

NUTRI-NET NEWS

April 1999

MEDIA MATTERS

This newsletter is a service of the Nutrition Education Network of Wisconsin, funded by a grant from the Food Stamp Program, Food and Nutrition Service, United States Department of Agriculture, and administered through the University of Wisconsin-Madison. It is designed to enhance coordination and communication among agencies and organizations that educate Wisconsin's low income individuals and families about nutrition and food.

Nutri-Net News shares brief information about programs and materials that support healthful and enjoyable eating.

What Behaviors Predict Fruit and Vegetable Consumption?

Trudeau E, Kristal AR, Li S, Patterson RE, *Journal of the American Dietetic Association*, December 1998, p. 1412-1417.

Food choices are the result of a complex interaction between sociodemographic, psychosocial, and environmental factors. Taste preferences, cost, and availability are related to fruit and vegetable consumption. In addition, most studies find positive associations of nutrition knowledge, self-efficacy, belief in a relationship between diet and health, and stages of change with fruit and vegetable intakes. However, the following study looked at fruit intakes separately from vegetable intakes. Utilizing data from the Washington State Cancer Risk Factor Behavior Survey (1995-1996), the researchers examined whether there are differences between the demographic and psychosocial correlates of fruit and vegetable intakes. Major findings from the study are highlighted below:

Demographic characteristics and BMI: Higher vegetable consumption was associated with increasing age, being married, and increasing

years of education. Associations of demographic characteristics with fruit intake were markedly different by sex. Among men, only education was positively associated with fruit consumption. Among women, fruit intake was positively associated with education and age and inversely associated with BMI.

Health status and health-related behavior: Respondents who perceived their health to be very good or excellent ate more servings of both fruits and vegetables than those with perceived poor or fair health. Regular exercise, supplement use, and reading food labels were also positively associated with fruit and vegetable intakes. (Results for men and women were combined, because there were no significant differences in associations.)

Subscription Information

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❑ **Psychosocial factors:** Beliefs, barriers, and stages of dietary change were significantly associated with both fruit and vegetable intakes, but the relationships were stronger for fruit intake than vegetables. Among the intrinsic motives, e.g., to stay healthy, to prevent cancer or other serious illness, or to feel better, the strongest relationship was to prevent cancer or other serious illness. Extrinsic motives, e.g., to control a medical problem, so that people will stop nagging me, or because my physician told me so, were not associated with fruit and vegetable intakes.

The results of this study suggest that intrinsic motives, and in particular, motives to stay healthy, are key components for successful nutrition interventions. Nutrition interventions may be more effective, at least among white adults in Washington State, in increasing intakes of fruits compared with vegetables. The authors suggested that nutritionists specifically address vegetable consumption, rather than providing an undifferentiated 5-A-Day message. Consumers may benefit from targeted education that focuses on vegetables during meal planning, shopping, and preparation.

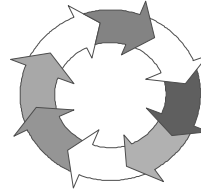
Use of Transtheoretical Model of Change to Successfully Predict Fruit and Vegetable Consumption.

Duyn MS, et al *Journal of Nutrition Education*, November-December 1998, pg. 371-380.

The transtheoretical model, otherwise known as the Stages of Change model, is becoming increasingly popular in attempts to improve health behaviors. DiClemente and Prochaska based the model on the assumption that people are at different stages of readiness to change a particular health-related behavior.

The 5 basic stages of change are:

1. Precontemplation: no intention of change.
2. Contemplation: seriously thinking about change.
3. Preparation or decision: planning to change.
4. Action: actively involved in behavior change.
5. Maintenance: sustaining behavior change.



The process is actually seen as cyclical rather than linear. An individual may relapse and re-enter at various points in the change process.

Stages of Change model has proven useful in changing health behaviors such as smoking cessation. It is now being used in the field of nutrition, particularly with weight loss, fiber intake, and fat reduction. For example, Auld, Nitzke, et al (1) classified adults into the five stages of change based on attitudes, knowledge, and dietary intakes of fat and fiber. They found that 45% of their participants were in the action/maintenance stages for fat and 38% for fiber. Their primary influence on their diet was concern for health. For precontemplators and contemplators, the primary influence on their diet was their personal food preferences and cooking skills. Females, older adults, and more highly educated people were more likely to be in higher stages.

Duyn et.al also used the Stages of Change model to predict dietary behaviors, specifically fruit and vegetable consumption. Using the data from the 1991 5- A-Day baseline survey of 2811 respondents, researchers examined the associations between stages of change, fruit and vegetable intake, and demographic and psychological factors.

Results of this analysis:

❑ **Stage of change was correlated with fruit and vegetable intake:**

Individuals in the maintenance stage reported the highest intakes of fruits and vegetables and met the national daily recommendations of 5 or more fruits and vegetables per day. Those in the action stage reported intakes that approached this level. Individuals in the precontemplative, contemplative, and preparation stages reported intakes of less than 3 total fruits and vegetables per day.

