

## 1: Relationship Between Poverty and Obesity - Food Research & Action Center

Poverty rates and obesity were reviewed across 3, counties in the U.S. (2,6). In contrast to international trends, people in America who live in the most poverty-dense counties are those most prone to obesity (Fig. 1 A).

From to , the rate for adults aged 18 years and over who met the guidelines for aerobic physical activity and muscle-strengthening activity increased by In contrast, between " and ", the obesity rate among adults aged 20 years and over increased by Between " and ", there was no change in the mean daily vegetable intake of persons aged 2 years and over 0. The Healthy People target is 1. In , adults who identified with 2 or more races had the highest rate among racial and ethnic groups, with Among education groups for adults aged 25 years and over, those with advanced degrees had the highest rate of meeting the current federal physical activity guidelines Rates age adjusted for individuals in other education groups were: In , adults aged 18"24 years had the highest rate of meeting the physical activity guidelines, Rates for other age groups were: Those with public insurance and the uninsured had rates of The rate for adults with private insurance was more than twice the rate for those with public insurance and Rates age adjusted for individuals in other income groups were: Adults aged 18 years and over born in the U. Among adults aged 18 years and over, married persons had the highest rate of meeting the physical activity guidelines Rates for widowed, never married, cohabitating, and divorced persons were 7. The rate for married adults was more than 2. The rates for cohabitating partners and never married and divorced persons were not significantly different than the best group rate. Unrounded values with additional decimal places beyond what are shown here are used in calculating health disparities, including identifying the best group and calculating the differences between groups. Rounded values displayed here are used in calculating changes over time and percent change needed to meet the target. Unless otherwise stated, all disparities described are statistically significant at the 0. Data except those by educational attainment, health insurance status, and age group are age adjusted to the standard population using the age groups 18"24, 25"34, 35"44, 45"64, and 65 years and over. Data by educational attainment are adjusted using the age groups 25"34, 35"44, 45"64, and 65 years and over. Data by health insurance status are adjusted using the age groups 18"44, 45"54, and 55" Data by age group are not age adjusted. Age-adjusted rates are weighted sums of age-specific rates. In ", the rate of obesity was Males aged 20 years and over had a lower rate of obesity than females The rate for females was Among racial and ethnic groups, the Asian non-Hispanic population had the lowest best rate of obesity, Rates age adjusted for other racial and ethnic groups were: Adults aged 20 years and over without activity limitations had a lower rate of obesity than adults with activity limitations The rate for adults with activity limitations was Among educational attainment groups for adults aged 25 years and over, college graduates or above had the lowest best rate of obesity, Rates age adjusted for other educational attainment groups were: Rates age adjusted for individuals in other family income groups were: The rate for adults born in the U. Among groups by health insurance status for adults aged 20"64 years, those with private health insurance had the lowest rate of obesity, Compared to the rate for those with private insurance, the rate for those with public health insurance was Among broad age groups, adults aged 20"44 years had the lowest rate of obesity, Rates for the other age groups were: Unless otherwise stated, all comparisons described are statistically significant at the 0. Preferably 4 years of data are pooled for analysis when available. Data except those by education status, health insurance coverage, and age group are age adjusted to the standard population using the age groups 20"29, 30"39, 40"49, 50"59, 60"69, 70"79, and 80 years and over. Data by education status are adjusted using the age groups 25"29, 30"39, 40"49, 50"59, 60"69, 70"79, and 80 years and over. Data by health insurance coverage are adjusted using the age groups 20"29, 30"39, 40"49, 50"59, and 60"64 years. Among racial and ethnic groups, the Asian non-Hispanic population had the lowest best rate of obesity, 9. Rates for other racial and ethnic groups were: Those with public insurance and the uninsured both had rates of The rate for youth without health insurance was Rates for youth in other family income groups were: Among racial and ethnic groups, the Asian non-Hispanic population aged 2 years and over had the highest mean daily vegetable intake, 0. Intakes age adjusted for other racial and ethnic groups were: Adults

