



# **Health Care for the Homeless**

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## **Bibliography #14**

### **Nutrition Issues for Individuals Who are Homeless**

July 2004

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**2003**

Bentley ME, Dee DL, Jensen JL. **Breastfeeding among low income, African-American women: Power, beliefs and decision making.** J Nutr 133(1): 305-309, 2003.

National data show that only 45% of African-American women reported ever breastfeeding compared to 66 and 68% of Hispanic and white women, respectively. Of African-American women who do choose to breastfeed, duration is short, with many discontinuing in the first days after birth. This report applies a social ecological framework to breastfeeding to investigate macrolevel-microlevel linkages. We posit that macrolevel factors, such as the media, aggressive marketing of breastmilk substitutes, welfare reform, hospital policy and breastfeeding legislation, interact with microlevel factors to influence a woman's decision to breastfeed. These microlevel factors include features of the community, neighborhoods, workplaces that support or discourage breastfeeding, social and personal networks and cultural norms and individual beliefs about breastfeeding. The report discusses how power operates at each level to influence women's choices and also emphasizes the value of ethnographic data in breastfeeding studies. Through a case study of a sample of low income, African-American women living in Baltimore, MD, where breastfeeding role models are few, beliefs that discourage breastfeeding are many, and where everyday life is full of danger and fear, it is understandable that breastfeeding is not considered practical. The narrative data provide important information that can be used to enhance intervention efforts.

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Buescher PA, Horton SJ, Devaney BL, Roholt SJ, Lenihan AJ, Whitmire JT, Kotch JB. **Child participation in WIC: Medicaid costs and use of health care services.** Am J Public Health 93(1): 145-150, 2003.

We used data from birth certificates, Medicaid, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to examine the relationship of child participation in WIC to Medicaid costs and use of health care services in North Carolina. We linked Medicaid enrollment, Medicaid paid claims, and WIC participation files to birth certificates for children born in North Carolina in 1992. We used multiple regression analysis to estimate the effects of WIC participation on the use of health care services and Medicaid costs. Medicaid-enrolled children participating in the WIC program showed greater use of all types of health care services compared with Medicaid-enrolled children who were not WIC participants. The health care needs of low-income children who participate in WIC may be better met than those of low-income children not participating in WIC.

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Currie, J. **U.S food and nutrition programs.** Los Angeles, CA: UCLA, 2003.

The U.S government operates a wide variety of food and nutrition programs (FANPs), which reach an estimated one out of every five Americans every day. Most FANPs were developed with the primary goal of assuring adequate nutrient intakes in populations deemed to be at risk of under nutrition. However, the nature of nutritional risks has changed from a situation in which significant numbers of Americans suffered from food shortages to one in which obesity is prevalent. The vast majority of research on FANPs focuses on the three largest programs: The Food Stamp Program (FSP), The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the National School Lunch Program. Accordingly, this report focuses on evidence regarding the way these three programs have met the goals of federal FANPs (author). Available From: Department of Economics, UCLA, 405 Hilgard Ave., Los Angeles, CA 90095, www.ucla.edu.

Heslin KC, Andersen RM, Gelberg L. **Case management and access to services for homeless women.** *J Health Care Poor Underserved* 14(1): 34-51, 2003.

Previous research on case management for homeless persons has not sufficiently addressed access to services for women of reproductive age. This cross-sectional study estimates the proportion of homeless women with case managers and the associations of case management with access to shelter; food stamps; Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and general medical care. Nine hundred seventy-four homeless women were sampled in Los Angeles County in 1997 and asked about their use of services and whether they had case managers. Approximately 56 percent of respondents had case managers. Having a case manager was associated with greater odds of using food stamps and of finding shelter without difficulty in the previous 30 days, but not with use of WIC or with unmet needs for medical care.

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Johnson LJ, McCool AC. **Dietary intake and nutritional status of older adult homeless women: A pilot study.** *J Nutr Elder* 23 (1):1-21, 2003.

A pilot study was conducted to identify eating patterns, food sources, and nutritional problems among a limited population of older homeless women located in a large urban area. Most of these women's food came from shelter meals, and their food intake was inadequate for most nutrients. The availability of fruits, vegetables, dairy products, and whole grains was very limited. Foods high in saturated fats and simple carbohydrates provided most of their caloric intake. Although some women were obese, most were found to have low BMI and mid-arm muscle mass area measurements indicating low body fat stores and potential muscle wasting.

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Tapper-Gardzina Y, Cotugna N. **The Kids Cafe: A program to reduce child hunger.** *J Pediatr Health Care* 17(1): 18-21, 2003.

