allen and Fuquay in Dallas Texas. Curt earned a bachelor's degree in Finance from Baylor University and Juris Doctorate from Southern Methodist University.

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FOUNDATION EXPANDS AED DISTRIBUTION

The Steven M. Gootter Foundation has been providing Automated External Defibrillators (AEDs) throughout Southern Arizona since 2009. One of the long range goals of the Foundation is to make sure that all places where people work, worship and play will have an AED in case it is ever needed. In addition, we are planning to give out another round of approximately 30 AEDs this year. We are very excited about the opportunity to provide more of these life-saving devices throughout Southern Arizona.

The Steven M. Gootter Foundation is pleased to announce that Jumpstart Medical, locally owned and operated by Tucson Fire Department EMT paramedics, will provide continuous chest compression and AED training, as well as maintenance and service on the AED's gifted to the recipients.



James Dean of Jumpstart Medical with all the gear for a Gootter AED training.

"Sudden cardiac arrest can happen unexpectedly to anyone at any age. A victim of sudden cardiac arrest needs immediate help. Bystanders must do something while waiting for EMS to arrive--even if paramedics are only minutes away--as the person's chance of surviving decreases significantly each minute that passes by. You cannot hurt someone in cardiac arrest. The AED will only deliver a shock if it detects the victim needs it. Most people are hesitant to act because they worry they will do the wrong thing and hurt someone. You cannot make things worse-you can only help. We want to promote a culture in which taking action as a bystander is just expected." - Paula Brazil, SHARE Program Coordinator

GOOTTER FOUNDATION AED RECIPIENTS

All (6) Tucson Boys and Girls Clubs Jim Reffkin Tennis Center ATC (Arizona Theater Company) TMA (Tucson Museum of Art) MOCA (Museum of Contemporary Art) Tucson Children's Museum Sunrise Drive Elementary School Cornerstone Christian Academy Congregation Anshei Israel Emerge! Center Against Domestic Abuse Temple Emanu-El The Loft Cinema Sporting Chance Center St. Francis Cabrini Church St. Thomas the Apostle Parish St. Elizabeth Ann Seton Parish Fox Tucson Theatre Tucson Senior Softball League

Nonprofit organizations located in Southern Arizona can apply for an AED at www.gootter.org Southern AZ High School AED recipients Amphitheater High School **BASIS Tucson North** Benson High School Bisbee High School Canyon Del Oro High School Desert Christian High School Desert View High School Empire High School Fenster School of America Flowing Wells High School Green Fields Country Day School Ironwood Ridge High School Pusch Ridge Christian Academy San Miguel Catholic High School Sunnyside High School St. Augustine Catholic High School Tanque Verde High School Vail High School Valley Union High School Willcox High School Yuma High School

COMMUNITY EXPRESSES APPRECIATION FOR AED DONATIONS

"Thanks so much to the Steven M Gootter Foundation for donating the AED to the Fox Tucson Theatre. It is so reassuring to know that we've got this essential piece of medical equipment on site now. What an important gift for all of our patrons!" - Craig Sumberg, Executive Director, Fox Tucson Theatre



"Having the ability to possibly save the lives of our theater patrons who are at risk for sudden cardiac death is of crucial benefit and we are very happy to help further the mission of the Steven M. Gootter Foundation. Thank you for your generous support and for your

commitment to the community." - Clyde W. Kunz, Chief Development Officer, Arizona Theater Company

"The Saint Augustine Catholic High School community is honored and grateful to the Gootter Foundation for its donation of an AED to our school. No one can control when an emergency arises, but our ability to be able to reach for an AED may mean the difference between life and



death of one of our students, a teacher, a parent, or visitor. We are not only thankful for the donation, but for the love and attention from the Foundation to train our staff to not simply react, but rather to respond quickly to an emergency that would require an AED. We are truly blessed! Thank you." - Lynn Cuffari, Principal, Saint Augustine Catholic High School

"Emerge! Center Against Domestic Abuse is so appreciative to the Gootter Foundation for providing us with an AED for our emergency shelter. We hope that we'll never have the need to use it, but we feel so much better about having it available should that need ever arise. We greatly appreciate all



that you do to make sure our community is a safer place, and are so thankful Emerge! is able to benefit from those efforts. Thank you!"

