

S A R V E R

H E A R T

C E N T E R

Winter 2004

Issue 39

The New CPR

groundbreaking
approach could
double
cardiac arrest
survival rates

The UA Sarver Heart Center has launched two major initiatives that could **double the number of people who survive out-of-hospital cardiac arrest** in Tucson.

At the center of both initiatives is a breakthrough method of cardiopulmonary resuscitation that emphasizes chest compressions and **eliminates the need for mouth-to-mouth breathing**. Called "continuous chest compression CPR," the method is easier to learn, remember and perform than standard CPR.

Why the change? Because research undertaken by the Sarver Heart Center CPR Research Group and other CPR experts have found that the method is far better.

"These results are so compelling that we feel dramatic changes need to be made as soon as possible," says Gordon A. Ewy, MD, director of the Sarver Heart Center. "We just **cannot wait any longer** to get the word out so that people can start learning it and performing it *now*."

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The Jack G. Copeland, MD, Endowed
Chair of Cardiothoracic Surgery
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CardioWest
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Be a Lifesaver

with Continuous Chest Compression CPR

UA SARVER HEART CENTER, Winter 2004

The New CPR

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In witnessed sudden cardiac arrest in adults, mouth-to-mouth resuscitation is **not necessary**.* Follow these instructions to perform Continuous Chest Compression CPR:

1. Direct someone to call 911 or make the call yourself.
2. Position the victim on his or her back on the floor. Place one hand on top of the other and place the heel of the bottom hand on the center of the victim's chest. Lock your elbows and begin forceful chest compressions at a rate of 100 per minute.
3. If an automated external defibrillator (AED) is available, attach it to the victim and follow the machine's instructions. If no AED is available, perform continuous chest compressions until paramedics arrive. Take turns if you have a partner.

* In cases involving children, suspected drowning or suspected drug overdose, follow standard CPR procedure (alternating 15 chest compressions with two mouth-to-mouth breaths).

THE UNIVERSITY OF
ARIZONA
SARVER HEART CENTER



UMC
UNIVERSITY MEDICAL CENTER

To learn more about Continuous Chest Compression CPR, please call the UA Sarver Heart Center at 626-4883 or visit www.heart.arizona.edu.

At the center of the research is the finding that stopping chest compressions to give mouth-to-mouth breaths is more harmful than helpful.

In standard CPR, 15 chest compressions are delivered and then two mouth-to-mouth breaths are given. While the compressions are performed, oxygenated blood is moved through the body and delivered to the brain and heart. When the compressions are stopped, no blood is moved and these organs essentially are starved. Compounding the problem is the fact that people take much longer to give the breaths than previously believed.

Moreover, research conducted at the Sarver Heart Center and elsewhere has shown that overwhelming numbers of people will not perform CPR because they are reluctant to do mouth-to-mouth breathing.

These findings have convinced the Sarver Heart Center of the need to immediately apply new techniques that have been proven to save more lives.

By teaming up with the Tucson Fire Department, a nationally recognized pioneer in emergency pre-hospital patient care, the Sarver Heart Center believes Tucson can achieve one of the highest survival rates in the nation for out-of-hospital cardiac arrest.

Under the first initiative, called the **Sarver Heart Center/Tucson Fire Department CPR Initiative**, TFD has made important modifications to the procedures that its firefighters and paramedics follow when responding to sudden cardiac arrest calls. The primary change is an increase in the number of chest compressions administered to victims and a decrease in the amount of time spent on steps that interrupt chest compressions.

The second initiative is the **Be a Lifesaver** public education campaign, a citywide effort to educate the citizens of Tucson about CCC-CPR. The Sarver Heart Center is urging Tucsonans to learn and use the simple, three-step method.

With CCC-CPR, there not only is a better chance of bystander participation, but a much greater chance that the victim will survive.

Doctors and researchers at the UA Sarver Heart Center have been active in CPR research for more than 30 years and have earned an international reputation for their findings and recommendations, many of which were incorporated in the American Heart Association's CPR Guidelines. ♥

SHC CPR Research Group

Marc Berg, MD

Karl B. Kern, MD

Robert A. Berg, MD

Melinda M. Hayes, MD

Lani L. Clark

Charles W. Otto, MD

Gordon A. Ewy, MD

Arthur B. Sanders, MD

Ron W. Hilwig, PhD, DVM

Terence Valenzuela, MD

On the Wing

The Sarver Heart Center continued its public education efforts with visits to Yuma and Sierra Vista this fall.

The Yuma public education conference was held Nov. 15. The speakers were: Gordon A. Ewy, MD; Vince Sorrell, MD; and Julia Indik, MD. The moderator was Bill Gresser. The Sarver Heart Center extends its gratitude to Sun Care Air Ambulance of Yuma for generously providing transportation to and from Yuma and Yuma Regional Medical Center for sponsoring the conference.