Hunger and food insecurity affect nearly 12 million children in the United States. Poverty is the foremost reason for hunger and food insecurity, but even the working poor sometimes have difficulty providing enough food for their household. Undernourished children may not present with severe clinical symptoms, but their ability to learn and psychosocial behavior can be affected. Feeding programs such as Kids Cafe can help decrease child hunger while improving learning and overall health. Kids Cafe's are operated by local food banks and sponsored by America's Second Harvest in partnership with ConAgra Foods, Inc. This article reviews the problem of child hunger and describes the Kids Cafe Program.

<b>2002</b>
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Bodnar LM, Siega-Riz AM. **A Diet Quality Index for Pregnancy detects variation in diet and differences by sociodemographic factors.** *Public Health Nutr* 5(6): 801-809, 2002.

OBJECTIVE:: Methods currently used to assess nutritional status during pregnancy have limitations if one wishes to examine the overall quality of the diet. A Diet Quality Index for Pregnancy (DQI-P) was developed to reflect current nutritional recommendations for pregnancy and national dietary guidelines. DESIGN:: Dietary intake was assessed during the second trimester using a food-frequency questionnaire. The DQI-P

includes eight components: % recommended servings of grains, vegetables and fruits, % recommendations for folate, iron and calcium, % energy from fat, and meal/snack patterning score. Scores can range from 0 to 80; each component contributed 10 points. SETTING:: Two public prenatal clinics in central North Carolina. SUBJECTS:: pregnant women who participated in the Pregnancy, Infection, and Nutrition (PIN) Study. RESULTS:: The DQI-P quantitatively differentiated diets. The mean score for the population was 56.0 (standard deviation 12.0). Women who were >30 years old, >350% of poverty, nulliparous and high school graduates had significantly higher overall DQI-P scores. Higher percentages of recommended vegetable servings were consumed by higher-income, older and better-educated women. Greater percentages of recommended intakes of folate and iron were seen among black, low-income and nulliparous women. Higher iron intakes were also seen among women who graduated high school and were less than 30 years old. Other differences were observed for intake of fat and meal/snack pattern. Because this index was based on national recommendations, the DQI-P may be a useful tool for research and public health settings to evaluating overall diet quality of pregnant women.

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Daly A. **Deprived families: Problems and needs.** J Fam Health Care 12(2):4, 2002.

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Cook JT. **Clinical implications of household food security: Definitions, monitoring, and policy.** Nutr Clin Care 5(4): 152-167, 2002.

Poverty-related food insecurity is a reality that many clinicians in nutrition and health care encounter either directly or indirectly. It is associated with both overnutrition and undernutrition, but it is not congruent with malnutrition. Food insecurity affects human development and health throughout the lifecycle, but can be particularly harmful during critical or vulnerable stages early and late in life. Understanding the causes and consequences of food insecurity and knowing how to identify them can improve the quality and effectiveness of clinical care, and facilitate prevention and treatment of many kinds of health problems. Numerous public policies and programs exist to ameliorate and prevent poverty-related food insecurity. However, the resources to support them ebb and flow with the politics of annual state and federal budgetary cycles. Support and need for these social-safety-net programs also vary with business cycles. Unfortunately, need often expands as support shrinks along with employment and government revenues during recessions, and shrinks as support expands along with employment and government revenues during expansions.

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Harris R. **Inadequate diets: Short- and long-term problems.** J Fam Health Care 12(2): 6, 2002.

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Kahn JL, Binns HJ, Chen T, Tanz RR, Listernick R. **Persistence and emergence of anemia in children during participation in the Special Supplemental Nutrition Program for Women, Infants, and Children.** Arch Pediatr Adol Med 156(10): 1028-1032, 2002.

The prevalence of iron-deficiency anemia in children has decreased owing to the provision of iron-containing infant formula and cereal and food vouchers to children enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). To determine the prevalence of anemia and changes in anemia status in children receiving WIC supplementation. Retrospective cross-sectional and longitudinal analysis of information on WIC participants. Two definitions of anemia were considered separately: Anemia1 and Anemia2, the latter using a more stringent definition of anemia to avoid misclassification. Consecutive cohort of 7053 infants and children aged 6 to 59 months. Prevalence of anemia by age and race or ethnicity and relationship between anemia and sex, birth weight, and weight-for-height z score. Infants aged 6 to 8 months were 3.3 times more likely to be anemic than children aged 36 to 59 months. There was no association

between anemia and race, birth weight, sex, or weight-for-height z score. Anemia rates were approximately halved in the more stringently defined Anemia2 group. Among children seen for at least 3 visits, 8.5% developed anemia and 19.1% of initially anemic children remained anemic; an additional 6.6% developed anemia at a third visit after having had 2 normal hemoglobin measurements. Anemia was common in WIC participants, with infants at highest risk. The diagnosis of anemia in black children depends on the cutoff value used. Despite ongoing receipt of WIC benefits, many children develop anemia or remain anemic. Implementation of mandatory follow-up of all anemic infants by WIC or health care providers may be warranted.