aged 20 years and over without activity limitations had a Persons aged 51 years and over had the highest mean daily vegetable intake, 0. Intakes for other age groups were: Among educational attainment groups for adults aged 25 years and over, college graduates or above had the highest mean daily vegetable intake, 0. Intakes age adjusted for other educational attainment groups were: Intakes age adjusted for other income groups were: Data except those by educational attainment, disability status, health insurance status, and age group are age adjusted using the age groups 2â€™5, 6â€™11, 12â€™19, 20â€™29, 30â€™39, 40â€™49, 50â€™59, 60â€™69, 70â€™79, and 80 years and over. Data by educational attainment are adjusted using the age groups 25â€™29, 30â€™39, 40â€™49, 50â€™59, 60â€™69, 70â€™79, and 80 years and over. Data by disability status are adjusted using the age groups 20â€™29, 30â€™39, 40â€™49, 50â€™59, 60â€™69, 70â€™79, and 80 years and over. Data by health insurance status are adjusted using the age groups 2â€™3, 4â€™8, 9â€™13, 14â€™18, 19â€™30, 31â€™50, and 51â€™

## 2: Adult Obesity Facts | Overweight & Obesity | CDC

*Home > Obesity & Health > Relationship Between Poverty and Obesity While all segments of the U.S. population are affected by obesity, one of the common myths that exists is that all or virtually all low-income people are far more likely to be obese.*

This review focuses on the relation between obesity and diet quality, dietary energy density, and energy costs. Evidence is provided to support the following points. First, the highest rates of obesity occur among population groups with the highest poverty rates and the least education. Third, the high energy density and palatability of sweets and fats are associated with higher energy intakes, at least in clinical and laboratory studies. Fourth, poverty and food insecurity are associated with lower food expenditures, low fruit and vegetable consumption, and lower-quality diets. A reduction in diet costs in linear programming models leads to high-fat, energy-dense diets that are similar in composition to those consumed by low-income groups. Such diets are more affordable than are prudent diets based on lean meats, fish, fresh vegetables, and fruit. The association between poverty and obesity may be mediated, in part, by the low cost of energy-dense foods and may be reinforced by the high palatability of sugar and fat. This economic framework provides an explanation for the observed links between socioeconomic variables and obesity when taste, dietary energy density, and diet costs are used as intervening variables. More and more Americans are becoming overweight and obese while consuming more added sugars and fats and spending a lower percentage of their disposable income on food. Poverty, food insecurity, obesity, education, income, energy density, food costs, added sugar, added fat, palatability, socioeconomic status

**INTRODUCTION** Rising rates of obesity in the United States have been linked to food supply trends and to the growing consumption of energy-dense foods 1 4. An increased consumption of snacks 5, caloric beverages 6, 7, and fast foods 8 by children and young adults has been shown repeatedly to be associated with obesity and excess weight gain. Studies have examined the contribution to the obesity epidemic of dietary sugars and fats 6, 9, larger portion sizes 10, and the lower nutrient density of foods eaten away from home. Public health policies for the prevention of obesity increasingly call for taxes and levies on fats and sweets, both to discourage their consumption and to help promote alternative and healthier food choices 15. Past studies on dietary antecedents of obesity have addressed taste preferences for sugar and fat as well as preferences for energy-dense foods 17. There is no question that the rates of obesity and type 2 diabetes in the United States follow a socioeconomic gradient, such that the burden of disease falls disproportionately on people with limited resources, racial-ethnic minorities, and the poor. Among women, higher obesity rates tend to be associated with low incomes and low education levels 21, 23. The association of obesity with low socioeconomic status (SES) has been less consistent among men 21. Minority populations except for Asian Americans have higher rates of obesity and overweight than do US whites. Analyses of data for 68 US adults in the National Health Interview Survey by the Centers for Disease Control and Prevention showed that the highest obesity rates were associated with the lowest incomes and low educational levels. The relation between obesity and education and income, based on charts published by the Centers for Disease Control and Prevention 22, is shown separately for men and women in Figure 1. Although obesity rates have continued to increase steadily in both sexes, at all ages, in all races, and at all educational levels 26, the highest rates occur among the most disadvantaged groups.