The Sierra Vista speakers were: Dr. Ewy; Peter Ott, MD; and Lorraine Mackstaller, MD. Linda Hoge, RN, of the cardiac rehabilitation program at Sierra Vista Regional Health Center, also spoke.



Photos from the Yuma conference, clockwise from top: Dr. Ewy talks with conference participants during a break. Two attendees listen to a presentation. Drs. Indik and Sorrell stand beside the plane that flew them to Yuma. Dr. Sorrell smiles from the co-pilot's seat.

The Jack G. Copeland, MD, Endowed Chair of Cardiothoracic Surgery

For 25 years, his name has been synonymous with groundbreaking innovations in heart transplantation, daring cardiac surgeries and exceptional results.

In distinguishing himself among his peers worldwide, Jack G. Copeland, MD, has helped further the reputation of the Sarver Heart Center and University Medical Center, while giving countless patients a second chance at life.

In honor of his accomplishments, more than 440 friends, colleagues and grateful patients have committed more than \$3 million to complete *The Jack G. Copeland, MD, Endowed Chair of Cardiothoracic Surgery* at the University of Arizona Foundation. A dinner to celebrate the completion of the chair was held this fall.

Interest income from the fund will assist the cardiothoracic surgical team in efforts to discover new options for patients with heart disease who are not helped by medication.

Copeland has been chief of cardiothoracic surgery at the UA College of Medicine since 1977. In 1979, University Medical Center became one of only six heart transplant centers in the world when Copeland performed the hospital's first transplant.

Among other milestones in Copeland's career: He was the first to use a total artificial heart as a "bridge to transplant"; he performed Arizona's first double-lung transplant; his team was the first in the United States to use the German "Berlin Heart" assist device designed for children. ♥

Celebration

(Right) Dr. Copeland is surrounded by, from left: his wife, Jan; Nedra Marnell; Nancy Harrington, RN, MS; Joan Wild; and Nancy Edling, RN. (Bottom left) Heart transplant recipient Nina Gibson speaks about Dr. Copeland. (Bottom right) Dr. Copeland listens as dinner attendees applaud.





(Clockwise from top left): Jan Copeland, left, with Courtney Price (fiancée of Dr. Copeland's son, Patrick) and Josephine Copeland, Dr. Copeland's mother; Master of Ceremonies Humberto S. Lopez hugs Dr. Copeland; heart transplant recipient and former state legislator Leo Corbet makes remarks; Dr. Copeland smiles as he makes his way to the front of the room.

UA Designated National Women's Health Center

The University of Arizona has received the prestigious designation as a National Center of Excellence in Women's Health (CoE), a major federal initiative to advance women's health care.

With funding from the U.S. Department of Health and Human Services (HHS), Office on Women's Health, the new UA CoE seeks to improve the health and wellness of all Arizona women, with attention to the special health issues of Hispanic and American Indian women. The UA received the designation this fall.

In making the announcement, HHS Secretary Tommy Thompson said, "These new centers of excellence provide innovative solutions for women seeking the best comprehensive care. They are part of our continuing commitment to bring quality health care to women, including minority and underserved women across the nation. These new centers will

"This award will help us fulfill our mission of improving the health and wellness of women of all ages and backgrounds."

Marietta Anthony, PhD
AHSC Associate Vice President
for Women's Health

help to develop effective approaches for improving women's health that can be adopted in communities throughout America."

The UA National Center of Excellence in Women's Health has six key areas: clinical care, research, community outreach, education, leader-

ship and evaluation. The UA CoE will be directed by a distinguished and diverse group of UA administrators, clinicians and researchers, with input from community members. Marietta Anthony, PhD, Arizona Health Sciences Center (AHSC) associate vice president for women's health, is director of the UA CoE, while Francisco Garcia, MD, MPH, director of the Division of Gynecology, Department of Obstetrics and Gynecology, is its clinical director.

"We are very pleased with the recognition of the University of Arizona as a National Center of Excellence in Women's Health," Dr. Anthony said. "This designation acknowledges the tremendous work of many people here at the University, and the close relationship that the University has with the communities it serves. This award will help us fulfill our mission of improving the health and wellness of women of all ages and backgrounds."

This new designation is expected to make available a variety of grant and other funding opportunities in women's health, according to AHSC officials. The University of Arizona ranks 44th in NIH funding out of 515 domestic institutions. The National Science Foundation ranks the UA 17th among the nation's public universities in total research (\$285 million) and it is one of only 63 research universities in the United States and Canada to be elected to the Association of American Universities. The Arizona Health Sciences Center has \$107.5 million in peer-reviewed grant funding.