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Kempson KM, Palmer Keenan D, Sadani PS, Ridlen S, Scotto Rosato N. **Food management practices used by people with limited resources to maintain food sufficiency as reported by nutrition educators.** *J Am Diet Assoc* 102(12): 1795-1799, 2002.

The food management practices used by people with limited resources to ensure food sufficiency have not been fully characterized. Semistructured interviews were conducted with 51 nutrition educators from the New Jersey Expanded Food and Nutrition Education Program and Food Stamp Nutrition Education Program, regarding the food management practices of program participants. Practices were grouped into two categories using the constant comparative method: manage food supply and regulate eating patterns. Novel practices were identified. Practices causing food safety or nutritional risks included removing spoiled sections, slime, mold, and insects from food; eating other people's leftovers; and, eating meat found as road kill. A foundation was formed for a grounded theory concerning food management practices by people with limited resources. Verification of these results with audiences with limited resources and determination of prevalence and relative risk of these practices is necessary. This research is important for nutrition professionals who work with people with limited resources because it elucidated a spectrum of safe and risky food management practices, proposed methods to ameliorate monthly eating pattern cycles, and exposed the possibility of food insecurity in unsuspected cases.

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Oliveira NL, Goldberg JP. **The Nutrition Status of Women and Children Who Are Homeless.** *Nutr Today* 37(2): 70-77, 2002.

Center on Nutrition Communication at Tufts University School of Nutrition Science and Policy, Boston, MA. Ms Oliveira is a medical writer in Boston, MA.; Nancy L. Oliveira, MS, RD, is a medical writer based in Boston, Mass. She received her master's degree in nutrition communication from Tufts University in 2000. Before that, she worked as a clinical dietitian.; Jeanne P. Goldberg, PhD, RD, Professor of Nutrition, is director of the graduate program in nutrition communication and the Center on Nutrition Communication at Tufts University School of Nutrition Science and Policy. The center maintains two Web sites, Tufts Nutrition Navigator, a resource guide to the best information on nutrition and fitness on the Internet, and Nutrition Commentator, which interprets breaking stories on nutrition and food safety. Women and children are the fastest growing segment of the homeless population, and yet there is a lack of research examining their nutrition status. This article reviews existing literature to understand better their situation and what might be effective strategies to improve their condition.

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Parker L. **The role of clinicians in helping patients achieve food security.** *Nutr Clin Care* 5(4):149-51, 2002.

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Peterson KE, Sorensen G, Pearson M, Hebert JR, Gottlieb BR, McCormick MC. **Design of an intervention addressing multiple levels of influence on dietary and activity patterns of low-income, postpartum women.** *Health Educ Res* 17(5): 531-540, 2002.

Low-income, multi-ethnic women are at elevated risk for obesity and chronic diseases, yet influences at different levels may act as barriers to changing risk behaviors. Following the birth of a child, childrearing and social isolation can exacerbate these influences. The social ecological framework integrates behavior-change strategies at different levels, providing a strong theoretical base for developing interventions in this high-risk population. The primary purpose of this randomized controlled trial is to test the efficacy of an educational model delivered by community-based paraprofessionals in improving diet, activity and weight loss among new mothers over a 12-month postpartum period and a 6-month maintenance period. This model fosters institutional change to support behavior changes influenced at intrapersonal and interpersonal levels, through collaboration with federal programs for low-income families: the Special Supplemental Food Program for Women, Infants and Children (WIC), and the Expanded Food and Nutrition Education Program (EFNEP). Participants are randomized to the Usual Care, e.g. WIC nutrition and breastfeeding education, or Enhanced EFNEP intervention arm, consisting of Usual WIC Care plus a sustained, multi-component intervention including home visits, group classes and monthly telephone counseling.

## 2001

Alaimo K, Olson CM, Frongillo EA, Briefel RR. **Food insufficiency, family income, and health in US preschool and school-aged children.** *American Journal of Public Health* 91(5): 781-786, May 2001.

**OBJECTIVE:** This study investigated associations between family income, food insufficiency, and health among US preschool and school-aged children. **METHODS:** Data from the third National Health and Nutrition Examination Survey were analyzed. Children were classified as food insufficient if the family respondent reported that the family sometimes or often did not get enough food to eat. Regression analyses were conducted with health measures as the outcome variables. Prevalence rates of health variables were compared by family income category, with control for age and gender. Odds ratios for food insufficiency were calculated with control for family income and other potential confounding factors. **RESULTS:** Low-income children had a higher prevalence of poor/fair health status and iron deficiency than high-income children. After confounding factors, including poverty status, had been controlled, food-insufficient children were significantly more likely to have poorer health status and to experience more frequent stomachaches and headaches than food-sufficient children; preschool food-insufficient children had more frequent colds. **CONCLUSIONS:** Food insufficiency and low family income are health concerns for US preschool and school-aged children.