Ed Mercurio-Sakwa, CEO, Emerge! Center Against Domestic Abuse

GOOTTER FOUNDATION FEATURED IN SARVER HEART CENTER NEWSLETTER



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Guidelines for Screening Athletes to Prevent Sudden Cardiac Arrest

s pep rallies kick off another season of school athletic programs, it's sobering to think that every three days a young athlete dies from a cardiac incident in the United States. In fact, sudden cardiac arrest is the number one killer of young athletes, and often it is caused by a pre-existing condition that could have been detected and managed to lower a person's risks.

The typical school athletic program requires athletes to obtain a physical exam that includes listening to the heart, checking blood pressure and reviewing family medical history. But is this enough?

That may depend on the quality of the family medical

history and what is done with that information if a cardiac risk is identified, says Jil C. Tardiff, MD, PhD, the University of Arizona Sarver Heart Center's Steven M. Gootter Endowed Chair for the Prevention of Sudden Cardiac Death. A professor of medicine in the Division of Cardiology and Department of Cellular and Molecular Medicine at the UA College of Medicine, Dr. Tardiff's research focuses on hypertrophic cardiomyopathy (HCM), which causes an abnormal thickening of the muscle in the heart's main pumping chamber. HCM, a genetic condition that affects one in 500 people, is one of the most common causes of sudden cardiac arrest in young people.



While exercise is important to maintaining heart health, athletes with certain conditions need to discuss exertion levels with their doctors, preferably a cardiologist who is knowledgeable about their diagnosis.

"Taking a careful family history is an important step in assessing anyone's risk of having a predisposition to HCM. It's important to assess a person's risk before an episode happens and patients need to be honest with their physicians about their symptoms. One of the difficult issues we face in evaluating a patient's symptoms is that they can be unpredictable or dynamic in HCM and this can lead patients to minimize or discount them. Doctors can be guilty of this as well," says Dr. Tardiff.

Doctors should ask about shortness of breath, especially with activity, fainting episodes and any sudden deaths in family members, especially those who were around age 40 or younger.

"Sometimes in cases of 'accidental' deaths, such as an adult drowning or a single-car wreck, we have to question whether sudden cardiac arrest could have been the underlying cause," says Dr. Tardiff. While the lack of a family history of sudden cardiac death does not rule out the diagnosis of HCM, it remains a central component in assessing risk.

A person who may have HCM should be assessed by a cardiologist – ideally at least once by a cardiologist who specializes in HCM. Following a thorough family history and physical exam, the cardiologist who suspects HCM should order an electrocardiogram (ECG) and a transthoracic echocardiogram (ultrasound). If the suspicion for

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HCM remains high after these tests, further workup likely would include an exercise echocardiogram, cardiac MRI and, in some cases, genetic testing.

"While genetic testing is not yet indicated in all patients with documented HCM, experimental evidence from my lab and others suggests that both the clinical course and outcome of the disease is, in part, dependent on the type of protein that has been affected by the genetic mutation. Thus, in the future it is likely that we will be able to tailor individual treatments to specific mutations and provide personalized care," says Dr. Tardiff.

In collaboration with pediatric cardiology and structural/interventional cardiology, Dr. Tardiff is developing an HCM clinic at The University of Arizona Medical Center – University Campus where individual patients and, when warranted, entire families can undergo comprehensive evaluation and care.

Some experts who are studying athlete safety advocate an ECG as part of the regular school physical. "The issue of mandated pre-participation clinical screening (usually via ECG) is a controversial topic because the data regarding the efficacy of such programs remains unclear. We want to be careful not to unduly frighten people. HCM in the popular press is usually presented as a dire diagnosis. I would recommend an ECG and an echocardiogram for an athlete whose family has a history of sudden cardiac arrest, any of the symptoms outlined above or a suspected cardiomyopathy, such as HCM," says Dr. Tardiff.

How active should a person be if they are at risk?

