CATCHing Them Early!
Healthy habits using CATCH Early Childhood

Shreela Sharma, PhD, RD
Presentation overview

• Current status of obesity in the U.S – childhood obesity
• Obesity in early childhood
• Risk factors to childhood obesity
• Recommendations for nutrition education and physical activity in early childhood
• CATCH Early Childhood program – description and data
• Other strategies for obesity prevention in early childhood
Obesity in the U.S. – Children and Adolescents

Seventy-four out of 10 states with obese children are from the south.

The prevalence of obesity among children from low-income families increased from 12.7 percent in 1999 to 14.4 percent in 2011.

During 2008 to 2011, 18 states and the U.S. Virgin Islands had a statistically significant decrease and only three states increased during this time.

Source: PedNSS, 2012
Socioeconomics and Obesity

- Thirty-three percent of adults who earn less than $15,000 per year were obese, compared with 25.4 percent of those who earned at least $50,000 per year (Trust for America’s Health and RWJF. F as in Fat, 2013).

Source: BRFSS, 2012
Obesity Rates Among Low-Income Preschoolers

Want to learn more? Go to www.cdc.gov/vitalsigns
Increased disparity in overweight by SES among 15-17 year old children as compared to 12-14 year olds.

Overweight prevalence among the poor is approximately 1.5 times that in the non-poor.

Source: Meich et al., JAMA. 2006;295(20):2385-2393
Increased proportion of those in poverty were physically inactive, had greater caloric intake from SSBs and skipped breakfast.

Source: Meich et al., JAMA. 2006;295(20):2385-2393
The Bottom Line

- Childhood obesity rates stabilizing but still too high (Ogden CL et al. JAMA. 2010).
- More than 12 million (16.9%) children and adolescents who are obese and more than 23 million (31.7%) who are either obese or overweight. (Ogden, CL et al. JAMA. 2012)
- Extreme obesity on the rise in adults and children especially among minority populations and has grown over time. (Wang et al., J Pediatr Obe. 2011)
Case study: Texas

- In Texas, the problem is worse with 36% of 2-5 year old WIC participants being overweight or obese.
  - 38% White
  - 35.3% AA
  - 44.6% Hispanic

In 2010, preschooler obesity rates were far higher in Western Asia (which includes the Middle East) than in Eastern, Southeastern, or South Central Asia (roughly 15, 5, 5, and 4 percent, respectively). But South Central Asia has the largest number of overweight preschoolers of any region on the world—an estimated 6.6 million children.

Obesity Is Caused by Positive Energy Balance
Children are Exposed to a Toxic Environment for Obesity

- Eating and exercise environments that contribute to overweight, including:
  - Availability and affordability of high fat/high carbohydrate food (fast food, soft drinks)
  - Large portion sizes
  - Marketing to children
  - Fewer family meals
  - TV/computers/video games
  - Safety issues
  - Decrease in physical education time

Source: Brownell, 1994
Consequences of Obesity in Childhood

• Obese children 80% more likely to become obese adults.
• 70% of the obese children have at least one of the cardiovascular disease (CVD) risk factors. 39% have two or more risk factors for CVD (high BP, elevated lipids, impaired glucose tolerance).
• Increasing prevalence of type 2 diabetes among children who are overweight and obese.
• Child metabolism is different than that of adults.
• An accelerated progression of insulin resistance to type 2 diabetes in children as compared to adults.
• Asthma, sleep apnea and fatty degeneration of the liver (hepatic steatosis).
• Increased risk for several cancers and poor prognosis.
Why target preschool-age children?

• Adiposity (i.e. body fatness) typically increases in the first year of life and then decreases.
• A renewed rise is seen again at ~5 to 6 years of age and is termed “adiposity rebound”.
• Children who experience early “adiposity rebound” are at high risk for obesity later.

How much Nutrition Education is Enough?

What about physical activity?

Guideline 1. Preschoolers should accumulate at least **60 minutes of structured** physical activity each day.

Guideline 2. Preschoolers should engage in **at least 60 minutes -- and up to several hours -- of unstructured** physical activity each day, and should not be sedentary for more than 60 minutes at a time, except when sleeping.

Guideline 3. Preschoolers should be encouraged to develop competence in fundamental **motor skills** that will serve as the building blocks for future motor skillfulness and physical activity.

Guideline 4. Preschoolers should have **access to indoor and outdoor areas** that meet or exceed recommended safety standards for performing large-muscle activities.

Guideline 5. **Caregivers and parents** in charge of preschoolers’ health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity.

Source: http://www.aahperd.org/naspe/standards/nationalGuidelines/ActiveStart.cfm
Action on Early Childhood: Priority Strategies

- Increasing physical activity
- Increasing fruits and vegetable consumption
- Reducing energy-dense food and sugar consumption
- Breastfeeding initiation and duration
- Decreasing television viewing
CATCH Early Childhood Program

• Developed based on the successful elements of CATCH.