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Kelly E. **Assessment of dietary intake of preschool children living in a homeless shelter.** *Appl Nurs Res*, 14(3): 146-54, 2001.

This study was undertaken by nursing students and faculty to learn more about what homeless preschool children were fed and what they are at a family shelter in the Southwest. Results from the study were shared with the entire shelter staff. Mothers who participated in the study were given information on age-appropriate food preparation and servings. This research reveals that important role nurses can play in documenting and

teaching both shelter staff and homeless mothers more about children's dietary needs and the long-term health outcomes of a proper diet.

Kertesz SG. **Pellagra in 2 homeless men.** Mayo clin Proc, 76(3):315-8, March 2001.

Pellagra is a nutritional disease with cutaneous, gastrointestinal, and neuropsychiatric manifestations. Because of the diversity of pellagra's signs and symptoms, diagnosis is difficult without an appropriate index of suspicion. Untreated, pellagra is fatal. Two cases of pellagra in contemporary homeless people are described. Complete evaluation supported a clinical diagnosis of pellagra after exclusion of other possibilities. Signs and symptoms resolved an institution of niacin therapy and change in diet. Appropriate suspicion for a diagnosis of pellagra requires attention to a combination of socioeconomic and behavioral risk factors for nutritional deficiency. The combination of homelessness, alcohol abuse, and failure to eat regularly – particularly, failure to make use of shelter-based meal programs – may identify people at special risk in contemporary settings.

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Lindsey AT, Schneider JK. **Food and nutrition resource guide for homeless shelters, Soup kitchens, and food Banks.** Beltsville, MD: Food and Nutrition Information Center, U.S. Department of Agriculture, 2001.

This Resource Guide contains food and nutrition educational materials for staff and volunteers working in homeless shelters, soup kitchens, food banks, and other related facilities, and contains materials that can be used by clients. This guide is divided into two sections: educational materials for clients, and resources for staff and volunteers. Topics include general nutrition, pregnancy, breastfeeding, feeding young children, elderly menu planning, food buying, and food safety and sanitation (authors). Available From: Food and Nutrition Information Center, National Agriculture Library, Agricultural Research Service, U.S. Department of Agriculture, 10301 Baltimore Avenue, Room 105, Beltsville, MD 20705, (301) 504-5719, [www.nal.usda.gov](http://www.nal.usda.gov).

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Siefert K, Heflin CM, Corcoran ME, Williams DR. **Food insufficiency and the physical and mental health of low-income women.** Women and Health 32 (1-2), 2001.

Poor women with children are disproportionately represented among the food insufficient. Recent research has linked food insufficiency with dietary deficiencies, but further research linking this problem to health and mental health problems is needed to inform health and social policy. We analyzed the relationship between food insufficiency and physical and mental health in a random sample of 724 single women who were welfare recipients in February, 1997. Food insufficiency was significantly associated with poor or fair self-rated health and physical limitations, and with respondents' meeting DSM-III-R criteria for recent major depression.

Although the cross-sectional design of this study precludes causal inference, these findings add to a growing body of evidence that food insufficiency is associated with serious adverse physical and mental health consequences.

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Stormer A, Harrison GG. **Does household food security affect cognitive and social development of kindergartners?** Madison, WI: Institute for Research on Poverty, 2003.

The development in the last decade of methodology for measuring and scaling household food insecurity and hunger in U.S. populations makes possible systematic examination of the ways in which hunger and food insecurity affect individuals and families. The impact on children has always been of primary concern for policy, advocacy, and science because of the vulnerability of children to long-term developmental sequelae. There is an emerging and rapidly growing literature demonstrating deleterious links between inadequate food and a variety of developmental outcomes for children, including poorer health status, school absenteeism, and

emotional and behavioral dysfunction. The research presented here explores the relationship of household food insecurity to children's well-being in terms of cognitive and social development at kindergarten entry, utilizing a large and representative sample children in the United States. The timing of this evaluation, in the fall of the child's first school experience, allows a snapshot of a child's development throughout his/her preschool years relatively independent of the major influence that the school experience will have subsequently (authors). Available From: Institute for Research on Poverty, University of Wisconsin-Madison, 1180 Observatory Drive, 3412 Social Science Building, Madison WI 53706, (608) 262-6358, [www.ssc.wisc.edu/irp](http://www.ssc.wisc.edu/irp)

## 2000

Kourgialis N, Wendel J, Darby P, Grant R, Kory WP, Pruitt J, Seim L, Redlener, I. **Improving the nutrition status of homeless children: Guidelines for homeless family shelters.** The Children's Health Fund, 2000.