"Management of HCM is usually individualized. This is important because the disease severity can vary widely, even between patients with the same genetic mutations. It is also important to remember that eliminating all exercise clearly is detrimental to heart health. While there are ongoing studies to assess exercise tolerance in patients with HCM, specific recommendations have

to be tailored to each individual in consultation with their cardiologist. At present, participating in high-intensity or contact sports (including, but not limited to, basketball, ice hockey, soccer, racquetball and football) largely is not recommended for patients with HCM. Other activities, such as biking, modest hiking, swimming (noncompetitive), doubles tennis and golf, are acceptable. Other sports can be pursued on a case-by-case basis," says Dr. Tardiff.

"In general, we advise patients to take care of themselves – control blood pressure, diabetes, and engage in exercise as symptoms allow – with a physician's guidance," she adds.

How is HCM treated?

"If a patient does not have symptoms, we usually do not treat. With symptoms (in particular, shortness of breath or chest pain) the first line of treatment is medications, such as beta or calcium blockers. In some cases, especially when the enlargement of the heart alters the ability of blood to be ejected from the heart and symptoms cannot be adequately controlled with medications, we will consider surgery to remove the obstructing part of the muscle. Such patients who cannot undergo surgery can be treated with alcohol septal ablation (a procedure that is performed in the catheterization laboratory)," says Dr. Tardiff.

For patients at high risk of sudden cardiac death, an implantable cardiac defibrillator (ICD) is often recommended. The decision regarding the need for an ICD is dependent on risk factors, including discovering certain abnormal heart rhythms during monitoring and the presence of syncope (fainting)," says Dr. Tardiff. Patients with ICDs can lead active lives, including exercise," she adds. •



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Young Faces of Sudden Cardiac Arrest: Raising Awareness and Safety in Schools

The Steven M. Gootter Foundation and the UA Sarver Heart Center have collaborated to fight sudden cardiac arrest by advancing research, raising awareness and educating the public about how to respond. The endowed chair that supports Dr. Jil Tardiff's research is just one example.

The Gootter Foundation, which has donated more than 40 automated external defibrillators (AEDs) to schools, places of worship and recreational centers in southern Arizona, continues to review application requests for AEDs. Details are on the foundation website: stevenmgootterfoundation.org.

The Gootter Foundation also produced several public service announcements to encourage more people to learn how to respond if they witness someone suddenly collapse from sudden cardiac arrest. One video features high school student Chris Miller who collapsed at band practice



Cardiac arrest survivor Chris Miller (l.) with Erika Yee, a classmate who learned how to respond from Melissa Ludgate (r.), a UA College of Medicine medical student who now is president of the REACT (Resuscitation Education and CPR Training) Group.



Rafael Rendon

and his classmate, Erika
Yee, who went into action using the skills
she learned as a Girl Scout from a Sarver
Heart Center trainer, Melissa Ludgate.
This and other videos are available on the
Gootter Foundation and Sarver Heart Center

websites: heart.arizona.edu.

Another video features Rafael "Ralphie" Rendon and his mother, Bridget. At age 14, Ralphie was a healthy freshman football player at Ajo High School when he suddenly collapsed during football practice. In his case, he had an undetected structural congenital heart defect that was surgically repaired. He was back to playing football two years later, in large part because a volunteer coach knew how to respond.

Please share these videos with groups to help spread this lifesaving message.

By combining basic research, comprehensive clinical care at the new Hypertrophic Cardiomyopathy Clinic and public awareness of how to respond to a witnessed cardiac arrest, the Sarver Heart Center is attacking this common disorder on all fronts and will lead the way towards providing a future free of sudden cardiac death in the Southwest.

