Environmental Influences on Eating Behavior of Children

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Improving CACFP through Research, Outreach, and Education: A Workshop for the Committee to Review Child and Adult Care Food Program Meal Requirements

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# Current Influences

<table>
<thead>
<tr>
<th>Unhealthy Food</th>
<th>Healthy Food</th>
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<tbody>
<tr>
<td>• Innate preference for sugar</td>
<td>• Preferences learned more slowly</td>
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<tr>
<td>• Quickly learn preferences for fat and salt</td>
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<tr>
<td>• Easier to prepare</td>
<td>• Harder to prepare</td>
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<tr>
<td>• Available nearly everywhere</td>
<td>• Available only some places</td>
</tr>
<tr>
<td>• Larger portions</td>
<td>• Smaller portions</td>
</tr>
<tr>
<td>• Less expensive</td>
<td>• More expensive</td>
</tr>
<tr>
<td>• Heavily marketed to children</td>
<td>• Hardly ever marketed to children</td>
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</tbody>
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School Lunch: 🍐 Promote Fruit
Serving vs. Offering Fruit

- Control schools took vs. ate
- Juice and Fruit consumption comparison
Serving vs. Offering Fruit

- Control schools - took
- Control schools - ate
- Intervention - took
- Intervention - ate

Chart showing comparison between the serving and offering of fruit in control and intervention schools.
Results

- Surprisingly, children who “chose” fruit were just as likely to eat it as children who were “served” fruit.
- The proportion who ate fruit (once taken) was the same: 70%.
- As a result of this policy change, the percent of children eating fruit went from 33% to 55%.

Research Question

• How are Child and Adult Care Feeding Program (CACFP) nutrition standards applied in center meals and snacks?
Policies to examine closely

• Beverages: milk, juice, and water
  • No fat, sugar, or artificial ingredient limits

• Grains
  • Whole-grain or enriched meal or enriched flour or fortified (cereals)
  • Can include “cornbread, biscuit, roll, or muffin”
  • No sugar or fat limits
Policies to examine closely

- Meat/meat alternates
  - Meat, poultry, and fish
  - No limits on saturated fat or preparation methods
  - Alternates include yogurt, cheese, eggs, beans, soy products, nuts, seeds,
  - Deter use of nuts and seeds
- Fruit / vegetables considered one category
HER Child Care Working Group

91% response

• Policies
• Food served
• Eating environment
• Training
• Communication
• Barriers

All Connecticut childcare centers (N=221) participating in CACFP
In-depth subsample

- Randomly chose 40 preschools
- Director interview
- Two site visits
  - Meal observation
  - Intake assessment for 6 children per site (N=122)
  - Examine environment for messages about nutrition
Findings

- 30% of children overweight (17%) or obese (13%)
- 87% of the time the menu matched the observed lunch
Current Policies

- Food brought from home for meals and snacks
  - Often not allowed if all meals and snacks provided
  - When parents send in meals or snacks, nutrition standards are either absent or weak
  
  *We encourage you to pack healthy meals*

- Only 10 centers out of 221 had strong policy restricting food from home

*No candy, soda, cookies or sweets*
Current Policies

1. Food brought from home for onsite celebrations
   - Majority had no policy
   - Some welcomed cupcakes and ice cream
   - Some had suggested limits
     
     Please bring a healthy snack

   - Minority had strong policy
     
     Only non-food celebration activities
     Only certain snacks allowed
Lack of policies

- Helping children self-regulate intake
- Setting maximum serving sizes
- Managing seconds
Protein Consumption at Lunch

- 37%: Less than a third of DRI
- 10%: Between 1/3 and 2/3 of DRI
- 27%: Between 2/3 and 100% of DRI
- 26%: 100% or more of DRI
Saturated Fat Consumption at Lunch

- Less than 1/3 of DRI limit
- Between 1/3 and 2/3 of DRI limit
- Between 2/3 and 100% of DRI limit
- Over 100% of DRI limit
Lunch Menu Analysis: Meat/Alternative

- High fat & Breaded Meats: 40%
- Cheese: 30%
- Poultry/Fish: 23%
- Legumes/beans: 10%
- Eggs: 5%
- Nut butter: 1%
- Soy products: 1%
- Yogurt: 1%
- Nuts/seeds: 1%
Raise Your Hand for White Milk

- 97% serve only white milk
  - 2/3 of them serve 1% milk
  - 1/3 of them serve 2% milk
  - remainder skim milk

- Children drink their unflavored milk
  - 35% of their Vitamin D
  - 32% of their Calcium
Fiber Consumption at Lunch

- 94%: Less than a quarter of DRI
- 1%: Between 1/4 and 1/3 of DRI
- 5%: Between 1/3 and 1/2 of DRI
Whole Grains: Observation

- Fewer than 10% of breads served are actually 100% whole grain
- 53% contain some whole grains
- Pasta, rice, tortillas, and crackers were rarely whole grain
Fruit and Vegetables

- Most centers serve less than 1 cup of fruit and ½ cup of vegetables at lunch
- Children eat less than one serving of fruit
- Children eat less than ½ serving of vegetables
- Children in centers that serve BOTH a fruit and vegetable at lunch
  - Significantly higher produce consumption
  - Significantly higher fiber consumption
Recommendations: Lower Saturated Fat

1. Limit high-fat / breaded meats
2. Promote low-fat, high-fiber protein sources (legumes, beans, and soy products)
3. Limit milk to unflavored 1% or skim
4. Switch to low-fat cheese and yogurt (but set sugar limit for yogurts)
Recommendations: Increase Fiber

5. Count fruit and vegetables as different food groups
6. Require full servings of both fruit and vegetables at lunch and one at snack
7. Teach providers to identify 100% whole grain products
8. Require whole grain bread
9. Replace juice with whole fruit
10. Serve fruit and vegetables first
Recommendations:
Decrease discretionary calories

11. Require food from home to follow relevant CACFP nutrition standards
12. Require additional foods provided by center to follow relevant nutrition standards
13. Require a written policy on celebrations
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