For more information, please visit the UA Center of Excellence in Women's Health website at www.womenshealth.arizona.edu. ♥

Dr. Ewy Keynote Speaker at Ship's Reunion

Sarver Heart Center Director Gordon A. Ewy, MD, was the keynote speaker at a recent reunion of the U.S.S. Begor. Dr. Ewy served in the U.S. Navy as a line officer and not a medical officer, as he was in the Naval Reserve Officers Training Corps during college and went to medical school after serving as ensign and lieutenant junior grade on the U.S.S. Begor, Attack Personnel Destroyer 127, from 1955 to 1957.

The reunion was held to honor the ship's involvement in the destruction of Hungnam Harbor in Korea in December 1950 by Navy Seals stationed aboard the Begor. (The scene, pictured at left, is one of the more famous naval pictures of the Korean War.)



The U.S.S. Begor

Dr. Ewy's talk focused on preventing cardiovascular disease.

"You can tell we are all getting older," Dr. Ewy said to begin his talk. "When I was aboard the Begor, all we talked about was girls, and now you want to hear about preventing heart disease!"

milestone
milestone
milestone



Above: Jack G. Copeland, MD, talks about Alex Rowe's history-making case at a news conference on Dec. 22, 2003. Seated next to him are Alex and Alex's father, Richard Rowe, MD.

Left: Alex and Dr. Copeland are prepped for their appearance on "Good Morning America" in the wee hours of Dec. 24, 2003.

UMC Patient is Youngest to Get Total Artificial Heart

Alex Rowe became the youngest person in the world to be placed on a total artificial heart when surgeons at University Medical Center removed his own diseased heart and replaced it with the CardioWest Total Artificial Heart (TAH).

The device, developed at UMC, kept him alive for two months before he underwent a heart transplant on Dec. 9, 2003. Jack G. Copeland, MD, and Pei Tsau, MD, performed the surgery.

A team led by Francisco Arabia, MD, implanted the CardioWest.

Alex suffers from muscular dystrophy, but didn't have heart problems until last summer, when his heart became stiff and unable to pump blood efficiently. His heart went

into cardiac arrest during a catheterization procedure at UMC and, after several minutes of unsuccessful cardiopulmonary resuscitation, surgeons decided to take out Alex's heart and replace it with the CardioWest. He was 15 at the time.

Alex spent his 16th birthday in the hospital waiting for a heart to become available.

Alex – the son of a doctor father and nurse mother – is from Mesa, Ariz.

The CardioWest is designed for severely ill patients with end-stage congestive heart failure. The CardioWest serves as an in-hospital bridge-to-transplantation for patients at imminent risk of death. CardioWest is developed by SynCardia Systems of Tucson. ♥

HEART NEWS FOR YOU

The ABCs of Preventing Heart and Vascular Disease

A is for antiplatelet therapy

By **Gordon A. Ewy, MD**

UA Sarver Heart Center Director

As the No. 1 killer of Americans, cardiovascular disease is our present-day pandemic – but it’s also preventable. It might not be quite as simple as A-B-C, but there is increasing evidence that an optimal lifestyle and appropriate medical therapy can prevent or halt cardiovascular disease.

But first, as Mary Poppins said, “Let’s start at the very beginning.”

What is cardiovascular disease, and when and how does it begin and progress? It is now clear that most cardiovascular disease is caused by “atherosclerosis,” a process that leads to blockage of the arteries. Blockage of the arteries in the heart causes heart attacks, while blockage of the arteries to the brain causes stroke. Blockage of the arteries to the legs causes peripheral arterial disease, and blockage of the arteries to the kidneys can cause kidney (renal) failure.

The word atherosclerosis is from “atheroma” (a deposit or accumulation of pulpy, lipid or fat-containing materials, especially in the arterial walls) and “sclerosis,” which means thickening or hardening. Why this process occurs only in the arteries is one focus of cardiovascular research.

Figure 1 depicts a blockage of an artery from atherosclerosis. In the top half of this illustration, there is a 50 percent blockage of this artery. This degree of blockage does not limit blood flow. In fact, one can have 50 percent blockage of all three major coronary arteries and run a marathon. Obviously, and unfortunately, such a

person can also go to the doctor, have a normal examination, a normal electrocardiogram, and a normal treadmill test and be told that they are “fine” only to have a heart attack within the next few weeks. What happened? This atherosclerotic blockage in the coronary artery breaks down (bottom half of illustration), exposing its contents to the blood flowing through the artery. The interaction of the contents of the atherosclerotic plaque and the

There is conclusive evidence that only half of the patients who should be taking aspirin are following this recommendation.

blood may result in a blood clot that then partially or completely blocks the artery, causing “angina” (chest pain) or a heart attack. When this occurs, and the patient develops symptoms (see page 10), he or she should immediately go to the hospital, where physicians can treat the condition. If there is complete blockage of a coronary artery, there are two ways that doctors can try to open the artery: by giving the patient “clot buster” drugs, which work in half of patients, or by taking the patient to the heart catheterization laboratory, where they are able to open the blocked artery more than 90 percent of the time.

