

# Stroke risk best found before 'the change'

A woman's cardiovascular risk factors such as cholesterol and blood pressure readings before menopause are a more accurate predictor of whether she will develop heart disease or stroke after menopause, researchers report in the May issue of *Stroke: Journal of the American Heart Association*.

"The premenopausal risk factors may be a stronger predictor of carotid atherosclerosis because they represent cumulative risk factor exposure during the premenopausal years whereas the risk factor changes during the early postmenopausal years have a shorter time for influence," says Karen A. Matthews, professor of psychiatry and epidemiology at the University of Pittsburgh Medical Center and lead author of the study.

This means that women who are at high risk for strokes and heart attacks after menopause can be identified during the years before menopause. "Prevention strategies should not be put off until menopause when a woman's risk of cardiovascular disease increases dramatically," says Matthews.

## Changes

The study was designed to describe changes in cardiovascular risk factors shortly before menopause and up to five years after menopause. A second goal was to evaluate the association between risk factors before and after menopause and carotid atherosclerosis.

The researchers evaluated 372 women (most of whom were

white) who completed examinations before menopause and again at one and five years after cessation of their menstrual cycles. Their average age was 47.5 at premenopausal examinations in 1983 and 1984. The exams included measurements of cholesterol, blood pressure, glucose, body weight, and body mass index (weight in proportion to height). Beginning in 1983, the postmenopausal exams included evaluation of the carotid arteries by ultrasound imaging to determine whether thickening had occurred.

During the time from premenopausal (the few years immediately preceding menopause) to first-year postmenopausal examination the changes in low-density lipoproteins ("bad" cholesterol), triglycerides and body mass index were larger than those between the first and fifth year after menopause. LDL increased (17.7 mg/dl) in perimenopause compared to a 2.6 mg/dl increase after menopause; the triglyceride change was 20.5 mg/dl and 9.3 mg/dl.

## Atherosclerosis

Premenopausal risk factors were a stronger predictor of the amount of carotid thickening and plaque revealed by ultrasound.

"Women who had elevated cholesterol, higher blood pressures and increased body weight before menopause had increased blood vessel thickening and atherosclerotic plaque formation in the neck arteries after

menopause. Such changes in the carotid arteries are associated with an increased heart attack and stroke risk," says Matthews. None of the changes in risk factors during the early postmenopausal period were associated with plaque formation.

The risk of heart disease and stroke increases after menopause in part because estrogen production decreases. Doctors often step up efforts to encourage postmenopausal women to adopt habits and treatments that may ward off heart disease and stroke. However, the new study suggests taking preventive steps earlier because it finds that many women already have risk factors — elevated levels of LDL and triglycerides — as they approach menopause. More important, these premenopausal risk factors, even if they are within normal range, were more strongly related to the development of blockages in the blood vessels than risk factors measured at or after menopause.

"At least five years after menopause, a substantial number of women had measurable plaque," says Matthews. "Women with elevated plaque had risk factors for cardiovascular disease when they were premenopausal, including elevated systolic blood pressure, LDL cholesterol and low levels of the good HDL cholesterol."

"This suggests that we can look relatively early, before the onset of symptoms, to see who is at high risk. Prevention efforts should begin when a woman is in

her 40s or even younger, so we don't have to deal with lots and lots of people who are very ill later in life."

## Intervention

An accompanying editorial by Dr. Gretchen E. Tietjen and Dr. Robin Brey says the study highlights the importance of re-establishing normal ranges of blood pressure and lipids for premenopausal women and of investigating cholesterol-lowering drugs and aggressive blood pressure control as a means of preventing a stroke in postmenopausal women.

"These risk factors don't necessarily have to be abnormal to increase the risk," says Tietjen, associate professor and chairwoman of neurology at the Medical College of Ohio in Toledo. "Maybe we ought to be setting the bar a little lower for what we determine to be abnormal."

The study did not directly address the effect of hormone replacement therapy on cardiovascular risk factors. That effect could be assessed in future evaluations, they write.

Co-authors were Dr. Lewis H. Kuller, Dr. Kim Sutton-Tyrrell and Yue-Pang Chang.

The work was financed in part by the National Institutes of Health.

The information contained in this American Heart Association Web site is not a substitute for medical advice or treatment, and the AHA recommends consultation with your doctor or health care professional.

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should limit themselves to one drink a day — defined as 1 1/2 fluid ounces of 80-proof spirits (bourbon, Scotch, vodka, gin, etc.), 1 oz. of 100-proof spirits, 4 oz. of wine, or 12 oz. of beer.

More than one drink a day may raise blood pressure and contribute to high triglycerides, cancer, and diseases of the liver, pancreas and nervous system, in addition to causing heart failure and stroke.