❑ **Knowing the recommended number of fruit and vegetable servings was associated with stages of change and increased fruit and vegetables consumption.**

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Precontemplators not only consumed fewer fruits and vegetables, but were the least knowledgeable about the number of servings of fruit and vegetables one should eat for good health; 80.5% believed that 2 or fewer servings of fruit and vegetables were sufficient. Out of this group, 47.5% thought that one or fewer servings were adequate.

□ **Stage of change was correlated to demographic, psychosocial, and lifestyle behaviors.**

Individuals in the maintenance stage for increased fruit and vegetable intake were associated with being female, being older, having more formal education, being non-smokers, being more likely to have made it a habit to eat lots of fruits and vegetables since childhood, and enjoying the taste of fruits and vegetables. The differences between groups in race/ethnicity and income level were less marked.

What does this mean for nutrition educators?

Understanding the demographic, psychosocial and lifestyle behaviors of the different stages can aide in the development of targeted messages. Using behaviors and attitudes of individuals in the maintenance stage can also provide insight into how people successfully make and maintain dietary changes.

Precontemplators, contemplators, and preparers may need messages that are tailored toward a younger, less literate audience that may not know the daily recommendations, have not made it a habit to eat fruits and vegetables, and may not enjoy the taste of them. Curriculum should emphasize the need to eat 5 or more servings of fruits and vegetables for good health, the benefits of incorporating fruits and vegetables early into their children's lives, and the enjoyable flavors fruits and vegetables can bring to a meal.

(1)Auld GW, Nitzke SA, et al. A Stage of Change Classification System Based on Actions and Beliefs Regarding Dietary Fat and Fiber. Am J Health Promot 1998;12(3):192-201



Tools of the Trade

A New Angle on the Pyramid

With Year 2000 in our near future and the next revision of the Dietary Guidelines coming due, some nutrition experts are voicing concerns about past dietary recommendations.



The Produce for Better Health Foundation (PBH) has recently testified before the U.S. Dietary Guidelines Advisory Committee, asking it to update national nutrition policy to recommend fruits and vegetables as the *core* of American's diets in the new Dietary Guidelines for Americans. They also provided a petition signed by hundreds of researchers and health organizations such as the American Cancer Society, AARP, American Diabetes Association, and others.

The petition read:

“An overwhelming body of evidence strongly supports increased consumption of fruits and vegetables to reduce the risk of chronic diseases, including but not limited to many types of cancer, heart disease, and stroke....We strongly urge the Year 2000 Dietary Guidelines Advisory Committee to position fruits and vegetables, in addition to other plant-based foods, as the core of America's diet and facilitate educating Americans to make fruits and vegetables the center of their plate.”

PBH also stated that many of us have a diet deficient in fruits and vegetables. One particular meal-time is breakfast. Only 10% of the foods consumed at breakfast are fruits or 100% juices. Adults are twice as likely to start the day with coffee than 100% juice.

For more information about PBH and fruit and vegetable consumption visit <http://www.5aday.com>

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Network Update

Network subcommittees have been busy preparing for the social marketing campaign that will be piloted in Dane and Rock counties in September and October 1999. The campaign's objective is to influence caregivers of children (preschool through eighth grade) who are food stamp eligible to include fruit and/or fruit juices as part of their breakfast with the intent of good role modeling. The target audience includes parents, grandparents, child care providers, and other caretakers of children. The evaluation committee is defining the campaign's evaluation objectives and procedures.

The Network's social marketing committee, in partnership with a private marketing consultant and graphic artist, are developing the format of the campaign. It will consist of two main elements: 1.) An awareness building component, which will use social marketing techniques to convey the theme -- **"Jump 'n Jive...Days Come Alive With Fruit."** and 2.) A local education component that complements the social marketing message. For example, while billboards, newsletters, and school lunch menu backs are being used for building awareness, nutrition educators in WNEP, WIC, Elderly Nutrition, schools and Head Start will be reaching the target population with the same message through their nutrition activities. A planning and training workshop for the local educators is being planned for May 21, 1999.

Network Update

The Resource Guide Committee is expanding the Network's web page to include information on general nutrition and healthy eating in addition to fruits, vegetables and breakfast topics. UW - Extension, The Bureau on Aging, and Nutrition Education Training (NET) Program materials are already posted. WIC resources are in the process of being added.

Check out our web site at:

<http://nutrisci.wisc.edu/nutrinet/index.html>



OUR MISSION:

The Nutrition Education Network of Wisconsin facilitates collaborative planning of nutrition education programs at the state and local levels. We promote healthful and enjoyable eating so that Wisconsin's low income individuals and families receive consistent, positive, relevant, accurate, and effective nutrition messages.

Nutri-Net News is one way that the Network shares information and resources to accomplish this mission.