The current study is a direct outgrowth of concerns expressed by Health Care for Homeless Children (HCHC) grantees regarding this issue during the previous nutrition initiative. A crucial lesson learned from the 1998 Nutrition Technical Assistance Initiative (TAI) was that health care providers often try to address these deficiencies by advocating for the nutrition needs of their patients but frequently lack the necessary resources to do so effectively. To address this concern, the Division of Community Pediatrics (DCP), Children's Hospital at Montefiore and The Children's Health Fund (CHF) developed "model" nutrition policies and procedures for family homeless shelters as well as practical recommendations and materials to assist health care providers. The initiative has sought to fulfill four key tasks: 1) An assessment of family shelter nutrition policies and procedures using mailed and telephone surveys, a review of relevant literature and consultation with nutrition and health experts. Surveys were directed to three groups: HCH programs, family shelters and HUD Continuum of Care Coordinators. This assessment includes a description of current shelter nutrition practices and an analysis of their potential impact on health status of homeless children. 2) The development and dissemination of "Homeless Family Facility Nutrition Guidelines" based on survey information, a review of relevant literature and consultation with nutrition and health experts. 3) The development of a detailed report including a summary of relevant literature, current family shelter nutrition practices, guidelines and recommendations for shelter nutrition practices and selected examples of "Best Practices" shelters which optimize the nutrition status of children living in family shelters. 4) The issuance of nutrition policy recommendations to federal and state governments, homeless family shelters and health care providers.

## 1998

Cutts DB, Pheley AM, Geppert JS, **Hunger in midwestern inner-city young children.** Arch Pediatr Adolesc Med, 152(5):489-93, May 1998. Comment in: Arch Pediatr Adolesc Med, 152(5):423-4, May 1998.

To determine the characteristics of hunger in young children who attend ambulatory pediatric clinics in a midwestern city. Structured survey measures of hunger, family characteristics, assistance program use, child feeding practices, and anthropometrics were used. In this population, 171 were hungry, and 842 were at risk for hunger. Hunger status was associated with increased age, decreased maternal education level, maternal nonwhite race, a history of homelessness, and parental unemployment. Hunger status was associated with use of Aid to Families with Dependent Children and food stamps but not with participation in The Special

Supplemental Nutrition Program for Women, Infants, and Children (WIC). Results of anthropometrics indicated that mean growth percentiles were no different between hunger categories. Housing, dietary, and family characteristics are identifiable risk factors for early childhood hunger. Hunger cannot be identified, however, using anthropometrics. It is disconcerting that fewer hungry children and children at risk for hunger participate in WIC compared with other programs. These data suggest the potential for more aggressive identification and intervention at the primary care and social service levels to benefit hungry children.

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Kelly E. **Nutrition among homeless children.** Public Health Reports 113: 287, 1998.

This letter discusses a study of 75 preschool children living with their mothers, conducted in a homeless shelter in Houston, TX. The focus was on assessing the food services provided by the shelter to children. While the shelter served three meals each day, food was not provided outside of mealtimes and therefore the nutritional needs of preschool children were unmet.

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Murphy JM; Wehler CA; Pagano ME; Little M; Kleinman RE; Jellinek MS. **Relationship between hunger and psychosocial functioning in low-income American children.** J Am Acad Child Adol Psych, 37(2):163-70, February 1998.

The current study examined the relationship between food insufficiency and school-age, low-income children's psychosocial functioning. The study also assessed the interinformant (parent versus child) reliability and time-to-time reliability of the CCHIP measure. Two hundred four school-age children and their parents from four inner-city public schools were interviewed using parent, teacher, and clinician report measures of Psychosocial functioning. Hungry and at-risk for hunger children were twice as likely as not-hungry children to be classified as having impaired functioning by parent and child report. Teachers reported higher levels of hyperactivity, absenteeism, and tardiness among hungry/at-risk children than not-hungry children. Parent and child reports of hunger significantly related to each other, and time-to-time reliability of the CCHIP measure was acceptable. Results of this study suggest that intermittent experiences of food insufficiency and hunger as measured by CCHIP are associated with poor behavioral and academic functioning in low-income children. The current study also supports the validity and reliability of the CCHIP measure for assessing hunger in children.

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Nelson K; Brown ME; Lurie N. **Hunger in an adult patient population.** JAMA,;279(15):1211-4, 1998.