What causes the breakdown or dis-

ruption of the atherosclerotic plaque? The cause of “plaque” breakdown or rupture is a focus of intense cardiovascular research. One factor is inflammation, as these so-called vulnerable plaques have more inflammatory cells than do stable plaques. A number of blood tests, such as high sensitivity C-reactive protein (hs-CRP) reflect inflammation, but this test does not tell us where the inflammation is. Other markers of inflammation are being investigated. (See Heart News for You, Issue 37, for more information on CRP.)

It is also clear that once these plaques are weakened, stress can cause them to rupture. But I will address stress in a future issue.

Once this so-called vulnerable plaque breaks down, its contents are exposed to the blood and clotting begins. The first step in the blood clotting process is activation of the platelets. This brings me to the first letter of the “ABCs”: A for antiplatelet therapy.

Platelets are small discs, much smaller than red blood cells, that when activated can initiate the development of a blood clot. If the damage to the artery is due to trauma, this is good, as it prevents us from bleeding to death. On the other hand, if the damage is inside of the artery, as occurs with a broken or ruptured atherosclerotic plaque, this protective mechanism can threaten our very existence!

There are a number of things that can make the platelets more active, including adrenalin, stress, vigorous exercise, smoking, etc. As noted above, the “active” or “activated” platelet may initiate the clotting process. Antiplatelet agents make the platelets

HEART NEWS FOR YOU

more difficult to activate. The most widely used antiplatelet agent is aspirin.

The platelets are made in our bone marrow, and have a definite life span. Aspirin inactivates the platelets for their life span of approximately seven days and thus has to be taken on a regular basis, as new platelets are created all the time.

In 1988, the aspirin component of the Physicians' Health Study (a randomized, double-blind, placebo-controlled – the best kind of scientific study – trial) of 22,071 apparently healthy men was stopped early, due principally to an extreme reduction (44 percent) in the risk of a first myocardial infarction, or heart attack. In this study, an adult aspirin (325 mg) was given every other day.

A smaller study (5,139 men) published the same year, the British Doctors' Trial, showed no significant benefit of aspirin.

Since these two landmark studies, there have been three additional studies. An analysis of all five of these studies (Arch Intern Med 2003; 163: 2006) found that aspirin was associated with a statistically significant reduction (32 percent) in the risk of a first heart attack and a significant reduction (15 percent) in the risk of all important vascular events (heart attack, stroke, etc.). There is increased risk, although small, of gastrointestinal bleeding and hemorrhagic stroke (bleeding into the brain) with aspirin therapy, so aspirin should be recommended only to those who are known to be at a higher risk of cardiovascular disease.

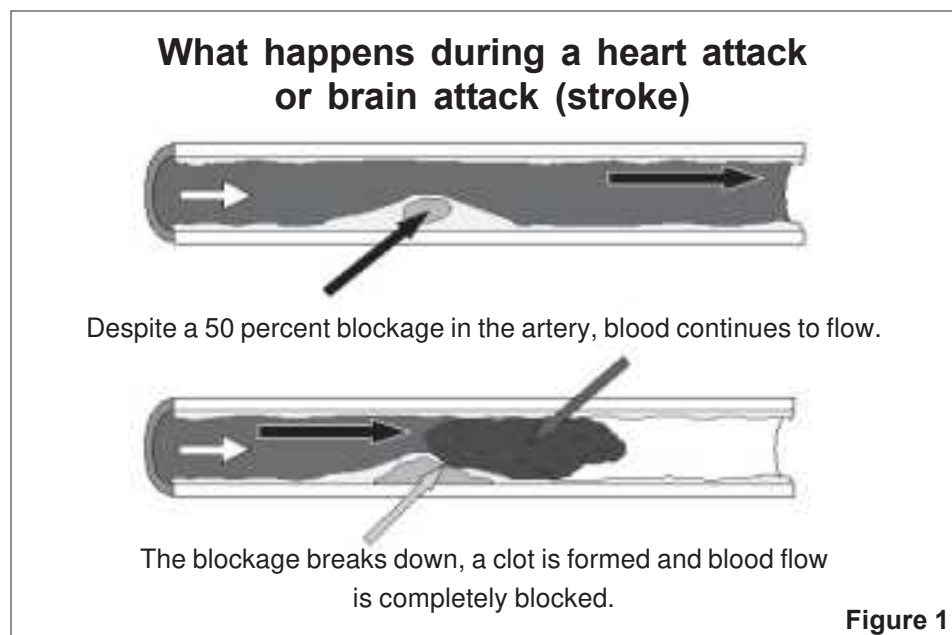
It is of interest that there is not enough data in women to routinely recommend aspirin therapy for primary prevention (e.g. prevention of a first cardiovascular event, such as a heart attack or bypass surgery). The effect of low-dose aspirin

in women is presently being studied in the Women's Health Study.

