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# 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**



**INSIDE THIS ISSUE**

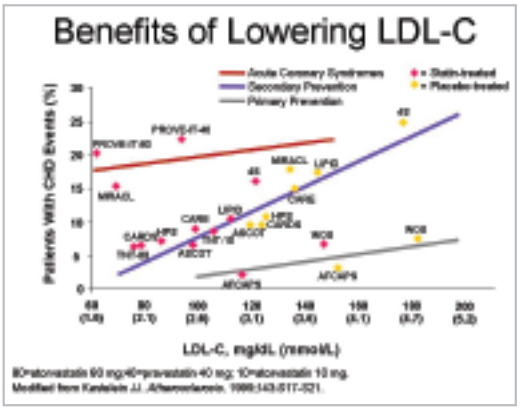


# Less IS More

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

The long awaited Treating To New Targets (TNT) study presented this spring at the American College of Cardiology meeting laid to rest the issue of whether lower is better when it comes to LDL cholesterol in patients with stable coronary heart disease (CHD). The study tested if LDL-C levels well below 100 had incremental benefit. The trial included 10,001 men and women aged 35-75 years with an LDL-C <130 mg/dL after a run in period. Subjects were randomized to atorvastatin 10 or 80 mg daily and were followed for an average of 5 years. There was a 22% reduction in major coronary events in the high dose group compared with the 10 mg dose. Of note was that the mean LDL levels were 77 mg/dL and 101 mg/dL in the 80 and 10 mg groups respectively. The incidence of side effects was low in both groups. Although there was not a significant reduction in total mortality with the higher dose statin, the study was not powered for all-cause mortality.

> "The TNT trial demonstrates the value of treating LDL cholesterol to well below 100 in patients with stable coronary heart disease, and supports recent recommendations to lower LDL targets to improve cardiovascular outcomes."
>
> ***Antonio M. Gotto, Jr., MD, DPhil***
> *Dean, Weill Cornell Medical College*




The TNT study extends findings from other studies in the acute event setting that pushing the LDL-C well below 100 has substantial clinical benefits even in a more stable CHD setting. Last summer an expert panel of the National Cholesterol Education Panel (NCEP) Adult Treatment Panel III recommended that clinicians consider targeting LDL-C to <70 mg/dL in high risk patients. The TNT study supports that recommendation and suggests that we do more than consider it. While it is always important to weigh risks of any medical intervention, it is also vital to take into account the risk of no action or undertreatment.

**References:**
1. LaRosa JC et al, N Engl J Med. 2005;352(14):1425-35.

# New Guidelines on Measuring Blood Pressure – Expanding the Doctor's Reach

**Thomas Pickering, MD**
*Director, Columbia Behavioral Cardiovascular Health and Hypertension Program*

The American Heart Association has just issued new guidelines this year on how blood pressure should be measured.[1] The major change from the last version in 1993 is that there is much greater emphasis on measurements made outside the doctor's office. In the last 10 years there has been a substantial amount of new information about the reliability of different ways of measuring blood pressure. Studies using 24 hour blood pressure monitoring have shown that the best way of predicting someone's risk of stroke and heart attack is the average level measured over the whole

CONTINUED ON P. 2

# Nutrition Myth of the Month:

## Diet and Blood Pressure – It's All in the Salt

*By* **Heidi Mochari, MPH, RD**

Not true.

Reducing daily sodium intake is an important dietary strategy for many persons with hypertension, but it is not the only one. Research from the Dietary Approaches to Stop Hypertension[1] "**DASH**-Sodium" trial provides evidence that when sodium intake is held constant, a diet such as the **DASH** Eating Plan, which emphasizes ***fruits***, ***vegetables***, ***low-fat dairy*** and ***reduced saturated fat***, will result in lower blood pressure levels compared with a typical American eating plan. The most significant reductions in blood pressure from the trial were evident when participants were consuming no more than 1,500 mg sodium per day and following the **DASH** Eating Plan.[2]

**A 2,000 calorie DASH Eating Plan consists of:**

| FOOD GROUP | AMOUNT |
|---|---|
| Grains | 7-8 servings daily |
| Vegetables | 4-5 servings daily |
| Fruits | 4-5 servings daily |
| Low Fat or Fat Free Dairy | 2-3 servings daily |
| Lean Meats, Poultry, Fish | 2 or less, 3oz. servings daily |
| Nuts, Seeds and Dry Beans | 4-5 servings per week |
| Heart Healthy Fats and Oils | 2-3 servings daily |
| Sweets | 5 servings per week |

**Some quick tips for patients during an office visit to help them adopt DASH principles into their lifestyles are:**

- Plan to have a fruit and/or vegetables as a part of **every** meal or snack.
- Many fruits and vegetables like carrots, grapes, and apple slices travel well. Pack them as a snack to avoid making poor food choices on the run.
- Try fat free yogurt with berries and high fiber cereal or a smoothie made from fruit and skim milk as a meal or a snack.
- Sprinkle unsalted nuts into salads for texture and taste instead of cheeses high in saturated fat.
- Read food labels before purchasing prepackaged foods. Choose foods labeled *sodium free, salt free, low sodium, very low sodium, reduced sodium or less sodium.*

For more information see http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm.


**References:**

1. National Heart, Lung, and Blood Institute; National High Blood Pressure Education Program Coordinating Committee. Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Hypertension. 2003 Dec;42(6):1206-52.
2. Sacks FM, et al. Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. DASH-Sodium Collaborative Research Group. N Engl J Med. 2001 Jan 4;344(1):3-10.


