Physical Activity and Healthy Eating in Summer Day Camps: Findings from Turn Up the HEAT (Healthy Eating and Activity Time)

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DIRECTOR, ARNOLD CHILDHOOD OBESITY INITIATIVE
Summer Day Camps (SDCs)

- Operate Monday-Friday
- Minimum 8 hours per day (8AM to 6PM)
- Minimum of 8 weeks during the summer
- Not overnight camps
- Not singular focus such as sports, arts, or academics
HEPA Standards in SDCs

- 2013 Commit to Health
- NRPA adopts HEPA Standards for SDCs
- Two Primary Goals
  - 60 minutes/day MVPA
  - Fruit/Vegetable served at every meal
**Turn Up the HEAT**
Healthy Eating and Activity Time

- **Group treatment/controlled trial** to achieve HEPA Standards
- **20 SDCs, 9 Organizations**
- **Serving >1,800 children annually**
- **10 Physical Activity Intervention**
  - Trainings: 2hrs
  - Boosters: 3hrs (during SDC)
- **10 Healthy Eating Intervention**
  - Food Providers/Menus
  - Trainings: 2hrs
  - Boosters: 3hrs (during SDC)
Physical Activity Intervention

STEPs Framework
( Strategies To Enhance Practice )

Theory of Expanded, Extended, and Enhanced Opportunities

- Expand (introduction of activity breaks/active field trips)
- Extend (schedule minimum of 3 hours/day for PA opportunities)
- Enhance (maximize MVPA children accumulate during schedule activity) activity opportunities.

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9th Biennial Childhood Obesity Conference

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Healthy Eating Intervention

Food Service Providers

Increase FV at every Eating Occasion
Increase Kid Friendly FV

SDC Staff

Role Modeling
Verbally Encourage HE

STEPs Framework (Strategies To Enhance Practice)

Healthy Eating Policy Goals

Serve Fruit or Vegetable Daily
Serve no Sugar-based Food/Drink or Artificially Flavored Foods
Water primary beverage | Staff Role Model

ALL ELEMENTS ARE EMBEDDED WITHIN AND ARE RESPONSIVE TO EACH UNIQUE PROGRAM ENVIRONMENT

Food Service Providers

Increase FV at every Eating Occasion
Increase Kid Friendly FV

SDC Staff

Role Modeling
Verbally Encourage HE

Healthy Eating Policies Reviewed for Snacks to Serve
Programs can enter anywhere along the continuum, with entry at higher STEPs requiring fewer intervention components/support

Target Program Leader

Represents Intentional Programming at every level: Snack, Homework/Academics, Enrichment, and Physical Activity Opportunities

Environmental Support for Snacks
Prep Area, Storage Area, None

Community Network of Grocery Stores

Water Primary Beverage
(Recommend only beverage – served at table or drinking fountain)

Sugar-Based Foods (Pop Tarts, Candy, Cookies)

Unflavored Grains (Pretzels, Tortilla Chips, Plain Cereal)

Artificially Flavored Grains (Doritos, Cheez Its, Chex Mix)

Unflavored Grains (Pretzels, Tortilla Chips, Plain Cereal)

Fruits and/or Vegetables

Sugar-Sweetened Beverages

Artificially Flavored Grains (Doritos, Cheez Its, Chex Mix)

Unflavored Grains (Pretzels, Tortilla Chips, Plain Cereal)

HEALTHY EATING POLICY GOALS

Serve Fruit or Vegetable Daily
Serve no Sugar-based Food/Drink or Artificially Flavored Foods
Water primary beverage | Staff Role Model

4. Location of Snack Purchases
No consistent location of snack purchases

3. Cost of Snack Purchases
Yes (Indicates the snack served each day of the week)
None
Yes, some of the days
None of the days
Yes, every day

5. Types of Snacks Served
Fruits and/or Vegetables
Sugar-Based Foods (Pop Tarts, Candy, Cookies)

2. Following Snack Schedule

Yes (Program forecasts annual total dollars for snack purchases – can provide information on avg. snack/child/day)
No/unclear annual budgeted amount (Program leader unsure of snack costs)

1. Schedule of Daily Snack Offerings
Yes – Several (Program purchases snacks from more than one retailers on a regular basis)
Yes – Single (Program purchases snacks from one retailer on a regular basis)

Health Education (Healthy Eating Education delivered a minimum of once/wk)

Eating/Drinking Unhealthy Foods/Bev

Modeling
(Encourage, Praise, Refrain from Eating/Drinking Unhealthy Items)

Healthy Eating Intervention

STEPs Framework (Strategies To Enhance Practice)

Successful Achievement

6. Staff Role
Modeling HE

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Outcome Measures

- **Physical Activity**
  ActiGraph Wrist-Placed Accelerometry

- **Foods Served**
  Direct Observation
  Digital Photography

- **Consumption**
  Plate Waste

- **Staff Behaviors**
  Direct Observation
Percentage of Kids Achieving 60min/d MVPA Standard

**Boys**
- Control: 81%
- Intervention: 78%

**Girls**
- Control: 76%
- Intervention: 69%
Percentage of Kids Achieving 60min/d MVPA Standard

Boys

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Girls

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Percentage of Kids Achieving 60min/d MVPA Standard

Increased Schedule PA Opportunities by 76min
(Tx 3.9hrs/d vs. Cnt 3.8hrs/d)

7 of 10 Tx SDCs Increased
LET US Play vs. 3 of 10 Cnt SDCs

Boys

Girls
Percentage of Days
FV Served During Meals

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<th>2015 Cnt</th>
<th>2015 Tx</th>
<th>2016 Cnt</th>
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<tr>
<td>Lunch Cnt</td>
<td>74%</td>
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<td>Lunch Tx</td>
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<td>Breakfast Cnt</td>
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Percentage of Days FV Served During Meals

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<td>Lunch Cnt</td>
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Lunch: Cnt 74%, Tx 83%; Lunch: Cnt 88%, Tx 87%; Breakfast: Cnt 36%, Tx 28%; 2016: Cnt 30%, Tx 18%.
Percentage of Days FV Served During Meals

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<td>Snacks</td>
<td>29%</td>
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Percentage of FV Consumed

- **Lunch All FV**
  - Count (Cnt): 2015 - 56%, 2016 - 49%
  - Trials (Tx): 2015 - 40%, 2016 - 51%

- **BF All F**
  - Count (Cnt): 2015 - 70%, 2016 - 48%
  - Trials (Tx): 2015 - 42%, 2016 - 53%
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<th>Group</th>
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Summary

• Physical Activity Incredibly High!

• Eating Occasions
  Absent FV (sometimes)

  Foods relatively good
  (USDA Nutrition Guidelines)

  Complex Network of Food Providers

• Do SDCs need changes?
Thank you!

Interested in a Masters/Doctoral Degree?

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- **Friends/Colleagues**
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  - Dekendal Cam
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