## 3: Poverty And Obesity: Breaking The Link | HuffPost

*Poverty rates and obesity were reviewed across 3, counties in the U.S. (2 Countries that develop wealth also develop obesity; for instance, with economic growth in China and India, obesity rates have increased by several-fold (1).*

Key findings Data from the National Health and Nutrition Examination Survey, Low income children and adolescents are more likely to be obese than their higher income counterparts, but the relationship is not consistent across race and ethnicity groups. Children and adolescents living in households where the head of household has a college degree are less likely to be obese compared with those living in households where the household head has less education, but the relationship is not consistent across race and ethnicity groups. Between and the prevalence of childhood obesity increased at all income and education levels. Childhood obesity often tracks to adulthood 2 and, in the short run, childhood obesity can lead to psychosocial problems and cardiovascular risk factors such as high blood pressure, high cholesterol, and abnormal glucose tolerance or diabetes 3. Studies have suggested that obesity is greater in the low income population than in higher income individuals 4. This data brief presents the most recent national data on childhood obesity and its association with poverty income ratio PIR and education of household head. Results are presented by sex and race and ethnicity. The relationship between income and obesity prevalence is significant among non-Hispanic white boys; Among non-Hispanic white girls, Among non-Hispanic black and Mexican-American children and adolescents, there is no significant trend in prevalence by income level for either boys or girls. In fact, the relationship does not appear to be consistent; among Mexican-American girls, although the difference is not significant, Of the approximately 6 million obese non-Hispanic white children and adolescents, the majority 4. Childhood obesity prevalence decreases as the education of the head of household increases, but the relationship is not consistent across race and ethnicity groups. Overall, there is a significant inverse relationship between obesity prevalence and education of household head. Among non-Hispanic white and black girls, the prevalence of obesity is significantly lower in households headed by individuals with a college degree than in households headed by individuals with less than a high school degree Figure 3. Between and the prevalence of childhood obesity increased at all income levels. Among girls, the prevalence of obesity increased from 5. Between and childhood obesity prevalence increased in households headed by individuals with all levels of education. In boys, the prevalence of childhood obesity increased significantly between and in households at all education levels. Among boys living in households headed by those with a college degree the prevalence increased from 4. Among girls, the prevalence of obesity increased significantly in households at all levels of education except where the head of the household had a college degree. Among girls in households with less than a high school degree, the prevalence increased from All boys and girls and non-Hispanic white and non-Hispanic black girls in highly educated households are less likely to be obese compared with their counterparts in households where the head has less than a high school degree. Between and the prevalence of obesity increased in children at all levels of income and education except among girls in households where the head had at least a college degree. BMI is calculated as weight in kilograms divided by height in meters squared, rounded to one decimal place. Poverty income ratio PIR: The ratio of household income to the poverty threshold after accounting for inflation and family size. NHANES is a cross-sectional survey designed to monitor the health and nutritional status of the civilian, noninstitutionalized U. The NHANES sample is selected through a complex, multistage design that includes selection of primary sampling units counties , household segments within the counties, and finally sample persons from selected households. The sample design includes oversampling to obtain reliable estimates of health and nutritional measures for population subgroups. In and , African-American and Mexican-American children and adolescents were oversampled. Each year of data collection is based on a representative sample covering all ages of the civilian, noninstitutionalized population. Public-use data files are released in 2-year cycles. Sample weights, which account for the differential probabilities of selection, nonresponse, and noncoverage, were incorporated into the estimation process. The standard errors of the percentages were estimated using Taylor Series Linearization, a method that incorporates the sample weights and sample design. Estimates of the number of

obese individuals were calculated using the average Current Population Survey CPS totals for and All differences reported are statistically significant unless otherwise indicated. About the authors Cynthia L. Lamb, and Margaret D. Prevalence of high body mass index in U. Tracking of childhood overweight into adulthood: A systematic review of the literature. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: The Bogalusa Heart Study. Wang Y, Zhang Q. Are American children and adolescents of low socioeconomic status at increased risk of obesity? Changes in the association between overweight and family income between and Am J Clin Nutr National Center for Health Statistics. Vital Health Stat 11 Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey. Accessed November 18, Obesity and socioeconomic status in children: United States and NCHS data brief no Copyright information All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