The primary survey included all patients aged 18 years or older who were admitted to the medicine surgery, and neurology services during a 2-week period, and all patients who attended the hospital's general medicine clinic during 1 week. A second survey included primary care patients who received insulin from the hospital pharmacy during a 1-month period. OUTCOME MEASURES: Rates of hunger and food insecurity. Of 709 eligible patients, 567 were interviewed in either the clinic or hospital. An additional 170 patients who received insulin were interviewed by telephone. Of the primary sample, 68 respondents reported not having enough food, 75 reported not eating for an entire day, and 77 reported going hungry but not eating because they could not afford food. A total of 222 had received food stamps in the previous year and of those, 113 had their food stamps reduced or eliminated. Recipients whose food stamps had been eliminated or reduced were more likely to report not having enough food, not eating for a whole day, going hungry but not eating, and cutting down on the size of meals or skipping meals. In multivariate analysis, independent predictors of hunger included an annual income of less than \$10000, drug use, and a reduction in food stamp benefits. Predictors of food insecurity included an annual income of less than \$10000, drug use, and a reduction in food stamps. In addition, 103 patients in the sample of diabetics reported hypoglycemic reactions; 32 of these were

attributed to inability to afford food. Hunger and food insecurity are common among patients seeking care at an urban county hospital.

Silliman K; Yamanoha MM; Morrissey AE. **Evidence of nutritional risk in a population of homeless adults in rural northern California.** J Am Diet Assoc, 98(8):908-10, August 1998.

## 1997

Lewit EM; Kerrebrock N. **Population-based growth stunting.** Future Child, 7(2):149-56, 1997.

Growth stunting, defined as height for age below the fifth percentile on a reference growth curve, is traditionally used as an indicator of nutritional status in children. Growth stunting is a population-based indicator and can indicate the prevalence of malnutrition or nutrition-related disorders among a population of children. Among certain segments of the U.S. child population, most notably poor children, growth stunting occurs more often than expected, suggesting that inadequate nutrition may be a not recent enough to allow for an assessment of the impact of several major public programs designed to address the risk of inadequate nutrition among children. Analysis of data from these programs does show, however, a higher than expected, but declining, level of stunting among program participants. The serious consequences of growth stunting and malnutrition - particularly impaired cognitive development - suggest that careful consideration of the growth stunting indicator should remain an important part of policy discussions on public nutrition programs.

Rose D; Oliveira V. **Nutrient intakes of individuals from food-insufficient households in the United States.** Am J Public Health

This study estimated the extent to which individuals from food-insufficient households were likely to have low intakes of energy and 14 other nutrients. The diets of preschoolers, adult women, and the elderly were analyzed with 24-hour recall data from the 1989 through 1991 Continuing Survey of Food Intake by Individuals. Logistic regression analysis was used to study the association of self-reported household food insufficiency with nutrient intakes below 50% of the recommended daily allowance. For adult women, food insufficiency was significantly associated with low intakes of eight nutrients, including energy, magnesium, and vitamins A, E, C, and B6. Elderly individuals in the food-insufficient group were also more likely to have low intakes of eight nutrients, including protein, calcium, and vitamins A and B6. Household food insufficiency was not significantly associated with low intakes among preschoolers. The results validate the use of self-reported hunger measures in nutritional surveillance and highlight nutrients of concern for food assistance and nutrition education efforts targeted at individuals from food-insufficient households.

Sherry B; Bister D; Yip R **Continuation of decline in prevalence of anemia in low-income children: The Vermont experience.** Arch Pediatr Adolesc Med, 151(9):928-30, September 1997.

An examination of 14 years of hematocrit data from the Centers for Disease Control and Prevention's Pediatric Nutrition Surveillance System in Vermont from 1981 through 1994. The same screening method and criteria for identifying and defining anemia and the same quality-assurance procedures were used during the 14 years. The program eligibility criteria were also consistent except for part of 1991 and 1992. The annual prevalence of anemia. Between 1981 and 1994, the prevalence of anemia halved. For children aged 6 to 24 months, this decline was from 7.8% to 4.6%; for children aged 2 to 5 years, the decline was from 7.9% to 3.1%. The decline in the prevalence of anemia among low-income children observed by the Centers for Disease Control and Prevention's Pediatric Nutrition Surveillance System up to the mid-1980s has continued

into the 1990s in Vermont. This finding indicates that iron nutrition in infancy and early childhood is still improving.

Spannaus-Martin DJ; Cook LR; Tanumihardjo SA; Duitsman PK; Olson JA. **Vitamin A and vitamin E statuses of preschool children of socioeconomically disadvantaged families living in the midwestern United States.** Eur J Clin Nutr, 51(12):864-9, December 1997.

To determine the vitamins A and E statuses of socioeconomically disadvantaged preschool American children. Cross-sectional study of preschool children from socioeconomically disadvantaged families. Central Iowa, USA. A group of 77 apparently healthy children was studied with the following characteristics: 5 mo-6 y; 37 males, 40 females, 56 non-Hispanic Caucasians, 3 Hispanics, 18 Afro-Americans. Modified relative dose response (MRDR) test for vitamin A status assessment; serum retinol, alpha-tocopherol, cholesterol, and carotenoids; weight for age. Although the mean weight for age was the 53<sup>rd</sup> percentile of the NCHS standard, a significant number of children were either markedly underweight or overweight. The only significant age-related changes were an alpha-tocopherol to cholesterol ratio between the 0-2 y and the 2-4 y groups. Serum cholesterol and lycopene concentrations of African-Americans were significantly higher than those of whites. Median serum concentrations of alpha-carotene and beta-carotene were lower and, of lycopene higher, than those found in children in a national survey. Serum carotenoid concentrations generally increased with age. Larger percentages of underweight and overweight children and a significant degree (32%) of inadequate vitamin A status were found in this group of disadvantaged children. African-Americans showed higher serum cholesterol and lycopene concentrations than did whites, but otherwise were nutritionally similar. Age-related changes were small. Of nutritional parameters considered, the vitamin A status of disadvantaged segments of our population clearly needs attention.