## New Guidelines on Measuring Blood Pressure – Expanding the Doctor's Reach (CONTINUED FROM P. 1)

24 hour period, and this technique is becoming the new "gold standard" for blood pressure measurement. It is not widely used however, and is somewhat inconvenient and relatively expensive. A cheaper and more convenient alternative is to use home or self monitoring with electronic devices that are now available at most drug stores. In patients with high blood pressure, both home monitoring and ambulatory monitoring tend to give blood pressure readings that are lower than readings taken by doctors, possibly because of "white coat" effect. In contrast, some patients have masked hypertension, when blood pressure is normal when taken by a doctor, but high at other times. Because this is associated with an increased risk of heart disease, it may be helpful to recommend patients be checked periodically outside the doctor's office.

Many doctors are now beginning to use all three methods of measuring blood pressure in their patients. The traditional clinic measurements are supplemented by ambulatory monitoring, which is mainly used to decide if someone really has high blood pressure or not. Home monitoring is a valuable adjunct to clinic measurements, and is particularly useful for monitoring the response to treatment. Most patients find it reassuring that their blood pressure is lower at home than in their doctor's office. For more information: www.americanheart.org


**References:**

1. Pickering TG et al. Circulation 2005;111:697-716

# Heart to Heart Patient Profile: Improving Cardiovascular Risk by Improving Compliance - *JL of Ponte Vedra Beach, FL*

*Interview By* **Allison Christian, EdD**

JL is a 58 year-old man who had an angioplasty in 1996 as a result of heart disease due to unhealthy lifestyle that included high blood pressure, undiagnosed diabetes, smoking, a high fat diet, and being overweight. After becoming aware of the need to modify his risk, JL has successfully complied with recommended medication and lifestyle regimens. The following interview provides insight into how he became one of our "Heart to Heart" success stories.

*Q: Upon recovering from an angioplasty, what changes did you need to make to reduce your risk?*

A: There were almost too many to list! Most importantly, I had to get my glucose, blood pressure, and cholesterol levels under control. In order to do so, my healthcare team recommended a new medication and lifestyle regimen.

*Q: What immediate actions did you take to comply with these recommendations?*

A: I developed and maintained a regular physical activity program. I restricted my caloric intake and portion size to lose unnecessary weight. I started taking blood pressure medications as recommended by my physician. I also quit smoking.

*Q: What helped you remain motivated to comply with your medications?*

A: I started monitoring my blood pressure and glucose levels at home. I could see differences when I skipped a medication dose so I realized that taking my medications exactly as prescribed was really helping me meet my goals.

For more information on monitoring your blood pressure at home, visit: *http://www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_Diagnosis.html*

For more information on monitoring your glucose/diabetes at home, visit: *http://www.diabetes.org/all-about-diabetes/diabetes-learning-center.jsp*

# Prevention Practice Tools: Improving Adherence

*By* **Allison Christian, EdD**

Despite the documented efficacy of nationally recommended prevention strategies to reduce cardiovascular disease many patients do not adhere to recommendations and do not reach target risk reduction goals. Compliance with medication and lifestyle recommendations can help maintain and improve health as well as manage symptoms and signs of disease. Compliance is a complex behavioral process that is influenced by variables related to the patient, healthcare provider, and health care system. As a healthcare professional, you can help improve compliance and optimize patient outcomes.

Healthcare professionals can improve patient compliance by identifying those at increased risk. Patient variables shown to predict non-compliance include:[1-2]

- Female gender
- Prior history of non-compliance
- Twice-a-day dosing/increased pill burden
- Existence of comorbidities
- Having a "good" perception of their health
- Not understanding the benefits of therapy

Healthcare professionals should consider including questions at routine visits to assess compliance and identify barriers that patients face in meeting prevention goals. At the NewYork-Presbyterian Hospital/Columbia Center for Heart Disease Prevention, all patients are asked at every visit, about adherence to therapy which is documented in the medical record.

Examples of questions used:

1. What percent of the time do you take your medications?
   Less than 80% 80% or more
2. What percent of the time do you follow a healthy lifestyle regimen?
   Less than 80% 80% or more

Physicians can help improve patient compliance by:[3-4]

- Using both verbal and written information to set simple, specific goals for the patient to meet before their next appointment
- Using tools such as reminder cards or personal contracts
- Coordinating a patient's medication/lifestyle regimen with recommendations from their other healthcare providers
- Scheduling frequent follow-up, and
- Using a systems approach to prevention. This approach involves forming a multidisciplinary healthcare team to provide patient education and follow-up


**References:**

1. LaRosa JH & LaRosa, JC. Arch Fam Med. 2000;9:1169-1175.
2. Dunbar J. In: Shumaker SA, Schron EB, Ockene JK, eds. The Handbook of Health Behavior Change. New York, NY: Springer Publishing Co Inc; 1990.
3. Houston-Miller N et al. Circulation. 1997;95:1085-1090.
4. Dunbar-Jacob J et al. Annals of Behavioral Medicine. 1995;17


# Did You Know? Facts On Medication Compliance

- Compliance during the first month of treatment has been found to be the most powerful predictor of long-term compliance.[1-4]
- Compliance has been shown to decrease over time.[5]
- Approximately 50% of people prescribed a lipid-lowering drug are taking it 6 months later, and 30-40% are taking it after 12 months even though it may take 6 months to 1 year before a benefit becomes recognized.[6]
- About one third or more of patients take prescribed doses of medication at intervals that frequently are longer than prescribed – often hours, sometimes days, occasionally weeks.[7]
- Increased pill burden is a predictor of non-compliance.[8]
- Non-compliance may often be the reason for lack of response to therapy.[9]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**Preventive Cardiology**

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