## 4: Socioeconomics and Obesity – The State of Obesity

*Major contributing factors to the disproportional impact of obesity on low income populations in America include the barriers faced by people living in poverty in accessing healthy foods, a lack.*

Health, United States, What can rural healthcare providers do to address obesity and overweight? To address obesity and overweight, rural clinics and hospitals can offer wellness classes and activities that encourage healthy diet and exercise, such as sessions on nutrition, preventing heart disease, and controlling diabetes. Hospitals that have exercise equipment for rehabilitation may want to make their workout areas available to the entire community. Primary care providers can serve as an information source to their patients on healthy diet and physical activity. A Bridge-building Toolkit for Rural Primary Care Practices , to help rural primary care practices connect their patients to obesity management resources. In addition to offering a step-by-step process, the toolkit includes sample forms, worksheets and other materials than can be adapted. How can local public health agencies help prevent obesity? Local public health agencies may find that by developing community partnerships with schools, healthcare providers, local businesses, and community groups, they can strengthen their mission to create opportunities for healthy living and reduce obesity and overweight in their communities. No one task or activity alone may solve the problem of obesity. However, when a variety of activities and programs are offered collaboratively they can encourage and reinforce lifestyle changes that support healthy behaviors and reduce obesity. Projects or programs that can be conducted by public health agencies and their partners may include: This publication discusses ways public health agencies can partner and coordinate with food retailers to support healthier eating, and includes examples of obesity prevention initiatives that can be implemented at the local or regional level. What role can rural schools play in encouraging healthy weight? Schools can play a key role in encouraging healthy weight of children and adolescents by developing programs and policies supporting healthy lifestyle behaviors, such as good eating habits and regular physical activities. Schools can begin by offering healthy choices in school lunches and nutritious snacks in vending machines, and by providing learning opportunities that promote healthy eating and an understanding of good nutrition. Schools can also design physical education programs to encourage children to develop an active lifestyle. From the Harvard T. Complete List suggests several strategies for obesity prevention that support healthy lifestyle behaviors among children and adolescents. What can rural communities do to help reduce obesity? Walking clubs, support groups for weight management, and healthy cooking and exercise classes are a few possibilities for supporting healthy weight throughout the community. Facilities may already exist in some communities that could serve the public as a community resource. For example, rural communities could enter into shared user-agreements with a local high school or community college opening their pool to the community for swimming, or gymnasium for early morning or after-hour community activities. Several resources are available to help rural communities identify a suitable program to meet their needs: The CDC Guide to Strategies to Increase Physical Activity in the Community provides information for program managers and policymakers to help them select action plans that will increase physical activity within their communities. The Community Guide developed by CDC is a collection of evidence-based interventions in community settings to improve health and prevent disease. Searchable topics include obesity, nutrition and physical activity. Promoting Active Living in Rural Communities summarizes the characteristics of rural communities that may affect obesity and overweight, and discusses observations from the field and lessons learned from rural active living interventions. Where can I find examples of obesity prevention or weight control programs that work in rural areas? Examples of successful programs for rural obesity prevention are available in the Rural Obesity Prevention Toolkit. Each site implemented a research and evidence-based program to increase physical activity and healthy food consumption of preschoolers ages 0 to 5. Hoonah Fun and Fit Partnership – An alliance of community members and local healthcare employees in rural Southeast Alaska working together to address obesity and overweight in their student population. Several interventions were implemented to enhance obesity awareness, improve access to physical activities, and promote healthier eating. Win with Wellness – A partnership of county health departments,

local healthcare providers, a regional non-profit, and a medical school organized to develop weight-loss support groups and health education classes addressing obesity and chronic disease in rural Stephenson and Carroll counties of Illinois. A large portion of the adult population in this rural area is overweight or obese, and the rates of diabetes, heart disease, and smoking are higher than in other parts of the state. More on this Topic.

