

Clinical Briefs in Primary Care™

The essential monthly primary care update

By Louis Kuritzky, MD

Supplement to *Clinical Cardiology Alert, Clinical Oncology Alert, Critical Care Alert, Infectious Disease Alert, Neurology Alert, OB/GYN Clinical Alert, Primary Care Reports, and Sports Medicine Reports.*

VOLUME 8, NUMBER 2

PAGES 3-4

FEBRUARY 2003

Stroke Reduction in Older Hypertensives with Abnormal Nocturnal Blood Pressure Dipping

Source: Hishide Y, et al. *Am J Hypertens.* 2002;15:844-850.

THE RELATIONSHIP BETWEEN adverse cardiovascular events and blood pressure (BP) is direct and linear. Numerous prospective randomized trials indicate that reduction of BP produces a substantial reduction in stroke, with less impressive benefits demonstrated for coronary heart disease (CHD) end points. Since most clinical trials have been based upon clinic or 'casual' BP measurements, rather than 24-hour monitoring (ABPM), we have much less information about whether specific attributes of BP during the circadian pattern variations are important indicators of cardiovascular risk. Some data have indicated that not only is ABPM a much more potent prognosticator for cardiovascular risk, but that specifically, persons whose blood pressure does not evidence the normal 10% or greater decline in the evening (so-called "non-dippers") are at substantially greater risk for target organ damage.

In this prospective study of elderly hypertensives (n = 811) who underwent ABPM, the cardiovascular end point effect of treatment upon nondipper hypertensives was much more dramatic than on dippers (ie, 'normal pattern'). Additionally, individuals who were determined to be 'white-coat' hypertensives by ABPM did not show the beneficial reduction of CV end points as seen in nondippers.

Increasing application of ABPM may help discern high-risk HTN groups most likely to benefit from intervention. ■

Primary Prevention of Hypertension

Source: Whelton PK, et al. *JAMA.* 2002;288:1882-1888.

ACCORDING TO JNC VI REPORTING, AS many as 43 million adults in America have hypertension (HTN), defined as blood pressure > 140/90. Although treatment with a variety of agents has been shown to reduce cardiovascular morbidity and mortality, effective primary prevention would be a more desirable goal. The National High Blood Pressure Education Program Coordinating Committee has provided evidence-based recommendations for primary prevention of hypertension in this communication.

The interventions documented to be efficacious in prevention of HTN include weight loss, reduction in dietary sodium, moderation in alcohol, increased physical activity, increased dietary potassium, and adherence to a DASH type diet.

Specifically, the interventions recommended include maintaining BMI < 25, keeping dietary sodium to < 2.4 g daily, engaging in at least 30 minutes of vigorous activity (such as brisk walking) most days of the week, limiting daily alcohol to 30 mL of ethanol (or the equivalent) including at least 3500 mg/d of dietary potassium, and following a diet that is rich in fruits, vegetables, and low-fat dairy products, but modest in saturated and total fat.

Blood pressure reductions from these

interventions may be as large as those seen with pharmacotherapy for HTN, and have been demonstrated to be sustainable. ■

Effect of Aggressive Screening and Treatment on Prostate Cancer Mortality

Source: Lu-Yao G, et al. *BMJ.* 2002;325:740-743.

THERE REMAINS A GREAT DEAL OF heated debate about the appropriate use of PSA screening amongst asymptomatic men. Although mortality for prostate cancer has declined since the mid-1990s, it remains uncertain whether this favorable outcome is indeed attributable to enhanced screening. Insight about the relationship between prostate cancer mortality and screening may be gained by comparing two different populations of men who underwent different patterns of PSA screening. During the 1987-1990 time period, men in the Seattle-Puget Sound region (n = 94,000) were more than 5 times more likely to undergo PSA testing than men in Connecticut (n = 120,000). Correspondingly, biopsy rates in the West Coast population were more than twice that of the East Coast population.

Over an 11-year follow-up, there was no discernible difference in prostate cancer mortality between the 2 populations. In ensuing years, the prostate cancer screening rates became much more similar. The men in these analyses were all 65 years or older, hence applicability for younger men is uncertain. Nonetheless, the mortality of prostate cancer effects mostly men older than age 70, so the

age of this group matches the demographic consequences of the disease. This study suggests that more avid PSA screening may not reduce prostate cancer mortality. ■

Diuretics, Mortality, and Nonrecovery of Renal Function in Acute Renal Failure

Source: Mehta RL, et al. *JAMA*. 2002;288:2547-2553.

DIURETICS ARE COMMONLY USED IN the setting of acute renal failure (ARF), based upon premises that they will reduce volume in extracellular volume overload and may convert oliguric ARF to nonoliguric ARF. To date, no randomized clinical trials have confirmed anticipated benefits in survival or restoration of renal function as a result of diuretic treatment. Mehta and associates postulated that diuretics in ARF would actually increase mortality and forestall recovery of renal function, and they studied critically ill ARF patients (n = 820) at 4 teaching hospitals. ARF was defined as BUN > 40 mg/dL, creatinine > 2.0 mg/dL, or an increase

of creatinine > 1 mg/dL over baseline.

