Food Insecurity and Obesity: the Paradox
Objectives

- Define Food Insecurity (FIS)
- Describe the Overlap between FIS and Obesity
- Discuss how to address both FIS and obesity simultaneously
Food Security

- Food security for a household means “access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum:
  - The *ready availability* of nutritionally adequate and safe foods.
  - Assured ability to acquire acceptable foods in *socially acceptable ways* (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).

http://www.usda.gov
Food Insecurity

- Food insecurity is limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.

# Levels and Components

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Unsuitable food, Food anxiety, Food acquisition in unacceptable ways

Radimir et al 1992
2006 Definitions

● **Food Secure**
  - **High food security**—Households had no problems, or anxiety about, consistently accessing adequate food.
  - **Marginal food security**—Households had problems at times, or anxiety about, accessing adequate food, but the quality, variety, and quantity of their food intake were not substantially reduced.

● **Food Insecure**
  - **Low food security**—Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.
  - **Very low food security**—At times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money and other resources for food.
Trends in prevalence rates of food insecurity and very low food security in U.S. households, 1995-2010

Prevalence rates for 1996 and 1997 were adjusted for the estimated effects of differences in data collection screening protocols used in those years.

What about Alabama?

NUMBER 4—17.3% food insecure and 7.0% very low food security

NUMBER 2—32.2% obese
At Risk Groups

- Food Insecurity
  - Minority groups
  - Education
  - Poverty
  - Environments
    - Food environment
    - Sub-standard housing
      - Sleep
    - Energy costs
    - Rent
  - Single women with children
  - Elderly (polypharmacy)

- Obesity
  - Minority groups
  - Education
  - Poverty
  - Environments
    - Food environment
    - Sub-standard housing
      - Sleep
  - Energy costs
  - Rent
Health Consequences

- Food Insecurity
  - Academic
  - Depression and other Emotional Issues
  - Coronary heart disease
  - Type 2 diabetes
  - Hypertension (high blood pressure)
  - Dyslipidemia
  - Poor birth outcomes

- Obesity
  - Educational Attainment
  - Depression and other Emotional Issues
  - Coronary heart disease
  - Type 2 diabetes
  - Hypertension (high blood pressure)
  - Dyslipidemia
  - Poor birth outcomes

DISCRIMINATION
Nutrition Consequences/Risk Factors

- Food Insecurity
  - Fruit and vegetable intake
  - Sugar Sweetened Beverage Intake
  - Meal skipping
  - Inability to have a family meal
  - Child feeding dynamics
  - Unsafe neighborhoods
  - Low physical activity

- Obesity
  - Fruit and vegetable intake
  - Sugar Sweetened Beverage Intake
  - Meal skipping
  - Family meals
  - Restaurant eating
  - Child feeding dynamics
  - Unsafe neighborhoods
  - Low physical activity
Food Insecurity and Obesity

- When does the relationship hold true?
- Child food insecurity associated with obesity under the following circumstances:
  - 12-17 years
  - Girls
  - White children
  - Children in families with < 100% of the poverty level (Casey et al 2008)
- Adult females
Food Security and Weight Cycling

Scenario 1
Underweight OR Normal Weight

Scenario 2
Overweight, Normal Weight
Food Security and Weight Cycling

- Scenario 4
  - Always marginally food secure
    - Overweight/Obese
    - Kids---excessive weight gain

- Scenario 5
  - Always low food secure
    - Underweight
Food Insecurity and Obesity

How can lack of food be related to obesity?

- Food restriction can lead to a preoccupation with food
- Reward after deprivation
- FIS is related to parents using “pressure to eat”
  - Learning to overeat in the presence of food
- Calorically dense foods are less expensive
- Lack of availability of affordable nutrient dense foods
- Perception of weight status may be incorrect ???
- Fear of losing weight ???
- Misperception regarding weight loss strategies (cost and time)
- Skills (menu planning, time management, cooking)
Addressing Both Issues

- Food assistance programs serve as a safety net for food insecure households
  - Recent policy changes
- Weight control programs and messages
  - Tailor to those without time and money
  - Address skills and strengths
- Policy
  - Sales tax on food (regressive)
  - Local Food Policy Councils
- Access to affordable healthy foods and places to be physically active