Chair’s Report
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The NPAM Council now has more than 1,000 members. At the recent spring meeting the Leadership Committee reviewed the current NPAM agenda and discussed the following major issues.

The American Heart Association has launched a most important initiative on childhood obesity. Drs. Rose Marie Robertson, the association’s chief scientific officer, and Robert Eckel, its president-elect, reviewed the key features. They told us that the association has recruited former President Bill Clinton and Arkansas Gov. Mike Huckabee to be spokespersons for this initiative. The NPAM Leadership Committee noted with pride that the concept of the obesity initiative originated in the NPAM Council. Further, the NPAM Council expects to serve in a critical advisory role on the initiative, which will be looking at several areas: healthcare providers, the physical activity industry, consumers (including children), media, the food industry and restaurants. Also, in the obesity area, NPAM members contributed importantly to the association’s weight-loss cookbook, “The No-Fad Diet.”

NPAM members are currently working on several scientific papers that will be published in American Heart Association journals. Among these are a position paper on metabolic syndrome (with NHLBI), new dietary guidelines, obesity and youth, exercise and acute CV events, dietary approaches to hypertension, physical activity promotion in schools, a position statement on diabetes and CVD, clinical guidelines for children and adolescents, and population-based prevention of obesity.

Our council just participated in the Spring Scientific Session. This meeting session was held in conjunction with two other councils: Epidemiology and Prevention, and Arteriosclerosis, Thrombosis, and Vascular Biology. In the spring of 2006, these other two councils will hold separate meetings, and NPAM members are encouraged to attend one or both. NPAM will have a representative on the program committees for both meetings. In addition, NPAM will have a strong presence at November 2005 Scientific Sessions to be held in Dallas. Several programs proposed by the Program Committee of NPAM were selected for Sessions. Finally, on Jan. 18–19, 2006, NPAM will sponsor a conference on obesity to be held in Washington, D.C. The council leadership would welcome suggestions for topics for programs at either Scientific Sessions 2006 in November or the Spring meetings 2006.

Although NPAM membership is slowly growing, it is still one of the smaller scientific councils in association. We need to expand our membership. I would like to ask each of you to assist in recruiting new members, either at the professional or regular level. If you will identify potential members and let them know that NPAM activities are on the cutting edge of the current American Heart Association agenda, you may convince them that joining NPAM not only brings benefits to themselves, but more importantly, gives them the opportunity to serve the American public in a larger way than they can do in their personal professional activities.

Lifestyle Interventions to Treat Metabolic Syndrome: The Role of the Physician and Other Health Care Professionals
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Current recommendations for the prevention and treatment of metabolic syndrome (MetS) feature a multi-faceted lifestyle modification approach. Approximately 47 million U.S. residents have MetS (1). It is estimated that the MetS will soon surpass cigarette smoking as the number one risk factor for cardiovascular disease (CVD) in the U.S. population (2). Individuals are diagnosed with MetS when they present with three of the following five risk factors: 1) abdominal obesity (waist circumference > 102 cm for males, > 88 cm for females); 2) elevated triglycerides (≥150 mg/dL); 3) low HDL-cholesterol (< 40 mg/dL for men, < 50 mg/dL for women); 4) hypertension (≥130/85 mm Hg); and 5) elevated fasting glucose (≥110 mg/dL). The Framingham Offspring-Spouse Study and the CARDIA (Coronary Artery Risk Development in Young Adults) Study reported significant relationships between habitual dietary patterns that included the frequent consumption of “empty calories” and fast-food choices (likely low-nutrient-dense foods) and MetS risk (3, 4). Lifestyle recommendations for the treatment of MetS need to focus on behavioral interventions that target multiple risk factors. The Diabetes Prevention Program (DPP) was a large (n=1711) and intensive lifestyle intervention (mean follow-up of 3.2 years) designed to achieve and maintain both a 7% weight loss and 150 minutes of exercise per week (5). The DPP is just one example of many interventions that have been successful at reducing multiple risk factors with intensive lifestyle modification. PREMIER (A Trial of Lifestyle Interventions for Blood Pressure Control) was a large (n=810) 6-month multi-center clinical trial designed to test the effectiveness of a multicomponent behavioral intervention on blood pressure in individuals with stage-1 hypertension (6). Individuals in the most intensive group received behavioral interventions to promote weight loss, sodium reduction, increase physical activity, limit alcohol intake and implement the DASH diet. Following 6 months of this intensive behavioral intervention, the prevalence of hypertension decreased from 38% to 12% (p=0.01) compared to the control group that received advice only. Smaller clinical trials also have demonstrated a significant reduction in CVD risk in obese, sedentary, postmenopausal women (7), and in a metropolitan community setting (8). In one study women were randomly assigned to receive either a lifestyle change intervention or a lifestyle change intervention with the addition of self-control skills training (7). Following 6 months of intervention, both groups significantly increased their physical activity, cardiorespiratory fitness, reduced their body weight and blood pressure levels and improved their lipid profile (p<0.05). The addition
of self-control skills did not provide any additional benefits to the lifestyle change intervention. In another study participants attended a 40-hour educational course for 4-weeks (8). During the classes the importance of making healthful lifestyles choices and strategies to improve nutrition and physical activity were discussed. Following the intervention individuals improved their health and nutrition knowledge, leading to decreases in percent body fat, total and LDL-cholesterol, and blood pressure. Collectively, these studies provide evidence for the effectiveness of short-term comprehensive lifestyle interventions that include behavioral counseling and educational classes, to reduce CVD risk. While the intensive lifestyle intervention used in the DPP successfully decreased the incidence of both type 2 diabetes and MetS over a three-year period, further studies are needed to identify strategies that will be effective in promoting long-term successful behavior change for reduction of multiple risk factors. For individuals who have multiple risk factors, the implementation of a single strategy that targets reduction of several risk factors at once is a treatment approach that should be considered at the outset. Recommending just one or two changes initially will be perceived as manageable and not overwhelming, particularly for older population groups (9). Successful implementation of one or two behavior changes can be followed by an individualized stepwise approach for implementing additional strategies that impact multiple risk factors. For example, once an individual feels comfortable with dietary modifications such as reductions in saturated fat and/or portion sizes, they may be ready to add 30 minutes of physical activity to their daily routine. Several behavior change strategies that have proven to be successful include tailored behavioral counseling (10), goal setting (11, 12), self-monitoring through lifestyle diaries (13), and ‘coaching’ via regular phone calls and mailings (14). Results from an analysis of 15 NIH-funded behavior-change projects indicate that successful intervention strategies include the use of self-regulatory skill training (i.e., goal-setting, self-monitoring, the use of feedback and social support, relapse prevention or preparation training) with continuous social support and guidance from a trained professional (15).