## 5: Obesity and poverty don't always go together | Pew Research Center

*A collection of twelve research articles that explore the many complex links between low socioeconomic status and the growing prevalence of obesity in Latin America and the Caribbean. Authored by leading experts in the nutritional sciences, the articles cite compelling evidence that obesity in poor.*

However, experts also warn of the major challenges ahead in the battle against obesity in America. Despite the apparent recent leveling-off in childhood obesity rates, the prevalence of obesity nonetheless remains high, with more than one-third of adults and almost 17 percent of youth obese in There are also significant concerns about the health and economic consequences that result from obesity-related complications. Diabetes, coronary heart disease, stroke, cancer, and osteoarthritis are just some of the illnesses associated with obesity that impose human suffering as well as significant medical costs [2]. To address this health crisis, attention must be focused on a key issue that lies at the core of the epidemic: A significant body of scientific evidence links poverty with higher rates of obesity. Additionally, reports have shown a higher prevalence of obesity among low-income adults. Visually, a compelling correlation emerges when comparing maps detailing poverty and obesity rates in the U. See images below U. Centers for Disease Control and Prevention Major contributing factors to the disproportional impact of obesity on low income populations in America include the barriers faced by people living in poverty in accessing healthy foods, a lack of nutrition education, a dearth of safe environments for physical activity and recreation, and food marketing targeted to this population. Population level data have shown that diet quality follows a socioeconomic gradient. People with higher socioeconomic status SES are more likely to consume whole grains, lean meats, fish, low-fat dairy products, and fresh vegetables and fruit. In contrast, lower SES is associated with the consumption of more refined grains and added fats [6]. Simply stated, families with limited economic resources may turn to food with poor nutritional quality because it is cheaper and more accessible [7]. Lack of physical activity is another commonly-cited problem fueling the obesity epidemic in America. Some low-income families live in neighborhoods where it is dangerous to play outside, reducing opportunities for both children and adults to exercise [8]. Furthermore, many low-income communities lack access to fresh and nutritious food. Instead of a supermarket, these neighborhoods may have an abundance of fast-food retailers and corner stores that are stocked with products high in fat and low in nutrients [9]. Additionally, low-income families are often targeted by food marketers with advertisements encouraging the consumption of nutrient-poor foods. In this environment, children in low-income families are especially hard hit, as evidence demonstrates that consistent exposure to such advertising increases the likelihood of adopting unhealthy dietary practices [10]. Therefore, in developing a strategy to reverse the obesity epidemic in America, a comprehensive "health in all policies" approach must be implemented. A roadmap to reverse obesity will not only tackle health and nutrition issues, but also focus on the underlying social and environmental factors that contribute to this public health problem. Decades of scientific research have revealed that our health habits and environments -- the choices people make regarding tobacco use, alcohol, food, and exercise, and the communities in which they live with their transportation systems, workplaces, grocery stores, and schools -- all impact health. At the national level, several initiatives have been launched to address these fundamental issues. The Affordable Care Act has mandated inclusion of menu labeling in restaurants and on vending machines, the Healthy Hunger-Free Kids Act has set nutrition standards for foods served in schools and child care facilities, and the increase in the number of Baby Friendly hospitals has expanded efforts to promote breastfeeding [11]. As part of this initiative, the Child Care State Challenge is encouraging the adoption of voluntary standards for physical activity, limits on screen time, healthy beverages, and promoting the availability of healthy foods in child care settings. At the community level, new affordable housing neighborhoods like Greenbridge, Washington located in King County near Seattle are being designed and built as models for creating an environment that promotes healthy diets and active lifestyles for their residents. In this predominantly immigrant community where more than 15 languages are spoken, more than 54 percent of adults are overweight or obese, and more than 85 percent of adolescents in grades 8, 10, and 12 do not meet the physical activity recommendations set

