

### Research Supports Healthy Living For Protection From Heart Failure

*From Brigham and Women's Hospital*

At the age of 40, your risk of developing heart failure sometime during the rest of your life is approximately one in five. Researchers at Brigham and Women's Hospital found that men who follow a number of healthy lifestyle behaviors may reduce their risk of heart failure to one in ten. The research appeared in the *Journal of the American Medical Association* in July 2009.

"Previous relationships between various lifestyle factors and predictors of heart failure have been established," says Luc Djoussé, MD, ScD, MPH, the lead author of the study. "But little was known about the joint contribution of these factors on the reduction of lifetime risk of heart failure."

Researchers found that healthy men who had normal body weight, never smoked, got regular exercise, drank alcohol in moderation, and consumed breakfast cereal and fruits and vegetables lowered their lifetime risk of heart failure. A greater number of healthy lifestyle factors was associated with an increasingly lower lifetime risk of heart failure, compared to men adhering to none of the six measured factors.

Lifetime risk of heart failure was found to be higher in men with hypertension than in those without hypertension. "We know that hypertension is a

*Continued on the next page*

*Dear Reader,*

*In this issue you will find new and exciting articles from the WorldCare Consortium on a new laser stitching process that minimizes scars, helpful information on healthy living and new evidence on how migraines may affect men and women differently.*

*Sincerely,*

*Rebika Shaw,*

*Regional Director, Corporate Communications*

### HEALTH NEWS

#### Closing Wounds With Laser May Leave Less Scarring Than Stitches

*From Massachusetts General Hospital*

Though they may sound like science fiction, "laser stitches"—formally known as photochemical tissue bonding or laser-assisted nanosuturing—are already being used to close wounds.

Researchers at Massachusetts General Hospital are using light to "stitch" surface wound openings back together. They do so by shining a laser onto the skin after each side of the opening has been coated with a dye approved by the FDA. When the light reacts with the dye, a continuous bond is created, reconnecting collagen in the skin tissue without heating the skin. This results in a watertight seal that requires no return visit to the doctor's office for suture removal.

"One way to describe how laser-assisted nanosuturing works is to think of the difference between Velco fasteners on shoes and shoe laces," explains Irene Kochevar, PhD, chemist and co-inventor of the technology. "With the laser, you attach the tissues using a huge number of nanosutures whereas traditional suturing leaves small gaps in the wound closure."

Though Sandy Tsao, MD, a dermatologist at Mass General, is still testing this treatment in a clinical trial, those being studied have had far less inflammatory response than they do with traditional stitches, since they have no reaction to a foreign body being introduced to the skin.

As well as reducing inflammation, photochemical tissue bonding may also reduce the chance of infection post surgery, since the skin has no openings to provide access to pathogens that might otherwise enter.

Patients also experience a cosmetic benefit with this new method of suturing. Those in the study had half of each wound closed using traditional suturing and the other half using the laser. In all patients, the laser-treated side looked better than the other. The laser leaves patients with only a single line rather than cross-hatch marks.

Dr. Kochevar foresees that this technology will expand beyond the skin's surface to repair intricate tissues such as cornea and nerves that are damaged by conventional suturing, which require extremely high levels of surgical skill for repair. "We're very excited about improving surgical outcomes and possibly making new surgeries available by using light to seal and connect delicate tissues with minimal scarring," Dr. Kochevar says.



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## Healthy Living (continued)

contributing risk factor for heart failure," Dr. Djoussé says. "However, we found that adhering to the specific lifestyle factors such as healthy body weight, not smoking, and regular exercise was associated with a lower lifetime risk of heart failure in the overall population and in men with hypertension, as well as those without hypertension."

"By identifying a number of modifiable lifestyle factors, we can arm patients and physicians with targeted habits to help reduce the occurrence of heart disease," Dr. Djoussé says, noting the need for additional investigation into the effects of these factors on other populations besides men.

## Mouse Study Points to Migraine Differences Between Genders

From UCLA

For every man with a migraine, three women are struck by the severe headaches that often come with nausea, sensitivity to light and sound, and visual disturbances. This 3-to-1 ratio raises the obvious question: Why? Previously it was thought migraines were caused by the narrowing and widening of blood vessels. Researchers at UCLA now suggest that women may have a faster trigger than men for activating the waves of brain activity thought to underlie migraines. If the theory is correct, this triggering mechanism may be a new target for migraine treatment.

Reporting in the *Annals of Neurology*, UCLA neurologist Andrew Charles, MD, and colleagues used a mouse model to discover a big difference between males and females

## NEWS ON WORLDCARE

### Children's Hospital of Pittsburgh joins Provider Network.

WorldCare members now have access to the expertise of physicians at Children's Hospital of Pittsburgh of UPMC, recognized for its exceptional clinical services, extensive research and education programs.

### Patient Perspective

*"I found the process easy. I found the report helpful. We took the time to discuss it with the physician. The physician was pleased with the second opinion. I think it's an excellent benefit that should be utilized more often." – WorldCare member*

### About WorldCare

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regarding a phenomenon called cortical spreading depression (CSD), which is thought to be a chief culprit in causing migraines.

Patients with migraines show cortical spreading depression, which is characterized by dramatic waves of activity that spread across the surface of the brain. CSD may in turn trigger not only the pain of migraine but the visual symptoms, nausea, dizziness, and difficulty concentrating that are so common in migraine patients.

In the study, female mice showed a significantly lower threshold for CSD when compared with males. In other words, it was much easier to evoke the waves of brain activity

believed to underlie migraine in females than it was in males.

Though it is known that migraines in females fluctuate with the menstrual cycle and are more frequent during the menstrual period, the study results appear to be independent of a specific phase of the cycle, according to Dr. Charles.

These results are exciting, Dr. Charles says, because they may represent a model for understanding the mechanisms underlying the increased prevalence of migraine in women. In addition, they add to growing evidence that CSD is a key target for the development of new migraine treatments.



Contact your local WorldCare office if you are interested in obtaining a second opinion from a WorldCare Consortium hospital. Visit [www.WorldCare.com](http://www.WorldCare.com) for more information.