Sudden Cardiac Arrest Research Grants

Paul Krieg, PhD, professor of cellular and molecular medicine, is the recipient of the **Steven M.**Gootter Investigator Award, which supported his project: "Cap2 Function during Cardiac Sarcomere

Development." Lack of the Cap2 protein is known to be a cause of heart failure, but the precise role of the protein in heart muscle is not known. Research in this project will improve understanding of the normal function of Cap2 protein in heart muscle and how its absence may lead to heart defects. ▼



Paul Kreig, PhD

Update on Gootter Investigator Award Recipients

In 2006, Dr. Anke Zieseniss was awarded a Steven M. Gootter Investigator award to study the impact of mutations that are found in a major contractile protein, actin. Mutations in actin in humans have been shown to lead to Sudden Cardiac Death. Two years, later, Dr. Carol Gregorio received a Steven M. Gootter Investigator award to continue these studies. As a result of these "seed" funds a major study was jump-started and the result is that the Gregorio laboratory has now identified that improper actin filament length regulation appears to be a critical contributor to the complex cardiac remodeling that occurs in most, if not all, cases of dilated cardiomyopathy (a major cause of Sudden Cardiac Death) — regardless of the primary cause of the disease. Dr. Gregorio has now submitted a proposal to the National Institutes of Health for \$2.5 million to continue these studies.



Dr. Carol Gregorio

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GOOTTER FOUNDATION FEATURED IN SARVER HEART CENTER NEWSLETTER

Gootter Foundation Raises Funds to Support Resuscitation Research Lab

hile the UA Sarver Heart Center Resuscitation Research Group is renowned for its research and advocacy of compression-only CPR, many people don't realize that the group also has been actively researching and developing new lifesaving protocols for emergency responders and hospitals in cases of sudden cardiac arrest.

"Early on when we were doing trainings about new protocols for emergency medicine responders, some of them said, 'Doc what are you going to do to change what happens to patients we resuscitate and bring to the hospital,'" says Karl B. Kern, MD, professor of medicine, co-director of the UA Sarver Heart Center and director of the Resuscitation Research Lab.



Claudine and Andrew Messing of the Gootter Foundation with Dr. Karl B. Kern.

"We have made progress and have more survivors. We now need to update our post-resuscitation care research unit to better simulate the clinical situation for survivors of cardiac arrest," adds Dr. Kern.

The generous support of the Steven M. Gootter Foundation will allow this highly productive research laboratory to continue to explore and test new approaches in resuscitation to improve survival from sudden cardiac arrest. It will provide the means to enable our post-resuscitation care unit continuous 24-hour operations to better simulate the human clinical situation. This support also will allow the laboratory to continue to pursue the most important resuscitation science questions and newest techniques quickly, and to provide important translational data that then will be applied in the care of those suffering cardiac arrest.

"We plan to explore new ways to further improve survival, but also ensure that all survivors have good quality of life, including good brain and heart function. Aggressive post-resuscitation treatments, including hypothermia (cooling) and emergent opening of coronary blockages, are keys to the next major advances in resuscitation. We want to make sure we are using best practices for the best possible outcomes," says Dr. Kern.

"We are delighted to support the research efforts of Dr. Karl Kern and the Resuscitation Research Group. We are very impressed with what this group has accomplished in the field of cardiopulmonary resuscitation and are eager to aid them in developing techniques to improve the quality of life of sudden cardiac arrest survivors," says Andrew Messing, president of the Steven M. Gootter Foundation. The Gootter Foundation is dedicated to saving lives by defeating sudden cardiac death through increased awareness, education and scientific research. ♥

Thank you

to the Steven M. Gootter Foundation

Because an endowment takes time to build and even more time to grow before its potential can be realized, the Sarver Heart Center is indebted to the Steven M. Gootter Foundation for recently awarding the Lab \$150,000. This contribution will allow the Resuscitation Research Lab to continue uninterrupted while the Gordon A. Ewy, MD Endowment for Resuscitation Research builds. Thank you to the Steven M. Gootter Foundation Board of Trustees for your continued belief in the importance of this work. •

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8th Annual Gootter Grand Slam



The Bryan Brothers, Murphy Jensen and the Gootter family.



L-R: Dr. Karl Kern, Mike Bryan, Murphy Jensen, Rick Small demonstrating Chest Compression CPR



UA cheerleaders, ballboys and Wilbur welcome the Bryan Brothers



Ginny Clements and Tom Rogers



L-R: Ann Charles, Lou and Trisha Schorr, Rob Charles



Bob Kivel, Sarah Smallhouse, Jessica Baylon and Murphy Jensen



UA Football Coach Rich Rodriguez