by the federal government [12]. Supported by Healthy Kids, Healthy Communities HKHC , a national program funded by the Robert Wood Johnson Foundation that promotes community-based solutions, Greenbridge focuses on shaping the environment to encourage healthy behaviors among families, with special attention to children who are at the highest risk. Thus far, a comprehensive set of measures has been put in place to foster the development of a healthier community. In addition to an elementary school, a Head Start program, and a Boy and Girls Club, this new affordable housing initiative offers community gardens to grow fresh fruits and vegetables, a library, as well as play areas, parks, and walking paths. A food bank, a public health clinic, and a community center that provides free exercise classes are located just a few blocks away. This integrative approach has turned a troubled neighborhood into a welcoming place to live. Initiatives like this one that involve not only individuals but the entire family and community provide a model for how to improve the health of cities across our nation. Targeting only one aspect of the problem will not be effective in fighting the obesity epidemic, since many of its causes stem from broad social and environmental factors. Moreover, to effectively confront the disproportionate impact of obesity on low income populations, the social determinants of health -- including the significant disparities that poorer people experience -- must be addressed. Communities are the cornerstone for preventive interventions that increase the accessibility of fresh foods and physical activity, implement policies to reduce the marketing of unhealthy foods to children and adults, and help make healthy nutritional choices easier and affordable. In this regard, public-private partnerships are critical in bringing families, businesses, health care organizations, government and other stakeholders together to reverse the impact of obesity in our country. Margaret Mead once said, "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. While the path to reversing the obesity epidemic in America is challenging, by working together, we can ensure a healthier future for all Americans. Rear Admiral Susan Blumenthal, M. Blumenthal served for more than 20 years in senior health leadership positions in the Federal government in the Administrations of four U. Admiral Blumenthal has received numerous awards including honorary doctorates and has been decorated with the highest medals of the US Public Health Service for her pioneering leadership and significant contributions to advancing health in the United States and worldwide. Jean Guo is an undergraduate student at Stanford University who is currently studying in Paris. National Center for Health Statistics. Prevalence of Obesity in the United States, Jan , available at [http: Gortmaker](http://Gortmaker), and Martin Brown. January 16, , available at [http: Obesity and Socioeconomic Status in Children and Adolescents: Dec](http://) , available at [http: July 7](http://) , available at [http: January 27](http://) , available at [http: Story](http://), and Melissa C. Disparities in Access to Healthy Foods in the U. November 23, , available at [http:](http://) For more articles by Susan Blumenthal, M. For more healthy living health news, click here.

### 6: NPR Choice page

*Mixing Up Correlation, Causation, Obesity, and Poverty. It's an easy mistake to make. "It's poverty, not individual choice that is driving extraordinary obesity levels," writes Martin Cohen in The Conversation.*

