

CHILDHOOD OBESITY WORKSHOP

1.) Objectives

- a. Describe the problem of overweight in 2 to 5 year old children
- b. List the possible consequences of being overweight as a young child.
- c. Describe the role of the child care environment and of the child care staff in helping to prevent overweight in children.

2.) List some ways in which your child care facility can help children eat healthier and get more activity

3.) Overview

- a. Obesity is increasing in America, especially among children.
- b. Obesity is caused by many factors, some of which we can't control, but many of which we can.
- c. Childhood obesity puts these kids at an increased risk for health problems later in life.
- d. Child care is an ideal setting to teach children healthy habits and combat childhood obesity.

4.) Obesity Trends

- a. There has been a dramatic rise in obesity in the last 20 years.
- b. In 1990, there were no states with an obesity prevalence greater than 14%. In 2006, there were only four states with an obesity prevalence under 20%. Two states, Mississippi and West Virginia, have obesity prevalence greater than or equal to 30%.

5.) Measuring Obesity

- a. Obesity is caused by taking in more calories than we burn. These excess calories are stored as fat.
- b. Body Mass Index (BMI) is the standard measure of obesity. It is calculated by dividing your weight in kilograms by your height in meters squared.
- c. Overweight is defined as a BMI of 25-30
- d. Obesity is defined as a BMI that is greater than or equal to 30.
- e. 31% of American adults (59 million) are obese
- f. More than 64% of Americans have a BMI greater than or equal to 25.
- g. The primary behaviors causing the obesity epidemic are well known and preventable: physical inactivity and unhealthy diet.

Despite this knowledge only 25% of US adults eat the recommended servings of fruits and vegetables each day and more than 50% of US adults do not get the recommended amount of physical activity to provide health benefits.

- h. Annual hospital costs related to overweight and obesity in children and adolescents have more than tripled over the past two decades rising from \$35million during 1979-1981 to \$127 million during 1997-1999.

6.) Factors that affect obesity

- a. Biology: genes
- b. Behaviors: diet and physical activity
- c. Environments: social and physical
- d. As little as 100 calories per day can cause a person to gain weight. It is important to make sure you compensate with physical activity to create a balance between energy in and energy out.

7.) Caloric Increases

- a. Between 1970 and 2000:
 - o Men: 2450-2618 kcal/day (+7%)
 - o Women 1542 to 1877 kcal/day (+22%)
 - o Boys: 2550-2800 kcal/day (+10%)
 - o Girls: 1780-1900 kcal/day (+7%)
- b. Consumption of food away from home increased from 18% to 32% of total calories between 1977-78 and 1994-96
- c. In 1997, the average American consumed 53 gallons of soft drinks and 17 gallons of fruit juices or drinks
- d. Soft drink consumption +51% since 1980
- e. Fruit juice consumption +40% since 1980
- f. Boys consume 300% more soft drinks than in the 1970s (from 7oz to 22oz per day)
- g. Children's sugar consumption is twice what is recommended

8.) What factors in the environment make it harder for us to eat smart and move more?

9.) Focus on Environmental Factors

- a. Urban Sprawl and Time Spent in Cars
 - a. In a study by Ewing and colleagues, they used national data from the Behavioral Risk Factor Surveillance Survey

and census data to look at Physical Activity and urban sprawl

- b. They discovered that the county sprawl index had small but significant associations with minutes walked, obesity, BMI, and hypertension.
- c. Residents of sprawling counties were likely to **walk less during leisure time, weigh more, and have greater prevalence of hypertension** than residents of compact counties.

b. Street Connectivity and Mixed Use

- a. Walking rates increase when streets easily connect
- b. And when residential and business/services are co-located

c. Poor Access to Recreational Facilities

- a. Physical activity levels are linked to having recreational facilities nearby. Many areas, especially low income area do not have parks, trails and gyms within walking distance

d. Lack of Parks and Green Spaces

- a. This holds true for having parks and green spaces close to residences
- b. Absence of places to be active relates to levels of PA

e. Density of Fast Food Restaurants

- a. Diet quality is affected by what types of food establishments are around us
- b. The more fast food outlets, the more frequently people go to these businesses
- c. We know the challenge to healthy eating that are posed by fast food consumption
- d. The popularity of super sizing has resulted in intake of unnecessary calories
- e. A recent study showed that the availability of Fast-food and Full-service (non fast food excluding coffee shops, ice cream, soft drink and soda fountain stands, and caterers) restaurants were more available in low and middle income neighborhoods compared to high-income neighborhoods. In addition, neighborhoods that were

predominantly black versus white neighborhoods had higher proportions of fast-food among total restaurants.

**Notes on serving sizes and eating out:*

- Over the past 20 years there has been a major change in portion sizes when eating out. For example, French fries used to come in one size now there are multiple sizes and all are bigger. Talk about calorie difference.
- Most restaurants use the cheapest ingredients that make the food taste the best. This often involves adding a lot of fat and sugar to their foods. This results in high calorie foods. We probably don't even realize how many calories we are eating when we eat out!
- We tend to drink more high calorie drinks when we eat at restaurants because they use tall glasses and there are often free refills. A 20 ounce regular soda or sweet tea contains about 250 calories!

f. Presence of Convenience Stores and Absence of Grocery Stores

- a. The higher the density of convenience stores and Mom/Pop stores – poorer nutritional quality of a person's diet
- b. This holds true for absence of grocery stores
- c. A recent study showed, that an increased availability of chain supermarkets was associated with lower adolescent Body Mass Index (BMI) and overweight and that greater availability of convenience stores was associated with higher BMI and overweight. The association between supermarket availability and weight was larger for African-American students compared to white or Hispanic students and larger for students in households in which the mother worked full time.

g. Prices

- a. Food costs (both money and time) have been steadily declining in past decades .
- b. Monetary price of food relative to other goods fell 14% since 1980
- c. Food prices had been rising from 1960-1980
- d. Largest declines are for “calorie dense” foods such as prepackaged chips, cookies, muffins, etc.