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Underwood S; Pridham K; Brown L; Clark T; Frazier W; Limbo R; Schroeder M; Thoyre S. **Infant feeding practices of low-income African American women in a central city community.** J Community Health Nurs, 14(3):189-205, 1997.

Health care professionals are frequently unfamiliar with the most typical infant feeding practices of the clients within the communities they attempt to serve. This observation was apparent during the development of a program in an inner-city community of Wisconsin to support the feeding practices of low-income African American women with low-birth-weight infants. As a result of initial encounters with prospective clients and health care and social service professionals from the targeted community, it was apparent that staff involved in this project needed to gain an understanding of common infant feeding practices of low-income African American women; a greater awareness of the values, beliefs, and health care practices, and a greater understanding of the impact of poverty on families in the community. To assist the staff in gaining a better understanding of the influence of culture and economics on infant feeding practices, a study of the infant feeding practices of a select group of low-income African American women was developed. The study aimed to gather information about common infant feeding practices of low-income African American women in an inner-city community of Wisconsin and determine the influence of cultural and economic variables on the decisions made by low-income African American women regarding infant feeding.

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Willis E; Kliegman RM; Meurer JR; Perry JM. **Welfare reform and food insecurity: influence on children** [see comments]. Arch Pediatr Adolesc Med, 151(9):871-5, September 1997. COMMENT: Arch Pediatr Adolesc Med, 151(9):870 September 1997.

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Winne M; Joseph H; Fisher A. **Community food security: a guide to concept, design, and implementation.** Venice, CA: Community Food Security Coalition, 1997.

Community food security is defined as "all persons in a community having access to culturally acceptable, nutritionally adequate food through local non-emergency sources at all times." This guide addresses all aspects of community food security from needs assessment and planning to collaborations, coalitions, and project implementation. Also included are chapters on finding funds, examples of community food security initiatives, and evaluation.

## 1996

Austin CK; Goodman CE; Van Halderen LL. **Absence of malnutrition in a population of homeless veterans.** *J Am Diet Assoc*, 96(12): 1283-1285, December 1996.

Bronner YL. **Nutritional status outcomes for children: ethnic, cultural, and environmental contexts.** *J Am Diet Assoc*, 96(9):891-903, September 1996.

This literature review explored the relationship between nutritional status outcomes among ethnically diverse children and cultural and environmental contexts. Articles from the literature on anthropometric/body composition measure diet, and physiologic outcomes among ethnically diverse children were identified through on-line literature searches and references from articles reviewed. Explanations consistent with evaluation of results from the studies and reports were developed by synthesis of the findings. Children from underserved, ethnically diverse population groups were at increased risk for obesity, increased serum lipid levels, and dietary consumption patterns that do not meet the Dietary Guidelines for Americans. More than 80% of all US children consume more than the recommended amount of total fat and saturated fat. These factors, which were noted during childhood, may track into adolescence, placing these children at increased risk for the early onset of chronic diseases such as non-insulin-dependent diabetes mellitus, cardiovascular disease, hypertension, and some forms of cancer. Although federally funded food assistance programs are changing rapidly, currently they provide foods that, when eaten as recommended, exceed the Dietary Guidelines for these children. Future interventions to improve the health and nutritional status of our nation's children, especially those from underserved, ethnically diverse groups, should be culturally appropriate and implemented at the levels of individuals, families, and communities.

Brown L; Pollitt, E. **Malnutrition, Poverty and Intellectual Development.** *Scientific American*: 38-43, 1996.

Studies reveal that poor diet influences mental development in many ways, and other aspects of poverty exacerbate the effects. Good nutrition early in life can help counteract the destructive effects of poverty on intellectual development. This study suggests that when the social and economic aspects of a child's environment cannot be easily changed, providing adequate nutrition during infancy and later will at least lessen the cognitive deficits engendered by poverty. It includes a food chart for optimal nutrition in children.

Food and Nutrition Information Center, National Agricultural Library. **Food and nutrition resource guide for homeless shelters, soup kitchens, and food banks.** Beltsville, MD: U.S. Dept. of Agriculture, 1996.