Follow social issues Poverty and obesity Unlike the alleged effect of food advertising, the impact of social inequalities on levels of obesity can be measured, and it is very substantial – the largest single factor that has so far been identified. Despite this, it receives scant attention in the media. Recent trends, holds up a true mirror, accurately reflecting the trend towards slimmer, healthier children. None of the SIRC members involved in the project are Freemasons, a fact that evoked surprise and welcome in equal measure from the Lodge members we met. Rational and evidence-based thinking clearly no longer stands in the way of appeasing the growing clamour for action on obesity, even when there is no evidence that the proposed measures will have the slightest impact. Amidst this disoriented casting around for culprits and simple solutions, driven hard by media hype, it was refreshing to read in the Observer a thoughtful article by David Smith that for once dealt with some of the real issues underlying the rise in obesity – poverty and disadvantage. Obesity is but one of the symptoms of the impoverishment that plagues their lives. For those directly concerned with stemming the declining health of this population the middle-class food and health philosophies generated in Westminster seem almost obscenely irrelevant. Give people jobs and the ability to be masters of their own destinies and they will make healthy decisions about their lives. You bring employment into here and I guarantee the pubs will empty, the kids will stay at school and the place will flourish. I hope the drop in life expectancy is a turning point and the politicians are called to account. They should hang their heads in shame. Poor health is a well-known feature of deprivation. The Government has to give them the means. The data show quite clearly that lower income families and those living in socially deprived neighbourhoods are far more at risk from becoming obese than the middle and upper classes. A report from the National Statistics office notes: The link is stronger among women. In , 30 per cent of women in routine occupations were classified as obese compared with 16 per cent in higher managerial and professional occupations. Whether this operates through the early establishment of behavioural patterns, such as diet and exercise, or through metabolic changes associated with early deprivation, is still to be determined. Unlike the alleged effect of food advertising, the impact of social inequalities on levels of obesity can be measured, and it is very substantial – the largest single factor that has so far been identified. The graph below demonstrates dramatically how little we seem to care about this issue. We can see clearly that as the frequency of such articles has risen progressively over this period of time, so too has coverage of the issue of advertising and promoting food to children and calls for stricter controls. The bottom line of the graph shows the number of articles in which attention was paid to issues of poverty, low-income families, social deprivation, etc. The graph speaks for itself. And because they are rarely headline news, government departments and agencies seem to have little cause to pay them much heed – especially when they are uncomfortable reminders that New Labour has not yet quite delivered the New Britain.

## 7: Obesity and Poverty: What's the link?

*Federal statistics indicate that the higher the poverty level, the higher the rate of obesity, especially among minorities. Around 16 percent of whites who earn \$50, are obese, but that figure climbs to nearly 23 percent among whites who only earn \$15,*

But those who are food-insecure or low-income also face unique challenges in adopting and maintaining healthful behaviors, as described below. Limited resources and lack of access to healthy, affordable foods. Instead, residents “especially those without reliable transportation” may be limited to shopping at small neighborhood convenience and corner stores, where fresh produce and low-fat items are limited, if available at all. Comprehensive literature reviews examining neighborhood disparities in food access find that neighborhood residents with better access to supermarkets and limited access to convenience stores tend to have healthier diets and reduced risk for obesity Larson et al. Households with fewer resources e. Food choices and purchases may be constrained by limits on how much can be carried when walking or using public transit e. Transportation costs also cut into the already limited resources of low-income households, and these costs plus travel time can be substantial Rose et al. When available, healthy food may be more expensive in terms of the monetary cost as well as for perishable items the potential for waste, whereas refined grains, added sugars, and fats are generally inexpensive, palatable, and readily available in low-income communities Aggarwal et al. Households with limited resources to buy enough food often try to stretch their food budgets by purchasing cheap, energy-dense foods that are filling “that is, they try to maximize their calories per dollar in order to stave off hunger DiSantis et al. When available, healthy food “especially fresh produce” is often of poorer quality in lower income neighborhoods, which diminishes the appeal of these items to buyers Andreyeva et al. Low-income communities have greater availability of fast food restaurants, especially near schools Fleischhacker et al. These restaurants serve many energy-dense, nutrient-poor foods at relatively low prices. Fast food consumption is associated with a diet high in calories and low in nutrients, and frequent consumption may lead to weight gain Larson et al. Cycles of Food Deprivation and Overeating Those who are eating less or skipping meals to stretch food budgets may overeat when food does become available, resulting in chronic ups and downs in food intake that can contribute to weight gain Bruening et al. Unfortunately, overconsumption is even easier given the availability of cheap, energy-dense foods in low-income communities Drewnowski, ; Hilmers et al. Such a coping mechanism puts them at risk for obesity “and research shows that parental obesity, especially maternal obesity, is in turn a strong predictor of childhood obesity Dev et al. High Levels of Stress, Anxiety, and Depression Members of low-income families, including children, may face high levels of stress and poor mental health e. A number of recent studies find associations between food insecurity and stress, depression, psychological distress, and other mental disorders Laraia et al. Research has linked stress and poor mental health to obesity in children and adults, including for adults stress from job-related demands and difficulty paying bills Block et al. In addition, a number of studies find associations between maternal stress or depression and child obesity Gross et al. Emerging evidence also suggests that maternal stress in combination with food insecurity may negatively impact child weight status Lohman et al. There also is growing evidence that low-income mothers struggling with depression or food insecurity utilize obesogenic child feeding practices and unfavorable parenting practices that could influence child weight status Bronte-Tinkew et al. Fewer Opportunities for Physical Activity Lower income neighborhoods have fewer physical activity resources than higher income neighborhoods, including fewer parks, green spaces, and recreational facilities, making it difficult to lead a physically active lifestyle Mowen, Research shows that limited access to such resources is a risk factor for obesity Gordon-Larsen et al. There is emerging evidence that food insecurity is associated with less physical activity and greater perceived barriers to physical activity e. This is not surprising, given that many environmental barriers to physical activity exist in low-income communities. When available, physical activity resources may not be attractive places to play or be physically active because low-income neighborhoods often have fewer natural features e. Crime, traffic, and unsafe playground equipment are common barriers to physical activity in low-income communities

