

Wednesday, 10:00 – 11:30, D6

## **Energy Balance in Children with Developmental Disabilities**

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Objectives:

Identify effective methods for the practical application of concepts related to improving the delivery of services for persons with developmental disabilities

Notes:

## Energy Balance in Children with Developmental Disabilities

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## Energy Balance in Children with Developmental Disabilities

- Introduction
- Conflicts
- Outline

## Obesity Epidemic

## Energy Balance

- Energy in = calories from food and drinks
- Energy out = calories burned from activity
- Energy imbalance can lead to weight gain
- Unhealthy weight can put kids at risk of developing diseases like heart disease, high blood pressure, high cholesterol, type 2 diabetes, and depression.

## Pediatric Metabolic Syndrome

- (Lifestyle + Diet) X Genetics – Activity = Risk

## Environment

- Where a child lives and goes to school has a significant impact on his or her health.
- Today's food and physical activity environment make it hard to be healthy.
  - Lack of physical activity in schools (e.g., no PE or recess)
  - Car-focused world – active transport (e.g., walking or biking) is not easy
  - Lack of available and affordable fresh fruits and veggies

### Environment

- Massive marketing of unhealthy food and beverages

### Environment

- Overabundance of energy-dense, nutrient-poor foods

### Environmental Shifts and Energy Intake

- Modest increases in energy not compensated by activity can result in large weight gain over time.
- 150 kcal/d excess intake = 15 lbs/year
- Five pounds of fat
- Examples of 150 kcal

### Environmental Shifts and Energy Intake

- Common causes of increased caloric intake
  - Snacking
  - Beverages
  - Increased portions
  - Limited variety
  - Fast food
  - Multiple caretakers

### Nutritional Environment

- Children are increasingly consuming food away from home
- Fast food, soft drinks, increased portion sizes, snacks
- Higher fat, sugar, carbohydrate
  - Nielson SJ et al Trends in energy intake in U.S. Between 1977 and 1996.
- Similar shifts seen across age groups.
  - Obes Res 2002;10;370-378.

### This Not That

### Nutritional Environment

- Portion sizes

### Nutritional Environment

- Television and Screen Time

### Nutritional Environment

- Television's Impact
  - Displaces physical activity
  - Snacking while viewing
  - Food advertisements
  - Use during mealtime = poor food consumption patterns

### Physical Activity Patterns

### Communities at Risk

- Communities at risk are neighborhoods and regions where children are more likely to be overexposed to unhealthy factors and underexposed to healthy ones.
- In these communities, resources are minimal, infrastructure is not conducive to physical activity, income is generally low, and economic opportunities may be scarce.
- The rates of obesity in communities at risk continue to rise far above those where children have access to healthy foods and places where they can engage in physical activity.

### Summertime

### Energy Balance

- Check in with your child’s doctor
  - Interpret influences of children’s growth
  - Age, diet, general health, heredity.
  - Body size, type, height, weight tend to run in families
- Use growth charts and BMI to determine if children are at a Healthy Weight

### Eat Better and Move More: Energy In

- Do the Math
- Determine calorie needs based on age, gender, and level of physical activity
- [www.health.gov/dietaryguidelines/2010.asp](http://www.health.gov/dietaryguidelines/2010.asp)
- [www.MyFitnessPal.com](http://www.MyFitnessPal.com)

### Eat Better and Move More: Energy Out

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### Data Sources

- Data Resource Center for Child and Adolescent Health <http://www.childhealthdata.org/content/Default.aspx>
- National Survey of Children’s Health <http://www.nschdata.org/Content/Default.aspx>
- Youth Risk Behavior Survey <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>
- Food Environment Atlas <http://maps.ers.usda.gov/FoodAtlas/>
- Pediatric Nutrition Surveillance System <http://www.cdc.gov/PEDNSS/>
- Pregnancy Nutrition Surveillance System <http://www.cdc.gov/PEDNSS/>
- School Health Profiles <http://www.cdc.gov/healthyYouth/profiles/>
- American Community Survey <http://www.census.gov/acs/www/>
- National Conference of State Legislatures <http://www.ncsl.org/Default.aspx?TabID=160&tabs=831,1#>
- Walkscore.com <http://www.walkscore.com/>
- National Household Transportation Survey <http://nhts.ornl.gov/>

### Additional Resources

- AAP Websites and Tools (Federal Affairs, State and Government Affairs, Obesity, Community Pediatrics)
- Let’s Move (<http://www.letsmove.gov/>)
- Be Our Voice ([www.nichq.org/advocacy](http://www.nichq.org/advocacy))
- Alliance for Healthier Generation ([www.healthiergeneration.org](http://www.healthiergeneration.org))
- RobertWood Johnson Center to Prevent Obesity ([www.reversechildhoodobesity.org](http://www.reversechildhoodobesity.org))