This resource guide contains food and nutrition educational materials for persons who work in homeless shelters, soup kitchens, food banks, and other facilities. It is divided into two sections: (1) educational materials for clients and (2) resources for staff and volunteers. Topics include general nutrition, pregnancy, breastfeeding, infant feeding, the young child, the elderly, menu planning and food buying, and food safety and sanitation.

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Liu T; Soong SJ; Wang X; Wilson NP; Craig CB. **African American and white differences in nutritional status among low-income women attending public health clinics.** J Health Care Poor Underserved, 7(4):323-37, November 1996.

Information concerning nutritional status and factors influencing dietary intakes among underserved populations is scarce. To obtain this information, data on nutritional status in a group of 726 white and African American women of low education and low income who were inner-city dwellers were analyzed. Dietary habits in all subjects were characterized by high intakes of fat, saturated fat, cholesterol, and salt and low intakes of fiber and folate. A comparison of dietary intake patterns of low-income white and African American women showed a trend toward poorer dietary habits among the white women. It is suggested that differences between African Americans and whites in most nutrient intakes were due to factors such as low levels of education and income rather than racial background alone. Results imply that disease prevention and health promotion programs should include efforts to increase awareness and practice of healthy diet habits among all low-income women.

## 1995

Beal AC, Redlener I. **Enhancing perinatal outcome in homeless women: the challenge of providing comprehensive health care.** Semin Perinatol, 19(4):307-13, August 1995.

Homeless women who are pregnant present a number of challenges to health care providers. As a group, they are at risk for a variety of illnesses that could affect their pregnancies, including sexually transmitted diseases and substance abuse. Poor access to health care, inadequate prenatal care, poor nutrition, and poor housing cause these women to suffer poor birth outcomes. They are more likely to deliver low birth weight infants and have higher rates of infant mortality. It should be understood that homeless pregnant women are a heterogeneous group. Generally, they are pregnant adolescents and women in homeless families. Additionally, there are differences within these two groups. The causes of homelessness for these women vary as do their needs during pregnancy. Any provider of health care to the homeless must understand the different situations of these women to deliver directed, effective care.

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Gelberg L; Stein JA; Neumann CG. **Determinants of under-nutrition among homeless adults.** Public Health Rep, 110(4): 448-454, July 1995.

Factors associated with undernutrition were investigated in a broad community-based sample of 457 homeless

adults (344 men and 113 women) who were interviewed and examined in a variety of settings during the summer of 1985. Latent variables representing drug use, alcohol use, a stereotyped homeless appearance, mental illness, poor physical health status, and measured variables of age, sex, income, and number of free food sources were used as predictors of undernutrition. Undernutrition was indicated with three anthropometric measures (weight, triceps skinfold, and upper arm muscle area in the lowest 15th percentile) and one observational measure. Of the sample, 33% were undernourished as defined by at least one of the anthropometric measures. Undernutrition was significantly associated with more drug use, fewer free food sources, less income, and male sex. The findings identify persons at risk for undernutrition and suggest programs to alleviate their hunger, including increased funding for food stamps and other income supports, more free food sources such as shelters and soup lines, and drug treatment programs.

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Killion CM. **Special health care needs of homeless pregnant women.** ANS Adv Nurs Sci, 18(2):44-56, December 1995.

When pregnancy accompanies homelessness, the need for adequate shelter is not being met during one of the most critical periods of a woman's life. This article focuses on the unique health needs of homeless pregnant women. Detailed accounts of the daily life experiences of African-American, white, and Latina homeless pregnant women were derived from an ethnographic study conducted in a metropolitan area in southern California. Their pregnancies were difficult because normal physiological changes of pregnancy often became pathological, signs of potential complications went unnoticed or unattended, and minor discomforts of pregnancy were exacerbated by the women's environment. Nursing therapeutics that support health maintenance and coping strategies of the women while on the streets or in shelters were explicated.

## 1994

Broughton J. **Food service for the homeless: A manual for emergency shelters, drop-in centers, and transitional housing providers.** Ganado, AZ: 1994.

This is a resource for food service planning for emergency shelters, drop-in centers, and transitional housing providers. First published in 1991, it now features a new section on nutrition and education resources, including reproducible handouts and 30 recipes for large groups. It has practical information on nutrition guidelines for all ages and needs of guests, food donation, volunteer coordination, and protection from food borne illnesses. All food recommendations follow the latest USDA Food Guide pyramid..

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National Health/Education Consortium. **Children's nutrition and learning.** ERIC, Clearinghouse on Elementary and Early Childhood Education, Champaign, IL, June 1994.

This digest reviews research on the link between nutrition and learning from the prenatal through school years, and considers the importance of nutrition education for children. AVAILABLE FROM: ERIC, Clearinghouse on Elementary and Early Childhood Education, Univ. of Illinois, 51 Gerty Drive, Champaign, IL 61820-7469.

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