Many effective behavior change models have been established. However, health care professionals must select programs that are most appropriate for individual patients. For example, while some individuals may require extensive social support from many health care professionals, including physicians, others may have a strong social support system within their home that they can rely on to assist them. Although current treatment guidelines recommend major risk factor modifications, many patients with established CVD do not remember receiving any information about the management of their risk factors (16). Moreover, a survey of residents and their attending physicians revealed that physicians often do not recommend behavior-change strategies, and few physicians feel effective in their counseling of smoking, physical activity, nutrition, and weight reduction (17). Despite these apparent gaps in the interactions between patients and physicians, research indicates that there is a positive correlation between effective physician-patient communication, improved patient care outcomes (18), the implementation of dietary changes (19), and patients’ adherence to lifestyle changes (20). Primary care physicians should thus be encouraged to initiate behavior change strategies in the primary care setting (21). Rather than focusing on the short-term, physicians should employ long-term management and prevention strategies (22). One counseling approach that is often used by physicians in prescribing and implementing behavior change utilizes the 5 ‘A’ factors: Assess, Advise, Agree, Assist, and Arrange follow-up (23). This approach enables other members of the health care team to assist patients in lifestyle modifications to decrease risk of chronic disease. This may include follow-up with a registered dietitian for comprehensive nutrition counseling, and/or a registered nurse who could provide additional advice and assurance. The following is an example of the 5 ‘A’ model:

**A Patient at High Risk for CVD with MetS**

**Assess:** A 57-year-old Caucasian male has been diagnosed with MetS. His blood pressure is 142/96 mmHg; waist circumference 42 inches; fasting glucose 89 mg/dL; and lipid profile (mg/dL): TC: 230, LDL-C 151, HDL-C: 39, TG: 202. He is sedentary and a nonsmoker. **Advise:** Although major lifestyle changes are indicated for this patient, he is the type of individual who easily will become overwhelmed with many recommendations. Thus, it is important to discuss a single intervention strategy with the patient that can affect multiple risk factors. For example, weight loss would have a significant effect on his abdominal obesity, leading to an improved lipid profile, reduced blood pressure, and improved insulin sensitivity. **Agree:** When first making recommendations it is important to discuss the different possibilities with the patient and, in a patient-physician partnership, agree on an initial intervention that will be most effective. The following interventions would favorably affect the patient’s risk status. Dietary recommendations to reduce saturated fat would not only decrease the calories in the diet but also would decrease LDL-C. Advice to increase fruits and vegetables in the diet (and replace energy-dense, low-nutrient foods) is a strategy that will decrease calories as well as energy density of the diet, thereby facilitating calorie reduction. The inclusion of a variety of fruits and vegetables as recommended by the DASH diet plan also would reduce blood pressure. Overall, a reduction of 10 lbs will elicit a 5–8% reduction in LDL-C, and a 3–10 mmHg reduction in systolic blood pressure. Once these dietary changes are implemented, a program of physical activity should be prescribed. The inclusion of at least 30 minutes of moderate to vigorous intensity physical activity on most, if not all days of the week would facilitate maintenance of a reduced body weight, and favorably affect the lipid profile via an increase in HDL-C and a reduction in TG, and decrease blood pressure. **Assist:** Patients vary in the amount of assistance they require to successfully implement behavior changes, and contributions from other health care professionals such as registered dietitians, nurses, and/or exercise physiologists will benefit compliance. Patients may be encouraged to attend group educational classes or meet with one of these health professionals in a one-on-one setting for comprehensive counseling and individualized recommendations. **Arrange follow-up:** For many individuals, regular follow-up provides a sense of accountability.
This follow-up may be as simple as monitoring the lipid profile, or more involved such as completion of daily food logs that are reviewed with a registered dietitian. The most important point, however, is that physicians need to constantly follow-up with patients in terms of lifestyle behaviors during regular office visits.

Summary

The treatment of MetS requires interventions that target multiple risk factors, including body weight, insulin resistance, dyslipidemia, and hypertension. Lifestyle interventions play an important role in the management of MetS. Primary care physicians have a unique opportunity to intervene in a one-on-one setting and advise patients on an individual basis. When making recommendations, lifestyle recommendations must be individualized. Single interventions that focus on multiple risk factors should be the first step in risk reduction. Additional changes should then be gradually implemented with the assistance of other members of the health care team to achieve optimal reduction in risk. Physicians and other health care professionals are encouraged to actively participate in educating and reinforcing lifestyle interventions in patients with MetS.

References


