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Congressman Baca and Congressman Fortenberry, thank you for this opportunity to testify about the important issue of obesity, chronic diseases, and nutrition. My name is Dr. Amy Yaroch and I am the Executive Director of the Center for Human Nutrition in Omaha, Nebraska. I am here as a public health nutrition researcher and also as a mother of two young children, who I would like to protect in the battle against obesity and related chronic diseases. I just moved to Nebraska about four months ago and before that, I was a Project Officer at the National Cancer Institute, part of the National Institutes of Health in Bethesda, Maryland. I am going to talk both about my experiences as a researcher as well as a Project Officer.

Obesity, which has steadily been on the rise over the past 30 years is associated with several debilitating chronic diseases including diabetes, heart disease and many of the major cancers [1-6]. Most cases of childhood obesity develop because of an imbalance in energy input and output, a phenomenon that is sustained by our "obesogenic" environment [7-12]. A healthy diet which is characterized by an increased intake of fruits and vegetables is linked with a decreased risk of obesity and chronic diseases; but unfortunately fruit and vegetable intake is still not adequate and most of the population does not consume the recommended five or more servings per day. National data show that *only* about 1 in 4 adults report eating five or more fruits and vegetables per day [13] and, most people do not even know that they should be eating five or more a day for good health [14-18].

I am going to focus on some obesity estimates to help give you an idea of the great magnitude of this problem for children and adults alike. National data indicate that two-thirds of adults are overweight or obese and one third

of children are overweight or obese. African Americans have the highest rates of obesity, followed by Hispanics, and then whites and the highest rates are generally found in the South and Midwest compared to the West and Northeast [19]. We also see high rates among American Indians. A recent study reported that among Native American tribes in North Dakota, South Dakota, Iowa, and Nebraska, a whopping 47% of children and adolescents were overweight or obese [20]. Overweight and obese children and adolescents are also more likely to become obese adults and die at an earlier age than their *peers* at a healthier weight. In addition, they are more likely to be less healthy, less happy, and absent from school more than their lower weight peers [20]. Unless we act now, today's children are likely to be the first generation to live sicker lives and die younger than their parents' generation [21]. I find this statement deeply troubling, especially given that I have two young children and how this can play out for them if something is not done. Rising obesity rates are attributed to many diet and physical activity related factors. A couple of diet-related factors that I would like to highlight are: Americans eat an average of 300 more calories a day than they did a quarter of a century ago and these consist of less nutritious foods. Unfortunately, nutritious foods such as fruits and vegetables are a lot more expensive than fatty, sugary less nutritious foods [22]. In addition, many supermarkets have been vacating poorer more underserved communities, leaving residents who live there with limited or no access to healthy and affordable foods. Regrettably, these so-called food deserts have spread across the US [23].

Financial health costs also merit discussion. A paper just released reported that obesity costs the country an estimated \$147 *billion* a year, a number that has almost doubled since the last time the CDC calculated it in 1998. A main point that I want to raise here is that *prevention* is absolutely key to curbing the obesity epidemic and it's medical and economic consequences. We are currently in the powerful position to reverse and/or prevent obesity and chronic diseases by improving diet and increasing physical activity among the US population, both young and old, rural and urban, and white and other ethnic minority populations.

As a project officer at the National Cancer Institute from 2002 until this past March, I had the opportunity to oversee a portfolio of diet and obesity prevention studies. What is heartening is that I saw a sharp rise in the studies getting funded in the area of obesity prevention while I was at the National Cancer Institute. You may have heard obesity referred to as the "new tobacco" and I think many are beginning to truly acknowledge the extent of this national challenge. In addition, I saw a shift in the types of studies being funded from purely individual-level approaches to those incorporating more environmental and policy strategies. An example of an individual-level approach would be going into a classroom and telling children that they should eat more fruits and vegetables. This type of approach *on its own* has met with limited success but it appears that combining this with other more "macro" level strategies such as taking sugar sweetened beverages out of vending machines in schools could prove to be very "fruitful" in the long run.

I was invited here to talk about the problem and others will address potential solutions. However, I want to end with urging consideration of a multi-level approach in moving forward. Using a systems-level three pronged approach can have great promise in addressing obesity and chronic disease prevention [24, 25]. First, we know that the individual has been genetically programmed at an early age to desire fatty and sugary foods and so we need to engage the individual to help provide them with the knowledge and tools to make healthier choices. Next, we need to provide a supportive environment, where healthy eating choices are easily accessible, available, and at a low cost. Finally, we need to have local, state, and federal policies in place to ensure that the communities in which people live, work, and play are indeed healthy communities.