In contrast, there is conclusive data that aspirin is effective in both men and women for secondary prevention (e.g. prevention of cardiovascular events in people who already have cardiovascular disease, and diabetics). Unfortunately, there also is conclusive evidence that only half of the patients

the Physicians' Health Study showed a greater aspirin benefit in those with elevated hs-CRP. Those with very low hs-CRP had no benefit, as their risk was low.

Another problem is that many patients told to take aspirin are taking other, ineffective antiplatelet medications. It has been reported that 11 percent of patients told to take aspirin



who should be taking aspirin (after a heart attack, bypass surgery, diabetes, angioplasty, stroke, etc.) are following this recommendation.

Is there a way to make sure that the benefit of aspirin outweighs the risk? One approach is to evaluate the patient's overall risk; if they have a greater than 10 percent chance of developing cardiovascular disease over the next 10 years, aspirin is recommended.

(Calculate your risk profile by going to the Sarver Heart Center website – www.heart.arizona.edu – and visiting the "Patient Information" area.)

Another approach is to measure the patient's hs-CRP to determine if chronic inflammation is present. Results from

are actually taking acetaminophen (Tylenol), which has no antiplatelet effect. An additional 10 percent are taking non-steroidal anti-inflammatory drugs (NSAIDs), such as Advil (ibuprofen) and Alleve (naproxen). These have an anti platelet effect only as long as they are in the bloodstream, and ibuprofen blocks the anti platelet effects of aspirin. Therefore aspirin (at least 81 mg) must be taken at least two hours before ibuprofen or naproxen to maintain aspirin's anti platelet effect.

There is a new type of pain medication called "COX-2 inhibitors." These medications are used for arthritic-type pain and are said to cause fewer stomach ulcers or gastrointestinal bleeding. COX-1 is expressed in platelets,

Continued on page 10

To Prevent Heart Disease and Stroke ... I Need to Know My Numbers

My blood pressure ideally should be 120/80 mm Hg or less. In general, my blood pressure is acceptable if it is less than 140/90 at the doctor's office and less than 130/90 at home. If I am diabetic or have renal disease, my blood pressure at my doctor's office needs to be 130/80 or lower.

My tobacco use should be zero.

My LDL (bad) cholesterol should be less than 100 mg/dL (and perhaps less than 80) if I have cardiovascular disease or am at high risk (coronary bypass, angioplasty, carotid disease, peripheral vascular disease, heart attack, strong family history, etc.).

My fasting triglyceride should be less than 150 mg/dL.

My HDL (good) cholesterol should be at least 40 mg/dL if I am male and at least 50 if I am female.

My high sensitivity C-reactive protein (if test is indicated) should be less than 1.0 mg/L or less than .1 mg/dL.

My exercise ideally should include walking 2 miles a day most days of the week.

My body mass index should be less than 25. (To calculate, go to www.heart.arizona.edu)

My fasting blood glucose should be less than 100 mg/dL. Fasting glucose 100-125 = pre-diabetic. Fasting glucose of 126 or greater = diabetic.

My hemoglobin A1c should be 6.5 mg/dL or less. If 7.0 or greater = diabetic.

My "Ejection Fraction" (heart function) ideally should be over 55%. If less than 40%, I am at risk for heart failure.

This information is presented for educational purposes only.

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Heart News

from page 9

the stomach lining and other tissues, and helps to protect the stomach lining. Inhibition of COX-1 inhibits platelet aggregation, but increases the chance of stomach irritation. COX-2 is produced at the site of inflammation and causes pain and inflammation. Aspirin, ibuprofen and naproxen block both, but COX-2 inhibitors such as Celebrex (celecoxib) and Vioxx (rofecoxib) block just COX-2. These COX-2 inhibitors lack the heart protective benefits of regular aspirin. For example, a recent study found that stopping aspirin and starting Vioxx appears to put one at a slightly higher risk of a heart attack.

More research is needed to determine platelet survival and overactive platelet function, so we can determine who needs aspirin and what dose.

The Physicians' Health Study used 325 mg of aspirin every other day. Current clinical guidelines from the American Heart Association and the American Diabetes Association recommend 81 mg to 162 mg of aspirin a

day for primary prevention of cardiovascular disease.

One cannot conclude a discussion on antiplatelet therapy without mentioning clopidogrel, or Plavix. This is a stronger antiplatelet drug given with aspirin for patients who have had stents placed in their coronary arteries. With the bare metal stents, this combination is continued for a month. However, a much longer duration of therapy is recommended in those with the new drug-eluting stents—nine months to a year.

Clopidogrel also is recommended with aspirin for other patients at high risk, such as those with peripheral vascular disease. The major drawback of clopidogrel or Plavix is the cost.