Using a covariate-adjusted model, diuretic use was associated with a 68% increase in in-hospital mortality, and a similar (77%) increase in likelihood of death or nonrecovery of renal function. Diuretics used included furosemide, bumetanide, metolazone, and HCTZ, with no demonstrable differences in outcomes dependent on any particular agent, whether used as monotherapy or combination therapy. Patients who were least responsive to diuretics (in terms of urinary output) were disproportionately at risk for adverse outcomes. Mehta et al posit that delay in using dialysis, while medical (diuretic) therapy is used, may indeed be injurious; they further suggest that diuretics, though not yet conclusively proven to be harmful by this single trial, are unlikely to provide benefit in the setting of ARF among critically ill patients. ■

Nut and Peanut Butter Consumption and Risk of DM-2 in Women

Source: Jiang R, et al. *JAMA*. 2002;288:2554-2560.

RECENT TRIALS HAVE CONFIRMED that both pharmacologic treatment (acarbose or metformin) and lifestyle intervention (weight loss and exercise) may prevent onset of type 2 diabetes (DM-2) in high-risk individuals. Recent data suggest that it is the type (saturated vs unsaturated) rather than the total fat percentage of diet that better predicts risk of DM-2. Higher intake of saturated fat and transfat negatively affect both glucose metabolism and insulin resistance. Since nuts contain primarily unsaturated fats, as well as fiber, magnesium, vitamins, minerals, and antioxidants, they theoretically provide a dietary substance that could favorably affect likelihood of developing DM-2.

To study the relationship between nuts and DM-2, Jiang and associates evaluated the participants in the Nurses Health Study (n = 121,700 women). Information collected on these women includes family history of diabetes, body weight, smoking, and physical activity; additionally, dietary questionnaires quantitated intake of nuts, dividing inquiry into peanuts, nuts, and peanut butter.

Women in the highest quartile of nut ingestion (at least 5 times weekly) when com-

pared with those who almost never consumed nuts (lowest quartile) demonstrated an age-adjusted 0.55 relative risk (RR) for DM-2. A similar comparison specific to peanut butter showed an RR of 0.79 comparing quartile 1 to quartile 4. Because there has been some concern that increasing nuts in the diet might worsen weight management issues, the fact that this study found that ingestion of nuts in the highest quartile was not associated with significantly greater weight gain than those eating nuts less frequently is reassuring. When coupled with the epidemiologic studies suggesting favorable effects of nuts upon lipids and coronary heart disease, this study provides increasing impetus for clinician endorsement of nut consumption. ■

Optimal Diets for Prevention of CHD

Source: Hu FB, Willett WC. *JAMA*. 2002;288:2569-2578.

THE CLASSIC DIET-HEART HYPOTHESIS postulates that dietary saturated fat and cholesterol are causally associated with coronary heart disease (CHD). Though the evidence for this hypothesis is sufficiently compelling that few clinicians debate its veracity, other components of diet, or their effects in concert, may be equally pertinent to the development of CHD.

A MEDLINE search produced 147 trials assessing diverse dietary factors, which indicated that omega-3-fatty acids, trans-fatty acids, carbohydrates, glycemic index, fiber, folate, individual foods (eg, nuts), and specific dietary patterns demonstrate a relationship with cardiovascular disease. From these data, several strategies, in addition to cholesterol reduction, are well substantiated to be associated with lesser risk of CHD: substitution of unsaturated fat (especially polyunsaturated) for saturated fat, reduction of transfatty acids, increases of omega-3 fatty acids (ie, from fish oil or plant sources), and a diversified diet which includes high intake of fruits, vegetables, nuts, and whole grains (low in refined grains). Despite the fact that common practice for management of obesity, an important contributor to CHD, suggests restriction of dietary fat to < 30% of total energy intake, the data to support such intervention are lacking. Rather, it may be more prudent to focus upon the favorable dietary characteristics detailed above, contained within a moderately hypocaloric diet. ■

Clinical Briefs in Primary Care™ is published monthly by American Health Consultants. Copyright © 2003 American Health Consultants. **Vice**

President/Group Publisher: Brenda Mooney. **Editorial Group Head:** Glen Harris. **Editor:** Stephen Brunton, MD. **Managing Editor:** Robin Mason. **Assistant Managing Editor:** Rob Kimball. **Senior Copy Editor:** Christie Messina

This is an educational publication designed to present scientific information and opinion to health professionals, stimulate thought, and further investigation. It does not provide advice regarding medical diagnosis or treatment for any individual case. It is not intended for the layman.

Subscriber Information

Customer Service: 1-800-688-2421

E-Mail Address: robert.kimball@ahcpub.com

World Wide Web: <http://www.ahcpub.com>

Address Correspondence to: American Health Consultants 3525 Piedmont Road, Building Six, Suite 400 Atlanta, GA 30305.

THOMSON
★
AMERICAN HEALTH CONSULTANTS