Thank you again for giving me the opportunity to testify. I would be pleased to answer any questions you may have.

References

- 1. World Cancer Research Fund/ American Institute for Cancer Research, *Food, nutrition, physical activity, and the prevntion of cancer: a global perspective.* 2007, AICR: Washington, DC.
- 2. Hung, H.C., et al., *Fruit and vegetable intake and risk of major chronic disease*. J Natl Cancer Inst, 2004. **96**(21): p. 1577-84.
- 3. Key, T.J., et al., *Diet, nutrition and the prevention of cancer*. Public Health Nutr, 2004. **7**(1A): p. 187-200.
- 4. Hu, F.B., *Plant-based foods and prevention of cardiovascular disease: an overview.* Am J Clin Nutr, 2003. **78**(3 Suppl): p. 544S-551S.
- 5. Van Duyn, M.A. and E. Pivonka, *Overview of the health benefits of fruit and vegetable consumption for the dietetics professional: selected literature.* J Am Diet Assoc, 2000. **100**(12): p. 1511-21.
- 6. Lampe, J.W., *Health effects of vegetables and fruit: assessing mechanisms of action in human experimental studies.* Am J Clin Nutr, 1999. **70**(3 Suppl): p. 475S-490S.
- Dietz, W., *Childhood obesity*, in *Modern nutrition in health and disease*, M.E. Shils, et al., Editors. 1999, Williams & Wilkins: Baltimore. p. 1071-80.
- 8. Sallis, J.F. and K. Glanz, *The role of built environments in physical activity, eating, and obesity in childhood.* Future Child, 2006. **16**(1): p. 89-108.
- 9. Glass, T.A. and M. McAtee, *Behavioral science at the crossroads in public health: extending horizons, envisioning the future.* Soc Sci Med, 2006. 7: p. 1650-71.
- 10. Papas, M.A., et al., *The built environment and obesity*. Epidemiol Rev, 2007. **29**: p. 129-43.
- 11. Bellisari, A., *Evolutionary origins of obesity*. Obes Rev, 2008. **9**(2): p. 165-80.
- 12. Maziak, W., K.D. Ward, and M.B. Stockton, *Childhood obesity: are we missing the big picture?* Obes Rev, 2008. **9**(1): p. 35-42.
- Blanck, H.M., et al., *Trends in fruit and vegetable consumption among U.S. men and women, 1994-2005.* Prev Chronic Dis, 2008. 5(2): p. A35.
- 14. Stables, G.J., et al., *Changes in vegetable and fruit consumption and awareness among US adults: results of the 1991 and 1997 5 A Day for Better Health Program surveys.* J Am Diet Assoc, 2002. **102**(6): p. 809-17.

- Van Duyn, M.A., et al., Association of awareness, intrapersonal and interpersonal factors, and stage of dietary change with fruit and vegetable consumption: a national survey. Am J Health Promot, 2001. 16(2): p. 69-78.
- 16. Marcus, A.C., et al., *Increasing fruit and vegetable consumption among callers to the CIS: results from a randomized trial.* Prev Med, 1998. **27**(5 Pt 2): p. S16-28.
- Havas, S., et al., *Factors associated with fruit and vegetable consumption among women participating in WIC*. J Am Diet Assoc, 1998. **98**(10): p. 1141-8.
- 18. Krebs-Smith, S.M., et al., *Psychosocial factors associated with fruit and vegetable consumption*. Am J Health Promot, 1995. **10**(2): p. 98-104.
- 19. *Differences in prevalence of obesity among black, white, and Hispanic adults United States, 2006-2008.* MMWR Morb Mortal Wkly Rep, 2009. **58**(27): p. 740-4.
- 20. *Key facts about childhood obesity*. 2009, Robert Wood Johnson Foundation. p. 18.
- 21. Olshansky, S.J., et al., *A potential decline in life expectancy in the United States in the 21st century.* N Engl J Med, 2005. **352**(11): p. 1138-45.
- 22. *F as in Fat: How obesity policies are failing in America 2009.* 2009, Robert Wood Johnson Foundation.
- Larson, N.I., M.T. Story, and M.C. Nelson, *Neighborhood* environments: disparities in access to healthy foods in the U.S. Am J Prev Med, 2009. 36(1): p. 74-81.
- 24. Huang, T.T., et al., *A systems-oriented multilevel framework for addressing obesity in the 21st century.* Prev Chronic Dis, 2009. **6**(3): p. A97.
- 25. Huang, T.T. and T.A. Glass, *Transforming research strategies for understanding and preventing obesity*. JAMA, 2008. **300**(15): p. 1811-3.