"A," the first letter of the ABCs for prevention of heart and vascular disease is for antiplatelet therapy. Subsequent issues of the *Sarver Heart Center Newsletter* will cover additional approaches to the primary or secondary prevention of atherosclerotic cardiovascular disease. ♥

Up next ... B for Blood Pressure.

Symptoms of Heart Attack

men

Chest Pressure, Tightness, Burning, Expanding, and/or Pain

Radiation to Neck, Jaw and or Arms (Especially Left Arm)

Shortness of Breath

Severe Fatigue, Cold Sweats

Nausea and Near Faint

women

Shortness of Breath

Weakness

Unusual Fatigue

Cold Sweats

Dizziness

Chest Tightness or Pain

The Jack and Mildred Michelson Memorial Endowment

By Jacquelyn Michelson

I have established the Jack and Mildred Michelson Memorial Endowment in honor of my parents. Both of these remarkable people lost their lives to heart disease before the age of 60.

Jack and Mildred were dynamic, energetic and exciting individuals, taken from my life when I revered them more as parents than unique personalities. My father died of his third heart attack in 1957, at the age of 57, when I was 13. My mother died of her first heart attack in 1959.

My parents arrived in New Mexico in the 1920s. My mother, a registered nurse, met my father when assigned as his private duty nurse while he recovered from pneumonia at St. Joseph's Hospital in Albuquerque.

My father employed his ingenuity and self-taught entrepreneurial skills to start our family business, which he named Bell Trading Post, after my mother, whose maiden name was Bell. My older brothers and I, all in our teen-age years at the death of our parents, carried on the business (later known as Sunbell Corporation), which was manufacturing Indian

jewelry in Albuquerque and selling it wholesale throughout the United States.

Losing both parents to heart disease prompted me and my two brothers, J.T. and Douglas, to learn as much as we could about this condition. It became a goal and purpose of mine to educate others and one day fulfill my intention of starting a memorial in my parents' names.

I look to the future of my children, Brian, Catherine, Tracie, Lisa and Beth, and want to gear my efforts toward freeing our world of heart disease and stroke. I am committed to devoting my energy and money to educating people with regard to heart disease and enabling research efforts to prevent heart disease, the leading

killer of both men and women in America.

While I suffered a tremendous loss in the death of my parents, I realize it is now my responsibility to make a difference in the lives of others by enlightening them so they may live long, healthy lives with their loved ones. ♥



Jack and Mildred Michelson

Remembering Raymond "Honey" Chaiten – 1914-2003

Raymond "Honey" Chaiten cherished the care given to him at the Sarver Heart Center and was grateful for the quality added to his life by his doctors. Mr. Chaiten died in February 2003 and his family established a memorial fund in his name.



Raymond Chaiten

Thanks to generous gifts given in memory of "Honey," two young investigator research awards will pay tribute to the memory of a joyful, kind and special man.

"Dad never aged. He was an eternal optimist who never judged anyone and loved life," his daughter, Alice Baker, says. "Like a child, his ageless spirit relished the joy in the world and hung on to the sheer wonder of life."

Honey arrived in Tucson

in 1959 and began work with the Shamrock dairy as a milkman and columnist for the company newsletter. Earlier in his career, he was a photographer and a newspaper columnist, interviewing entertainers like Henny Youngman and the Three Stooges. One of his passions in life was dancing and later in his life he became a square dance teacher. His full-time volunteer position with Fruchthendler Elementary School was his last and most cherished job. The students and teachers fondly referred to him as "Mr. C" and presented him with an award for 8,020 hours over 11 years with Tucson Unified School District.

Mr. Chaiten would brighten the halls of the hospital by greeting all he came upon, creating uproarious laughter with his latest jokes. He was a regular at Sarver Heart Center events and always brought along a camera, assuring all the presenters and staff that he had gotten them on film.

His presence is missed, but the memory of his kind smile and twinkling eyes remind us that laughter truly is the best medicine. ♥

Dr. Califf is Marcus Visiting Professor

Robert M. Califf, MD, of Duke University Medical Center, spoke on the state of health care during the Samuel and Edith Marcus Visiting Professorship Lecture.

Dr. Califf, a cardiologist, is the seventh Samuel and Edith Marcus Visiting Professor. The professorship is named for the parents

of Frank I. Marcus, MD, the founding chief of cardiology at the UA College of Medicine. It was established at the UA in 1997 by Marcus and his brother, Julius, and sister, Shirley Marcus Feinberg, for the enhancement of education and research for students, residents, fellows and faculty in cardiology.

As director of the Duke Clinical Research Institute, Dr. Califf is known for his involvement in many of the best-known clinical trials in cardiovascular disease. He is considered an international leader in the fields of health outcomes, quality of care and medical economics.

