

NewYork-Presbyterian Hospital  
Columbia University College of  
Physicians & Surgeons  
Weill Medical College of  
Cornell University



Preventive Cardiology

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Disclaimer: This resource provides brief, general information about heart health. It does not take the place of the instructions you receive from your health care providers. For answers to other questions talk to your physician or other health care provider. NewYork-Presbyterian Hospital does not endorse specifically any test, treatment, or procedure mentioned in this newsletter.

## Did You Know?

### Facts on Women & Heart Disease

- Heart disease kills more women each year than all other forms of cancer combined.
- One out of every two women will die of heart disease, but only half of all women know heart disease is the leading killer.
- Sixty four percent of women who die suddenly of heart disease have no previous symptoms.
- The American Heart Association launched the "Go Red" Campaign on February 4th, 2004 to increase awareness of heart disease and stroke among women. For more information visit: [www.americanheart.org](http://www.americanheart.org).



**Welcome to the inaugural issue of the  
Heart Health Times. We hope the information  
helps you put prevention into practice!**

**- The Editorial Board**

**Visit our website [www.hearthealthtimes.com](http://www.hearthealthtimes.com)**

# Heart Health Times

A newsletter from NewYork-Presbyterian Hospital Preventive Cardiology Program

Affiliated with Columbia University College of Physicians & Surgeons and Weill Medical College of Cornell University



## Preventive Cardiology Program

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## New Prevention Guidelines Issued For Women

Lori Mosca, MD, PhD, Editor-in-Chief



This month the American Heart Association issued the first set of comprehensive evidence-rated guidelines for the prevention of cardiovascular disease in women published in the February 10th edition of *Circulation*. As Chair of the Expert Panel that included representatives from a dozen professional and governmental organizations, I can say that this was a landmark collaborative initiative. Another 2-dozen organizations endorsed the guidelines, providing an unprecedented opportunity to speak with a unified voice and to disseminate the recommendations into practice. Preventive interventions were rated according to the strength and the quality of evidence to support recommendations after a systematic literature review of nearly 7000 articles. The panel emphasized the importance of assessing the absolute heart disease risk and categorizing women as high, intermediate, or lower risk to help determine the intensity of preventive therapy. Several of the recommendations vary according to the level of patient risk. For example, aspirin therapy is recommended for all high-risk women and

is not recommended for low-risk women. Among intermediate risk women, aspirin can be considered as long as blood pressure is controlled and benefit is likely to outweigh risk of gastrointestinal side effects and bleeding. Key modifications to prior guidelines for cholesterol management in women include a strong recommendation that high-risk women be prescribed statin therapy regardless of

“The guidelines set new performance standards and should help physicians prioritize prevention strategies.”

Antonio M. Gotto, Jr., MD, DPhil  
Dean, Weill Cornell Medical College

LDL cholesterol level, although the level of evidence to support this strategy is more abundant for women with an LDL above 100mg/dL. Hormone therapy and antioxidant supplements were not recommended for prevention in addition to aspirin therapy for low risk women because of unproven benefit and possible adverse effects. A list of priorities in practice and Internet resources is included in the guidelines to facilitate implementation in practice. For more information see [www.americanheart.org](http://www.americanheart.org)

## Research Highlights: Stopping Macrophage Death May Prevent Lesion Rupture

Plaque rupture is a key trigger for cardiovascular events. In two recent NIH-sponsored studies, Columbia University investigators discovered that targeting a specific molecular pathway inside unstable lesions prone to rupture might provide a new way to treat atherosclerosis. “The idea

that going into a pre-existing lesion and attacking a specific pathway that leads to rupture could become a powerful method to prevent numerous deaths caused by atherosclerosis,” says Dr. Ira Tabas, principal investigator of the research.

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# Nutrition Myth of the Month: Are All Chocolates Created Equal?

By Heidi Mochari, RD



**N**ot true. Recent scientific evidence suggests that dark chocolate has a heart friendly impact that milk chocolate, white chocolate, and commercial chocolate confections may not.

Antioxidant effects<sup>1</sup>, reduced blood clotting<sup>2</sup>, and even improved blood pressure in the elderly<sup>3</sup> have all been linked with dark chocolate consumption. Scientists attribute these benefits to the rich flavonoid content of cocoa, a main ingredient in dark chocolate. Milk chocolate and commercial chocolate confections often contain less cocoa than dark chocolate (plus more hydrogenated vegetable fats, milk, or corn syrup). White chocolate may contain little or no cocoa at all.

