

# Investment in research saves lives and money

facts about:

## Heart Disease & Stroke

### Today:

- Heart disease is the number one killer of Americans and stroke is number three.
- Heart disease, stroke and other cardiovascular diseases are the most prevalent diseases among men and women of all races and ethnicities.
- 1.1 million people will suffer a heart attack this year.
- 600,000 people suffer a stroke each year; nearly 30% of them will die within the year and as many as 30% will be permanently disabled.
- By retirement age, 65 percent of Americans will have some form of cardiovascular disease.

SOURCE: AMERICAN HEART ASSOCIATION (WWW.AMERICANHEART.ORG AND 1-800-AHA-USA-1)

SAVING LIVES  
SAVING MONEY

### HOW RESEARCH SAVES LIVES:

- Since 1970, death rates from cardiovascular diseases have fallen by almost 50 percent and death rates from stroke have fallen by 60 percent, yet they are still the number one cause of death.\*
- The National Institutes of Health-sponsored Framingham Heart Study identified smoking, high cholesterol and high blood pressure as risk factors for heart disease and stroke. Awareness of these risk factors by physicians and the public resulted in a major decrease in heart disease and stroke since 1970.\*\*
- Cholesterol reducing drugs such as statins are being used by millions of Americans to prevent heart disease and strokes, to decrease recurrence of heart attacks and to reduce the need for bypass surgery. Statins also improve survival of heart transplant patients.\*\*

\*SOURCE: THE CENTERS FOR DISEASE CONTROL AND PREVENTION (WWW.CDC.GOV)

\*\*SOURCE: NATIONAL INSTITUTES OF HEALTH (WWW.NIH.GOV/)

### HOW RESEARCH SAVES MONEY:

- The average life-span of Americans increased from 50 years in 1900 to 77 years in 2000. Steadily declining mortality rates from cardiovascular disease since the mid-1960s is a significant reason for longer, more productive lives.\*
- It is difficult to place a dollar value on human life, but economists have estimated that years of productivity gained through the prevention and treatment of cardiovascular diseases contributed \$1.5 trillion to the nation's economy each year from 1970 to 1990.\*
- A NIH-sponsored study found that the bioengineered clot-busting drug called t-PA saves \$4,400 for each patient in health care costs. The NIH predicts that \$100 million a year could be saved if this drug is used more widely.

\*SOURCE: THE ECONOMIC VALUE OF MEDICAL RESEARCH, MURPHY/TOPEL

The medical and health research policy program of the Mary Woodard Lasker Charitable Trust  
www.fundingfirst.org  
www.laskerfoundation.org

*"If you think research is expensive, try disease."*

— Mary Lasker 1901–1994

### The Cost:

- Heart disease and stroke cost the U.S. more than \$350 billion in 2003. Of this \$350 billion, \$209 billion was spent for direct medical costs, \$32 billion for lost productivity during illness, and \$110 billion for loss of future productivity due to premature death.

SOURCE: AMERICAN HEART ASSOCIATION

### survivor



NAME: SHERRI SELPH

AGE: 49

DISEASE: CONGESTIVE HEART FAILURE

STAGE: END STAGE

Sherri Selph was 41 when she was first diagnosed with second-stage congestive heart failure.

However, her rapidly diminishing health led to a diagnosis of end-stage heart disease. A heart transplant was not an option. Survival statistics for patients with Sherri's condition are grim. Even with the best treatment available, only 50 percent of heart failure patients live beyond a year.

Her doctor suggested that Sherri enroll in the clinical trial, Randomized Evaluation of Mechanical Assistance in Congestive Heart Failure or REMATCH. Of the 22 university medical centers participating in this National Institutes of Health/Thoratec Corporation study, none was near Sherri's South Carolina home, and personal finances prevented her from traveling to a trial site.

Then came the phone call from William Holman, M.D., co-investigator for the trial being conducted at the University of Alabama at Birmingham, offering her assistance and a place in the study. Sherri soon became a patient and a member of the group that received an implantable heart pump.

The results were immediate. Four days after receiving her heart pump Sherri was back on her feet. "I could not believe it. The pump had given me back my life," she said. "Without this procedure, I would not have lived to see my youngest grandson who is now two and a half years old."

After several months at UAB, Sherri is now back in South Carolina with her heart pump and her five grandchildren – who prefer that she stay right where she is.

# facts about: } Heart Disease & Stroke

## Hope for the Future:

- NIH-sponsored research such as the Framingham Heart Study and the Jackson Heart Study will allow scientists to identify new risk factors, isolate genes that contribute to heart disease and stroke, and develop tests to detect diseases in the earliest stages.
- Patients with chest pain due to heart disease who are treated with the gene "VEGF2" have increased blood flow to the heart, less chest pain and an increased ability to exercise. Studies suggest that VEGF2 stimulates new blood vessels to grow, thus supplying more oxygen to the heart.

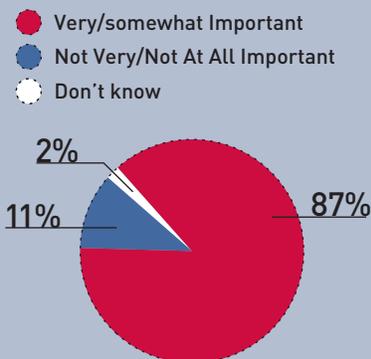
SOURCE: NATIONAL INSTITUTES OF HEALTH (WWW.NIH.GOV/)

## The Bottom Line:

Research has identified better strategies to prevent, diagnose and treat heart disease and stroke. These advances have significantly increased the likelihood that a person will survive heart disease and stroke and remain productive for many years. Investing more in heart disease and stroke research today will improve the health of Americans tomorrow.