If you don't drink, don't start. Keep in mind that women do not metabolize alcohol as well as men, said Valhampayan. "A lesser amount affects them more."

"A doctor's best friend is an educated patient," said Valhampayan. Know your cholesterol levels and blood pressure readings. Know the risk factors of heart disease and the warning signs of heart attack (see related story). And remember, there are no stupid questions when you visit your health care provider. Be assertive, urges the American Heart Association. If your questions aren't answered to your satisfaction, ask for a referral and get a second opinion. It's your life, and you're in charge.

Contact the American Heart Association at (800) AHA-USA1 or visit [www.americanheart.org](http://www.americanheart.org)

# U-M program aims to help spinal cord injury patients

ANN ARBOR, MI - The University of Michigan Health System is once again offering a program to help people with spinal cord injuries discover ways to improve their health and well-being.

The course's participants will also help U-M researchers understand the effectiveness of different approaches for maintaining the overall well-being of people with spinal cord injury — information that could help improve the lives of others with similar conditions.

The Wellness with SCI Program, as it is called, is now recruiting participants for its series of free medical clinics, questionnaires and follow-up consultations. The first session is on June 18.

Those who qualify may also be

assigned to the workshop group, which will take part in six-hour classes in July, August and September, addressing topics ranging from exercise and bladder/bowel function to nutrition and sexuality. These will be followed by two more medical clinics in September and February. Besides the free medical attention and information, participants can get free transportation and earn up to \$225 for taking part.

Any person aged 18 to 65 who has lived for two or more years with an SCI at the C-5 level or below may be eligible and can call (734) 938-9474 or e-mail [elsc@umich.edu](mailto:elsc@umich.edu) to find out more.

The U-M has one of the nation's 16 model spinal cord injury systems.

# St. Mary Mercy leads effort to expand public defibrillators

St. Mary Mercy Hospital is leading a city-wide effort to increase the number of automated external defibrillators, or AEDs, in key Livonia locations. AEDs are lap-top size devices that can shock a dying heart back to life. They're designed for use in public areas.

Recognizing the need for more AEDs in Livonia, St. Mary Mercy has organized a task force representing health care, education, police, fire, government, industrial centers, the YMCA, and malls to address this challenge. Working with the American Heart Association, the group is currently determining current AED locations in the community; they will then identify additional locations that would provide the maximum protection for the community.

St. Mary Mercy Hospital is a training site for automated defibrillators.

"One of the biggest obstacles will be funding," said Nurse Ginger Ramsay, chairwoman, and health educator in the Community Outreach Department, St. Mary Mercy Hospital. The defibrillators cost \$3,000 to \$4,000 each.

Some 250,000 people die each year from sudden cardiac arrest, according to the American Heart Association. In conjunction with cardiopulmonary resuscitation (CPR), AEDs can save lives in places where people have been trained to use them. For every minute defibrillation is delayed, the victim's chances of survival go down 7-10 percent. "Time is critical during a heart attack," said Dr. Ash Gokli, director of

emergency medicine at St. Mary Mercy. "Placing more AEDs in the community will save lives."

AED's now on the market are safe and easy to use, making it possible for non-medical personnel to be trained to provide rapid defibrillation. More and more companies are taking this step since legislation providing limited liability for non-medical AED users was passed in the state recently. The American Heart Association recommends that any facility in which large groups of people congregate consider establishing a defibrillation program.

For more information about public access defibrillators, call Ginger Ramsay at (734) 656-8947.

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**SPOTLIGHT ON**

**Orthodontics**

by Josephine Finazzo, D.M.D.

**ADULT MATTERS**

If you think you are too old to have straight, healthy teeth, rest assured it is never too late to enhance your smile. In fact, up to 25% of all orthodontic treatment is presently being performed on adults, most of whom did not receive treatment as youngsters because it was too expensive or the techniques of their day couldn't solve their problems. Today, orthodontic treatment is a relatively inexpensive proposition, and space-age materials & advanced techniques put most problems within the purview of orthodontic correction. The main difference between youth & adult orthodontics is the length of treatment. Because an adult's bone structure is more firmly set than that of an adolescent, adult treatment usually takes 18 to 24 months longer.

Don't hesitate to seek treatment to give yourself a great smile — you deserve to look & feel your best. At THE ORTHODONTIC GROUP, located at 19850 Middlebelt, we would be happy to discuss new orthodontic options with you. You may be surprised at how inexpensive & easy treatment can be these days. We have a computer imaging system that helps patients visualize the end result of orthodontic treatment. Call us at 442-8885 for an appointment. Day & evening appointments are available & no referral is necessary. Payment plans & terms are available. Look for our next article in two weeks.

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