Those chosen for the professorship spend three days at the UA Sarver Heart Center, sharing their expertise with faculty and students during formal and informal talks.

Dr. Califf visited in January. ♥



Dr. Califf

How to Make a Bequest Through Your Will

As the highly public Campaign Arizona continues to increase support for cardiovascular research, some friends and supporters choose to plan their personal gifts in a confidential manner. If you wish to contribute in this way, please instruct your independent legal adviser to use the following language:

"I hereby leave (specific dollar amount or percentage of residuary estate) to The University of Arizona Foundation, an Arizona nonprofit corporation, for the University of Arizona Sarver Heart Center, a division of the College of Medicine, to establish "The (family name/s of your choice) Endowment."

You or your legal counsel may also seek assistance in planning your gift by calling Brian Bateman, senior director of development at the UA Sarver Heart Center, at (520) 626-4146 or (800) 665-2328.

SHC Members Named 'Best Doctors'

Several members of the UA Sarver Heart Center have been named among "The Best Doctors in America." The annual list is compiled by Best Doctors, Inc., a medical referral service that surveys tens of thousand of leading specialists worldwide, asking them what doctors in their specialty they themselves would go to for treatment. Only about 4 percent of all U.S. doctors are selected for the list. For more information, visit www.bestdoctors.com.

Joseph S. Alpert, MD
Cardiology

Robert A. Berg, MD
Pediatrics

Samuel Butman, MD
Cardiology

Jack G. Copeland, MD
Cardiothoracic Surgery

Bruce M. Coull, MD
Neurology

Gordon A. Ewy, MD
Cardiology

Paul E. Fenster, MD
Cardiology

Stanley J. Goldberg, MD
Pediatrics

Karl B. Kern, MD
Cardiology

Scott E. Klewer, MD
Pediatrics

Richard D. Lane, PhD
Psychiatry

Joseph Mills, MD
Vascular Surgery

Myra L. Muramoto, MD
Family Medicine

Charles W. Otto, MD
Anesthesiology

Theron W. Ovitt, MD
Radiology

Kathryn L. Reed, MD
Obstetrics and Gynecology

Gulshan K. Sethi, MD
Cardiothoracic Surgery

James M. Woolfenden, MD
Nuclear Medicine

In Brief

Dr. Sorrell Named “Echo Master”

Dr. Vincent L. Sorrell recently won the “Echo X-Games” and was subsequently named World Echo Master Champion 2003.

The competition was held at the conclusion of the VII World Congress of Echocardiography and Vascular Ultrasound, held in Buenos Aires this fall.

Contestants were asked to make diagnoses based on echocardiograms; the one with the most correct diagnoses won.

Dr. Sorrell is *The Allan C. Hudson and Helen Lovaas Endowed Professor of Cardiovascular Imaging*. He holds faculty appointments in medicine and radiology and is an expert in cardiac imaging.

He has been recognized as an honored faculty member participating in the World Congress of Echocardiography every year since 1996, giving lectures in China, Brazil, South Korea, Egypt, Turkey and Argentina.

Dr. Sanders Honored for Research

Arthur B. Sanders, MD, was selected to receive an award for Outstanding Contributions in Research from the American College of Emergency Physicians.

Dr. Sanders is an emergency medicine professor at the UA College of Medicine and a member of the Sarver Heart Center’s CPR (cardiopulmonary resuscitation) Research Group. He has been active in improving CPR techniques and his research has been the basis for some of the recommendations in the American Heart Association’s CPR guidelines.

Dr. Huang Given Research Honor

A research abstract written by cardiology fellow Ming-He Huang, MD, earned him an invitation to the 3rd Annual Cardiology Fellows Forum of Excellence.

A total of 124 abstracts were presented for consideration. Dr. Huang was one of 30 finalists, which earned him an invitation to attend.

Dr. Huang’s abstract was titled “Functional Significance of Intrinsic Cardiac Adrenergic Cells in Fetal Heart.”



Life after Bypass

Almost 20 years ago, Gertrude Stein of Arizona City was recovering from double bypass surgery. Today, at the age of 95, she is a regular on the golf course and still seeing the cardiologist who cared for her back then – Dr. Gordon A. Ewy.

Dr. Marcus Speaks in China

Frank I. Marcus, MD, was invited to be a presenter at the 14th Great Wall International Congress of Cardiology meeting, held in Beijing in October. His talk was on arrhythmogenic right ventricular dysplasia. While in Beijing, he also gave a talk at the Chaoyang Hospital, titled “Resynchronization Therapy for Congestive Heart Failure.”

Dr. Marcus Listed in “Profiles in Cardiology”

Frank I. Marcus, MD, has been included in “Profiles in Cardiology,” a book that features “individuals who have made significant contributions to the study of cardiovascular disease.”