### State Leadership in Heart Disease and Stroke is Important

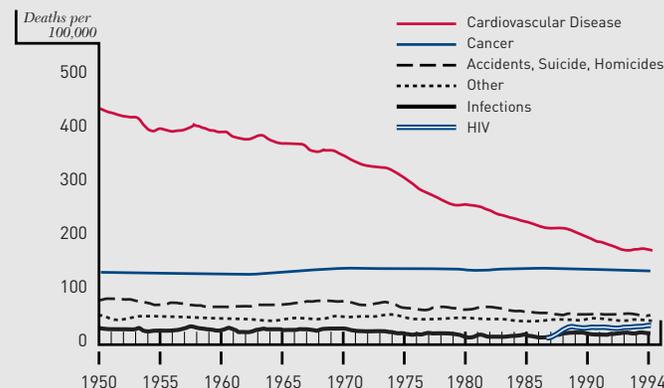
How important is it that your state be a national leader in heart disease and stroke research?



SOURCE: AGGREGATE 2002, CHARLTON RESEARCH COMPANY FOR RESEARCH/AMERICA

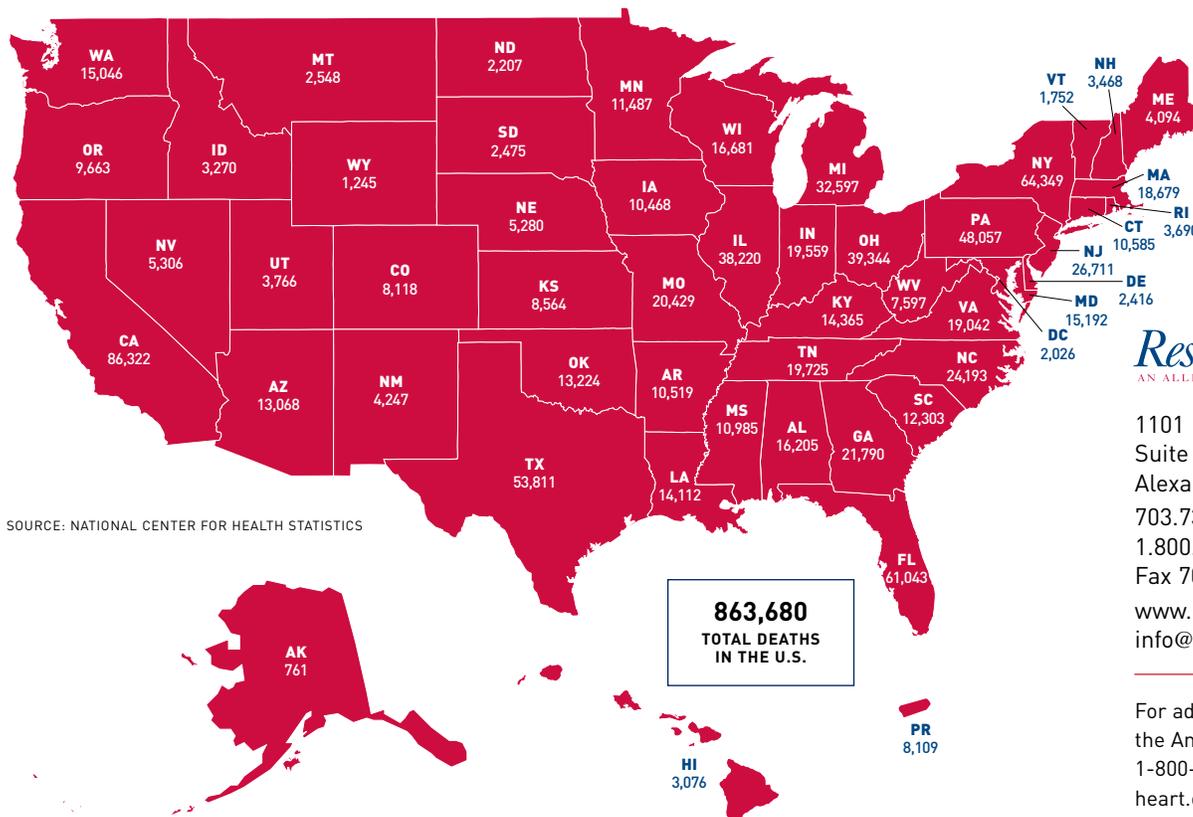
### Declining Mortality Since 1950

Although cardiovascular disease is still the most prevalent disease, the age-adjusted death rates have declined by more than 50 percent over the past 40 years.



SOURCE: "THE ECONOMICS OF BETTER HEALTH: THE CASE OF CARDIOVASCULAR DISEASE," CUTLER/KADIYALA

## Number of Deaths Due to Heart Disease and Stroke, 2001



SOURCE: NATIONAL CENTER FOR HEALTH STATISTICS

**863,680**  
TOTAL DEATHS  
IN THE U.S.

**Research!America**  
AN ALLIANCE FOR DISCOVERIES IN HEALTH®

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For additional information contact the American Heart Association at 1-800-AHA-USA-1; www.americanheart.org OR the American Stroke Association at 1-888-4-STROKE; www.strokeassociation.org