• A physical activity & nutrition education program for preschool age children in daycare or school settings.
What’s the goal?

To be a center/school where everyone is working together and speaking a common language that creates and maintains a healthy learning environment.
The CEC Program is composed of 3 components:

- **Classroom Lessons**
- **Physical Activities**
- **Parent Tip Sheets**
Classroom curriculum – *It’s Fun To Be Healthy!*

- Consists of **9 nutrition and 10-gardening based** lessons plans.

- Lessons focused on healthy eating behaviors, increasing **preference, willingness and intake** of fresh fruits, vegetables, low-fat dairy and healthy drinks, healthy snacking habits and, seed-to-plate nutrition concept.

- Includes **interactive**, hands-on coloring activities, stories, songs and games.

- **Extension activities and Curriculum connectors**

- **Nine parent tip sheets** complementing the nutrition lesson plans sent home to the parents weekly.
Physical Activity Box

- Over **500 structured activities** aimed at increasing overall physical activity including MVPA.
- Warm-up, classroom management, GO activities aimed at fitness, coordination, strength and flexibility, cool-down activities.
- Activities implemented indoors and outdoors; with/without equipment.
- Adapted ideas for children with physical disabilities.
• This is the CATCH resource for you to use to create a healthy environment throughout your center/school.

• The Toolkit will help you coordinate efforts center-wide to promote and reinforce the messages of CATCH through simple, educational, and enjoyable activities.
There are 6 themes – 1 theme every other month through the school year.

The themes are:

- CATCH Kick Off Week
- Healthy Holiday Celebrations
- CATCH A Healthy New Year
- National Nutrition Month
- CATCH A Healthy Summer
- Blast Off to Health
Implementing the Coordination Toolkit

- Each theme has key activities outlined in order for multiple faculty/staff to be involved in a coordinated way.

- The activities for each theme include:
  - Bulletin Board Idea
  - Craft Activity
  - Health Lesson Connection
  - Physical Activity
  - Nutrition Link
  - Parent/Family Involvement
Theme I: CATCH Kick Off Week

- Bulletin Board – “Join the CATCH MVP Team”
- Craft Activity – Students decorate CATCH MVP Jerseys
- Health Lesson Connection – Review daily CATCH messages & teach Lesson 1
HCDE Head Start demographics

- 48.0% Asian
- 45.0% African American
- 4.0% White
- 3.0% Bi-Racial/Multiracial
- 0.50% Hispanic
Pilot testing of CEC – 2009-2010

Table1: Participant recruitment and retention by center.

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Results of pilot testing

• Significant post-intervention **increases in servings of fruits and vegetables consumed** measured using direct observation in the intervention group (p<0.001).

• For physical activity measured using direct observation, in the intervention group, there was a significant increase in and the percent time spent in **running activities** (p<0.001). The amount of time spent in **vigorous activities** increased from 0.6% to 9% from baseline to post intervention (p=0.049).

• Process evaluation showed over **90% completion of program components – Key to program success!**

(Sharma et al., in press; Chuang et al., unpublished data)
CATCH Early Childhood Implementation

Implemented in:
- 6 states
- 500 preschools
- YMCAs, Head Start
- school-based preK
- etc.
- CEC in Texas CORP project
What Else Can We Do?

• **Increase accountability** from preschools/day cares and primary care physicians.
  – Require healthy eating and physical activity courses in preschools
  – Train preschool teachers and staff on healthy eating and physical activity recommendations for preschoolers

• **Provide resources** (personnel, funding) and structure (e.g., require community members to serve on preschool committees)

• **Modeling** of healthy eating and physical activity

• **Teacher and family encouragement** of choosing healthy options

• **Increase skills**: Classes (cooking/gardening) for parents
What Else Can We Do?

• **Provide opportunities** for increased access to PA and healthful eating
  – Provide guidelines for early childhood nutrition and physical activity
  – Support expansion of farm to school programs and WIC/SNAP into farmers’ markets
  – Support recess, free play in preschool

• **No food rewards**
  • Create “healthy food” coupons that students can redeem in the cafeteria
  • Don’t use foods for fund raising

• **Monitor** preschooler BMI & nutrition/activity trend
References


• Sharma S.V., Chuang R., Hedberg A.M. Pilot testing CATCH early childhood: A preschool-based program aimed at promoting healthy nutrition and physical activity among 3 to 5 year old children enrolled in head start. American Journal of Health Education. In press.

THANK YOU

Shreela Sharma, PhD, RD  
Shreela.V.Sharma@uth.tmc.edu

UTHealth | The University of Texas Health Science Center at Houston
School of Public Health
Michael & Susan Dell Center for Healthy Living
1200 Hermann Pressler | RAS E603 | Houston, TX 77030

www.msdcenter.org

MICHAEL & SUSAN DELL CENTER for HEALTHY LIVING