Weight Management and
Healthy Nutrition

Scientific evidence on the health hazards of obesity continues to mount. Higher body mass index (BMI) is not only a major risk factor for diabetes, cardiovascular disease, cancer and premature death but is also implicated as a cause of OA, particularly of the knee.68,69 People who maintain a healthy weight are less likely to develop symptomatic knee OA as they age and therefore less likely to need major surgical procedures to treat OA symptoms.70–72 Being overweight can increase pressure on weight bearing joints and thereby increase pain and inflammation associated with OA. When present in knee and hip joints, OA has a greater clinical impact than when it affects other joints.74

The problems of overweight and obesity increasingly begin at a very young age. The prevalence of obesity among children aged 6 to 11 has more than doubled in the past 20 years, and the rate among adolescents aged 12 to 19 has more than tripled.75,76,77,78 Obese youth are at increased risk for bone and joint problems79,80,81 and are more likely than their peers with normal weights to become overweight or obese adults. As they age, they are at far greater risk of experiencing associated adult health problems, including OA.82,83

Although the role of excess weight as a contributor to the progression of OA remains unclear, modest weight loss among people with knee OA has been shown to produce meaningful improvements in physical function, self-reported disability, pain symptoms and quality of life. Overweight and obese adults with knee OA who lose just one pound gain a four-fold reduction in knee joint load.84 These findings underscore the potential public health importance of implementing appropriate weight management approaches for the prevention and treatment of knee OA, while at the same time suggesting the wisdom of weight management for people with OA in other joints.

Nutritional factors may also play a role in development, progression and management of OA but solid evidence of their impact remains elusive. While research efforts continue, people with OA can benefit from the current dietary recommendations85 for all Americans to promote health and prevent chronic conditions. Note that in 2010, new Dietary Guidelines for Americans will be released.

Endorse National Obesity Policy
A variety of policies and initiatives exist to prevent or reduce overweight and obesity among all age groups, including the landmark document the Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity along with the recently released Recommended Community Strategies and Measurements to Prevent Obesity in the United States: Implementation and Measurement
Guide. Full implementation is essential, with attention to people with OA as part of a comprehensive approach to prevent serious health consequences of obesity.

In addition, increased awareness and education about the role of overweight and obesity in causing or exacerbating OA should be on the agenda of policy and decision makers who influence school and worksite wellness and community or environmental planning.

- We must implement the recommendations of the Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity and the Recommended Community Strategies and Measurements to Prevent Obesity in the United States: Implementation and Measurement Guide that impact the health of people with or at risk for OA.

- We must promote policies, initiatives and state and national partnerships to help all people achieve and maintain a healthy weight, thereby potentially reducing the risk for developing OA and possibly reducing the burden of OA for those who do develop it.

Promote Dietary Guidelines
The Dietary Guidelines for Americans are the standard from which public policy and guidance related to nutrition, diet and health are developed. These guidelines are based on a comprehensive review of diet and health and provide science-based advice to promote health, reduce the risk of chronic conditions and improve health in individuals who have already developed risk factors or conditions. Furthermore, policies requiring access to healthy food choices and information about nutrient content of foods support health goals for people with OA.

As previously mentioned (in the Physical Activity section), CDC recently initiated MAPPS Interventions, a major new chronic disease initiative for evidence-based policy and environmental change related to obesity, physical activity and nutrition. These efforts should include actions that reach populations with OA so that they adopt healthy choices as lifelong behaviors. (For more information on MAPPS, see www.cdc.gov/nccdphp/recovery.)

- We must support widespread adoption of the Dietary Guidelines for Americans by all Americans with OA and support continued attention to consideration of the relationship of nutrition and dietary components and OA in future editions of the Guidelines.

- We must promote policies, initiatives and state and national partnerships to help all people achieve and maintain a healthy diet, thereby potentially reducing their risk for obesity and related OA risks.

Support Worksite Interventions
The Guide to Community Preventive Health Services recommends worksite interventions combining nutrition and physical activity to control obesity and overweight. These guidelines should be fully implemented.

- We must support worksites that offer onsite physical activity, nutrition and weight management classes or counseling as well as reimbursement and incentives for participation in offerings from external sources with information, technical support, and recognition.
Enhance Environment Support for Healthy Weight

Environmental modifications are needed to improve nutrition, increase opportunities for physical activity and participation, and support zoning and community planning policies that link energy intake and energy expenditure to the built environment.

We must accept and implement built-environment, land use and design policies, and other policy and environmental changes proven to increase physical activity and access to healthy foods, such as those found in the Guide to Community Preventive Services, and other evidence-based sources, since these population-based approaches also impact people with OA.

Address Nutritional Supplements

Nutritional supplements are often used by people with OA but current scientific evidence does not support recommending specific nutritional supplements to effectively prevent or manage OA. When considering recommendations related to dietary supplements, current lack of reliable consumer information and the resulting safety risks need to be clarified. Supplements currently available and those that will be developed should be evaluated for their effects on relevant OA outcomes so that the best recommendations regarding effectiveness, safety, acceptability and cost can be determined.

We must promote policies related to evaluation, monitoring and dissemination of reliable consumer information regarding the safe and efficacious use of dietary/nutritional supplements.
Key Research Priorities

- Further identify the optimal amount of weight loss needed to produce improvements in clinically-relevant and patient-oriented OA outcomes in overweight or obese individuals with OA.

- Increase our understanding of the extent to which attenuating weight gain through appropriate weight management strategies may aid in the prevention of OA.

- Develop a more comprehensive understanding of the efficacy of behavioral strategies that will promote successful long-term weight management in persons with or at risk for OA.

- Clarify the role of specific dietary components and nutritional supplements in the prevention and management of OA.