- e. Unfortunately, between 1985 and 2000, the nominal price of fresh fruits and vegetables, fish, and dairy products increased by 118%, 77%, and 56%, respectively, whereas the nominal price of sugar and sweets, fats and oils, and carbonated beverages increased at much lower rates—46%, 35%, and 20%, respectively.
- f. No wonder we are stocking our kitchens with less healthy foods!

h. School and Work

- a. Although the research isn't abundant in this area, the environment-behavior relationship exists in our work/school setting as well
- b. These are some environmental aspects that have a potential link to obesity
 - Food choices in cafeteria or school store
 - Places to be active (quality of outdoor space)
 - Is there TIME to eat?
 - Where to store food brought from home?
 - Work is physically undemanding. We don't even step next door to speak to a colleague; we send an email!

i. Home

- a. Research shows that homes with fruits and vegetables present and accessible (washed, cut-up) have children who eat more of them
- b. Research shows that children who live in homes with more family meals eat more fruits and vegetables and less calorie-dense foods. Adults control what comes to the dinner table!
- c. Family traditions such as going for a walk or playing after dinner can have a positive impact on a child's weight.
- d. Increasing time spent outdoors has a positive impact on a child's physical activity.
- e. Having a dog in the home can be helpful for getting physical activity and maintaining weight. But be careful—dogs are also having an obesity epidemic!
- f. The home environment such as presence of exercise equipment, number and location of TVs, and space for outdoor play has an effect on weight status.

10.) Childhood Obesity

- a. In 2005, 56% of children age 3 to 6 enrolled in child care centers. What a great opportunity to make an impact!

11.) Measuring childhood Obesity

- a. Body Mass Index is also used to measure if children are overweight or obese. A child's BMI is determined from their height and weight measurements, just like adults. This number is then plotted on a growth chart based on the child's age and sex to determine their BMI percentile
- b. If a child's BMI falls between the 85th -95th the child is considered overweight, and if a child's BMI is at or above the 95th they are classified as obese.

10.) Statistics and Trends

- Childhood obesity rates have risen from about 5% in 1971
- Some groups, for example Mexican-American 2-5 year old boys, are disproportionately affected.
- Every year more and more preschool children are considered overweight. So starting prevention programs early is a good idea.
- Preschool children who are overweight are almost five times more likely to be overweight as young adults.
- The longer a child is overweight, the more likely she/he will be an obese adult at risk for many chronic conditions and health problems.

11.) Brainstorm: What health risks are associated with childhood overweight?

- a. Heart disease: increase blood pressure, cholesterol, triglycerides
- b. Breathing Problems
- c. Type 2 Diabetes
- d. Musculoskeletal problems
- e. Weight discrimination

12.) Contributors to Childhood Obesity

- Food Choices - diets higher in calories (including fats and simple sugars) and lower in fruits and vegetables are linked with overweight
- Physical Activity vs. Sedentary Activity - less physical activity and more time spent participating in activities such as watching TV results in less energy expenditure

- Parental Obesity - children of obese parents are more likely to be overweight themselves. There is an inherited component to childhood overweight that makes it easier for some children to become overweight than others. There are a number of single gene mutations ("genetic alterations") that are capable of causing severe childhood overweight, though these are rare. Even children with genetic risk for overweight will still only become overweight if they consume more calories than they use. Parental obesity may also reflect a family environment that promotes excess eating and insufficient activity.
- Eating Patterns - skipping meals or failure to maintain a regular eating schedule can result in increased intakes when food is eaten.
- Parenting Style - some researchers believe that excess parental control over children's eating might lead to poor self regulation of kid's energy intake.
- Diabetes during pregnancy - overweight and type 2 diabetes occur with greater frequency in the offspring of diabetic mothers (who are also more likely to be obese)
- Low Birth Weight - Low birth weight (<2500 g) is a risk factor for overweight in several epidemiological studies.
- Excessive weight gain during pregnancy - Several studies have shown that excessive maternal weight gain during pregnancy is associated with increased birth weight and overweight later in life.
- Formula Feeding - Breast feeding is generally recommended over formula feeding. Although the exact mechanism is unknown, several long-term studies suggest that breast feeding may prevent excess weight gain as children grow.
- Parental Eating and Physical Activity Habits - Parents with poor nutritional habits and who lead sedentary lifestyles role model these behaviors for their children, thereby creating an "obesogenic" home environment.
- Demographic Factors. Certain demographic factors are associated with an increased risk of being overweight in childhood. For example, there is evidence that African-American and Hispanic children 6 to 11 years old are more likely to be overweight than are non-Hispanic white children of the same age. Asian and Pacific Islander children of the same age were slightly less likely to be overweight

13.) **Brainstorm: What can child care centers do to prevent obesity in preschoolers?** Use worksheet to write down some ideas.

- a. *Discuss healthy habits, not body type*
- b. *Choose healthy food to serve, but allow children to choose what to eat*
- c. *Serve a variety of foods with more F/V, whole grains*
- d. *Bake, broil, roast or grill meats instead of frying them.*
- e. *Limit use of high calorie, high fat and high sugar sauces and spreads.*
- f. *Limit juice*
- g. *Be active as a group*
- h. *Encourage free play*
- i. *Provide time outdoors*
- j. *Role model healthy habits*
- k. *Make things fun!!*

14.) Summary

- a. Convenience has made things too easy!
- b. 1 in 4 preschoolers is overweight.
- c. Diet and physical activity play a role.
- d. Together we can make a difference!