Read the food label on your dark chocolate for the cocoa content. Look for a high cocoa content (greater than 60% is a good start) in dark chocolate made from cocoa powder or cocoa liquor, cocoa butter, sugar and little to nothing else. Of course excess consumption of any kind of chocolate could make meeting your heart disease prevention goals more challenging. All types of

chocolate are calorie dense and eating too much can promote weight gain.

On a lighter note, it has been documented that stearic acid, a saturated fat that represents approximately 30% of the fatty acids in chocolate, does not raise serum cholesterol levels the way that other saturated fatty acids (i.e. lauric, myristic, and palmitic) do<sup>4</sup>. Consumers should be cautious with this knowledge however. Overall reduction in daily consumption of saturated fats from all sources is associated with lower risk of coronary heart disease.

Fit dark chocolate into a balanced diet that is rich in fruits and vegetables, low in saturated fat and cholesterol, with calories adequate to promote a healthy body weight. The best bet is to enjoy small amounts of dark chocolate in place of other desserts.

#### References:

1. Wan Y, Vinson JA, Etherton TD, et al. Effects of Cocoa Powder and Dark Chocolate on LDL Oxidative Susceptibility and Prostaglandin Concentrations in Humans. *Am J Clin Nutr.* 2001; 74:576-602.
2. Keen CL. Chocolate: Food as Medicine/Medicine as Food. *Journal of the American College of Nutrition.* 2001; 20:5: 436S-439S.
3. Taubert D, Berkels R, Roesen R, Klaus W. Chocolate and Blood Pressure in Elderly Individuals with Isolated Systolic Hypertension. *JAMA.* 2003; 290(8): 1029-30.
4. Conner WE. Harbingers of Coronary Heart Disease: Dietary Saturated Fatty Acids and Cholesterol. Is Chocolate Benign Because of its Stearic Acid Content? *Am J Clin Nutr.* 1999; 70:951-2.

## Heart Healthy Recipe: Cocoa Banana Bread

2 large ripe bananas, mashed	2 Tbsp. cocoa
6 ounces plain non-fat yogurt	2 Cups flour
4 large egg whites	1/2 tsp. baking powder
1/2 Cup canola oil	1/2 tsp. baking soda

Note: For texture add chopped walnuts. For juicier bread add raisins or dried cranberries.

#### Nutrition Information:

Serving size: 1 slice	Calories: 150
Saturated fat: < 1g	Polyunsaturated fat: 2g
Monounsaturated fat: 4g	Cholesterol: 0 mg
Sodium: 75 mg	Fiber: 1g

1. Preheat oven to 350 degrees F. Use non-stick 8.5"x4.5" loaf pan.
2. Pour canola oil into a large bowl. Beat in egg whites one at a time on low setting.
3. Beat in yogurt, followed by mashed bananas.
4. Separately, mix flour, baking soda, baking powder and cocoa. Add slowly to wet ingredients.
5. When evenly blended, spoon batter into bread pan.
6. Bake for 1.5-2 hours, or until toothpick comes out clean. Let cool completely before slicing. Yield: 16 slices

Recipe By Heidi Mochari, RD

## Do's and Don'ts: New Prevention Guidelines for Women

### Do

- Assess overall level of risk in all women and categorize as high, intermediate, lower, or optimal risk.
- Encourage regular physical activity, smoking avoidance, weight management, and a heart healthy diet in all women.
- Prioritize risk-reducing interventions by strength of recommendation and level of evidence.
- Use pharmacotherapy in addition to lifestyle when blood pressure > 140/90 in all women.
- Use aspirin, beta-blockers, statins and ACE-inhibitors in all high-risk women unless contraindicated.

### Don't

- Use aspirin for prevention of CVD in low risk women.
- Use antioxidants for prevention of CVD.
- Use hormone therapy in postmenopausal women to prevent CVD.