Neckerman et al. Because of these and other safety concerns, children and adults alike are more likely to stay indoors and engage in sedentary activities, such as watching television or playing video games. Not surprisingly, those living in unsafe neighborhoods are at greater risk for obesity Duncan et al. Low-income children are less likely to participate in organized sports C. Students in low-income schools spend less time being active during physical education classes and are less likely to have recess, both of which are of particular concern given the already limited opportunities for physical activity in their communities Barros et al. Greater Exposure to Marketing of Obesity-Promoting Products Low-income youth and adults are exposed to disproportionately more marketing and advertising for obesity-promoting products that encourage the consumption of unhealthful foods and discourage physical activity e. Such advertising has a particularly strong influence on the preferences, diets, and purchases of children, who are the targets of many marketing efforts Institute of Medicine, ; Institute of Medicine, This results in lack of screening for food insecurity and referrals for food assistance, as well as lack of diagnosis and treatment of emerging chronic health problems like obesity.

### 8: WHO | Obesity and poverty: a new public health challenge

*Children living below the federal household poverty level have an obesity rate times higher ( percent) than children living in households exceeding percent of the federal poverty level. Children living in low-income neighborhoods are 20 percent to 60 percent more likely to be obese or overweight than children living in high.*

### 9: Poverty and Obesity in the U.S.

*Poverty and obesity. Unlike the alleged effect of food advertising, the impact of social inequalities on levels of obesity can be measured, and it is very substantial “ the largest single factor that has so far been identified.*

*Teacher Collaboration and Talk in Multilingual Classrooms (Bilingual Education and Bilingualism) Machine generated contents note: Breach 1 Machine Gun Kelly The Savage Day (Ulverscroft Large Print) Ancestral unicorns Standard fabrication practices for cane sugar mills Star Wars Clone Wars Adventures 1 Library technicians in Australia Student Guide Resource Manual to Accompany Human Development Myths and unexplored areas Islam (Simple Guide) Lichens of California (California Natural History Guides, 54) Best midwestern colleges Rest api design rulebook Ethnotheories about Breastfeeding and Mother-Infant Interaction (Studies in Ethnopsychology Ethnopsyoan Reel 131. Orleans Parish (excluding the city of New Orleans) The History Of The Rebellion And Civil Wars In England V3 Changing places : the advantages of multi-sited ethnography Karen Leonard Small business ideas files The matrix in theory critical studies 29 Liang introduction to java programming eighth edition Knotted sash ch. 14. Pediatric surgery secrets Christ the Meaning of Life Something old something new short story The key to a loving heart Lead Chalcogenides Experiments for Physics 105 Fundamentals of Physics Have we ever been normal? China rich girlfriend At first sight Mladen Dolar Nissan serena service manual Consumer behavior 7th edition hoyer On the road north of Boston Dutch language proficiency of Turkish children born in the Netherlands The Chicago medical journal Renault clio service manual Richard H. Parham. Make Your Own Sex Toys Piety and Profession*