“The lives of those who create new ideas, or perform necessary tasks in a scholarly manner, deserve our attention,” the book’s preface states.

In its profile of Dr. Marcus, the book traces Dr. Marcus’ career from his graduation with honors from Boston University School of Medicine, to his cardiology fellowship at Georgetown University Hospital, to his appointment as the founding chief of cardiology at the UA College of Medicine.

It also notes his research contributions, including his studies on digoxin, his investigation into arrhythmogenic right ventricular dysplasia and his innovations in the techniques of catheter ablation.

Donors Help Buy Gene Analysis Equipment

The Sarver Heart Center has been fortunate to be given donations by people who want to help with the purchase of major pieces of research equipment. Because of the complex nature of the equipment, it is difficult for non-researchers to understand exactly how that equipment will be used.

We greatly appreciate these contributions and would like to announce the newest purchase, and attempt to explain a little about what it does.

The equipment is called the Rotor-Gene 3000 and belongs to a class of equipment known as “real-time PCR,” which is a technology that makes gene analysis quicker and more precise.

This equipment will be used by several Sarver Heart Center physicians and scientists who examine gene expression as part of their research on cardiovascular conditions. It is a major addition to the Center and we expect it to have an important impact on both our research and our efforts toward “... a future free of heart disease and stroke.” ♥



It's Official

SHC Advisory Board member Helen Lovaas presents Paul McDonagh, PhD, with a new lab coat. Dr. McDonagh recently was named The Allan C. Hudson and Helen Lovaas Chair of Vascular Biology and Coagulation. The coat was embroidered with his new title.

Charitable Gift Annuities

The payout rate on charitable gift annuities are negotiable and are dependent on the age and number of annuitants. Here are some example rates.

One Annuitant

Age	Rate (%)
65	6.0
70	6.5
75	7.5
80	8.5
85	9.5
90	10.5

Two Annuitants

Age	Rate (%)
65, 65	5.5
70, 70	6.0
75, 75	6.5
80, 80	7.0
85, 85	8.0
90, 90	9.5



WHAT DO YOU THINK

Please take a moment to share your thoughts about the *Sarver Heart Center Newsletter*. If you have a concern or question not addressed here, please attach a note to this form or send e-mail to pila@u.arizona.edu. Thank you!

How much of the *Sarver Heart Center Newsletter* do you typically read?

- All Most Some Little

How does this newsletter compare with other health-related publications you read?

- Much Better Somewhat Better About the Same Not as Good

Do you share this newsletter with family, friends or others?

- Often Sometimes Rarely Never

What topics would you like to read about in future issues?

Would you like to receive any of the following information?

- A one-page summary of the Top 10 ways to prevent heart disease and stroke
- The “*To Prevent Heart Disease & Stroke ... I Need to Know My Numbers*” wallet card with information about recommended goals for cholesterol, blood pressure, etc.
- A packet of eight complimentary memorial and honor cards that will allow you to remember family and friends and contribute to research at the same time
- Planning a gift through a charitable gift annuity, a charitable trust or through an estate or bequest
- How to establish an endowed fund in support of cardiovascular research
- The levels of giving and how to be acknowledged on the wall of recognition at the Sarver Heart Center

Other requests?

- Please send a newsletter to the following family and friends:

- Please do not solicit contributions from me/us by mail

- Please remove me/us from the mailing list

Your Name (optional): _____

Address, City/State and Zip: _____

Phone: _____ E-Mail: _____

FROM THE DIRECTOR



One of my more pleasant duties is to acknowledge significant accomplishments of the Sarver Heart Center. It is even more pleasant when so much is happening that I have to try to squeeze in news about more than one major event in this small space.

The past few months have been very exciting. Not only did we initiate a groundbreaking demonstration project in cardiopulmonary resuscitation, but we marked the completion of *The Jack G. Copeland, MD, Endowed Chair of Cardiothoracic Surgery*.

In November, the Sarver Heart Center CPR Research Group, in conjunction with the Tucson Fire Department, unveiled a new approach to out-of-hospital cardiac arrest. Tucson is the first city in the world to make these sweeping changes in the treatment of cardiac arrest victims. We believe that recent research findings in CPR are so compelling that we need to make changes NOW, rather than wait years for the international guidelines to be changed.

Turning to the other exciting news, it is altogether fitting that Dr. Copeland has been honored with an endowed chair in his name. Jack's accomplishments since he

arrived at the UA College of Medicine as a young man to head the cardiothoracic surgery program are legendary. They were aptly highlighted by the list of prominent speakers and the video presented at the celebration dinner, also in November. We are indeed fortunate to have such a skilled surgeon and endowment support for the cardiovascular surgery program in perpetuity. All who contributed to this chair should be justifiably proud.

Sincerely,

Gordon A. Ewy, MD
Director, UA Sarver Heart Center

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