#### Abbreviations

ACE = angiotensin converting enzyme  
CVD = cardiovascular disease  
HDL-C = high – density lipoprotein  
LDL-C = low – density lipoprotein

# Heart to Heart Patient Profile: Lifestyle Changes

Rosalie Sanderson of New York, NY



**M**rs. Sanderson is a 53 year-old woman referred for lifestyle risk factor management two years ago. Subsequently, she has lost 40 lbs, made heart healthy dietary changes and reached healthy cholesterol and blood pressure levels.

The following interview provides insight into how she became one of our “Heart to Heart” success stories.

**Q: What motivated you to improve your heart health?**

**A:** After struggling with my weight for 10 years and becoming familiar with the literature on prevention I realized I owed it to myself to take action. I met with a physician who clarified the goals I needed to meet to prevent heart disease.

**Q: What were the steps you took to improve your heart health?**

**A:** At my physician’s advice, I started exercising each day, at least 30 minutes/day and increased my fruit/vegetable, grain and fish intake while limiting saturated fat intake.

**Q: What helped you make heart healthy changes?**

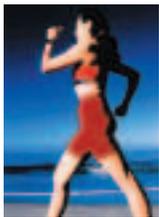
**A:** Being well informed by having a knowledgeable health care team. Believing nothing is impossible. Everyone faces challenges in making changes and meeting goals. The key is to develop realistic solutions to problems that arise and to ask for help when you are struggling and need motivation.

**Q: What barrier(s) did you face along the way and how did you overcome them?**

**A:** Staying committed. There were inevitable interruptions in my normal routine, such as a holiday, but planning for those are critical. I kept a journal to help me stay committed by recording my successes and setbacks. I learned to incorporate healthy choices as habits in my daily life. I start my day by taking 5 “mental minutes” to visualize the day because it keeps me focused. I reward myself for accomplishments, even small ones.

Interview By **Allison Linfante, MA**

## Prevention Practice Tools By Allison Linfante, MA



**P**hysicians play a critical role in helping patients reach recommended exercise goals. Physicians regularly should ask patients about what types of exercise and how much activity they are getting. Also, by providing a “prescription” for exercise it is more likely that patients will adhere to recommendations. Motivational tools can

be very helpful. A pedometer, a pager-sized device, can help track physical activity by monitoring total number of steps, distance in miles, average speed, average steps/minute, and calories burned. Pedometers, available at most sporting good stores, range in cost from \$10 for a simple pedometer to \$60 for a more sophisticated pedometer that can announce progress and play music. Using a pedometer may encourage some patients to walk their way to a more healthy and active lifestyle. Other techniques that may help

improve adherence to exercise are choosing enjoyable exercises and varying exercise routines so that they do not become boring. It is important to remember that some regular activity is better than a completely sedentary lifestyle and that for optimal prevention of heart disease, exercise should be part of an overall heart healthy lifestyle.

**U.S. Surgeon General Recommendation:  
Walk 10,000 steps a day for optimal  
health, reduction of chronic disease risk,  
and weight management.  
For more information visit  
[www.shapeup.org](http://www.shapeup.org)**

## Stopping Macrophage Death May Prevent Lesion Rupture (CONTINUED FROM P. 1)

Many believe that as plaque accumulates it closes off blood flow thereby causing a heart attack or stroke, says Dr. Tabas, but that is probably not the case since the vessel can expand and induce the formation of new vessels. The majority of ischemic cardiovascular events appear to be caused by much smaller plaques. These dangerous plaques tend to have a core that is rich with cholesterol and macrophages and to be covered by a thin, fragile cap that can break and cause the release of a number of pro-clotting factors into the blood. Within minutes of plaque rupture, a clot forms that may shut off blood flow to the heart or brain.

Cholesterol-loading and consequent death of macrophage cells appears to be a key sequence in the development of atherosclerosis.

New research has explored how excessive cholesterol may trigger the endoplasmic reticulum (ER) in macrophages to signal their own destruction. When researchers bred mice that had defective delivery of cholesterol to the ER, macrophages from these animals cultured in vitro survived, despite engulfing large amounts of the fat. Most importantly, when cholesterol delivery to the ER was blocked in a mouse model of advanced atherosclerosis, there was less lesional macrophage death and less lesional necrosis. These data may be used to develop novel therapies to prevent plaque rupture. The studies were published in *Nature Cell Biology* [2003; 5(9):781-92] and in the *Proceedings of the National Academy of Sciences* [2003; 100:10423-10428].