

# **The Maryland School Wellness Agenda 2011: “Preschool to College”**

Advances in Pediatric Nutrition  
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# The “Collaborators”

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- Maryland AAP: Obesity Prevention Taskforce: Alan Lake, Dan Levy, Cheryl DePinto, David Paige, Edisa Padder, Peggy Yen

# Why Bother?

- David Katz, Yale University

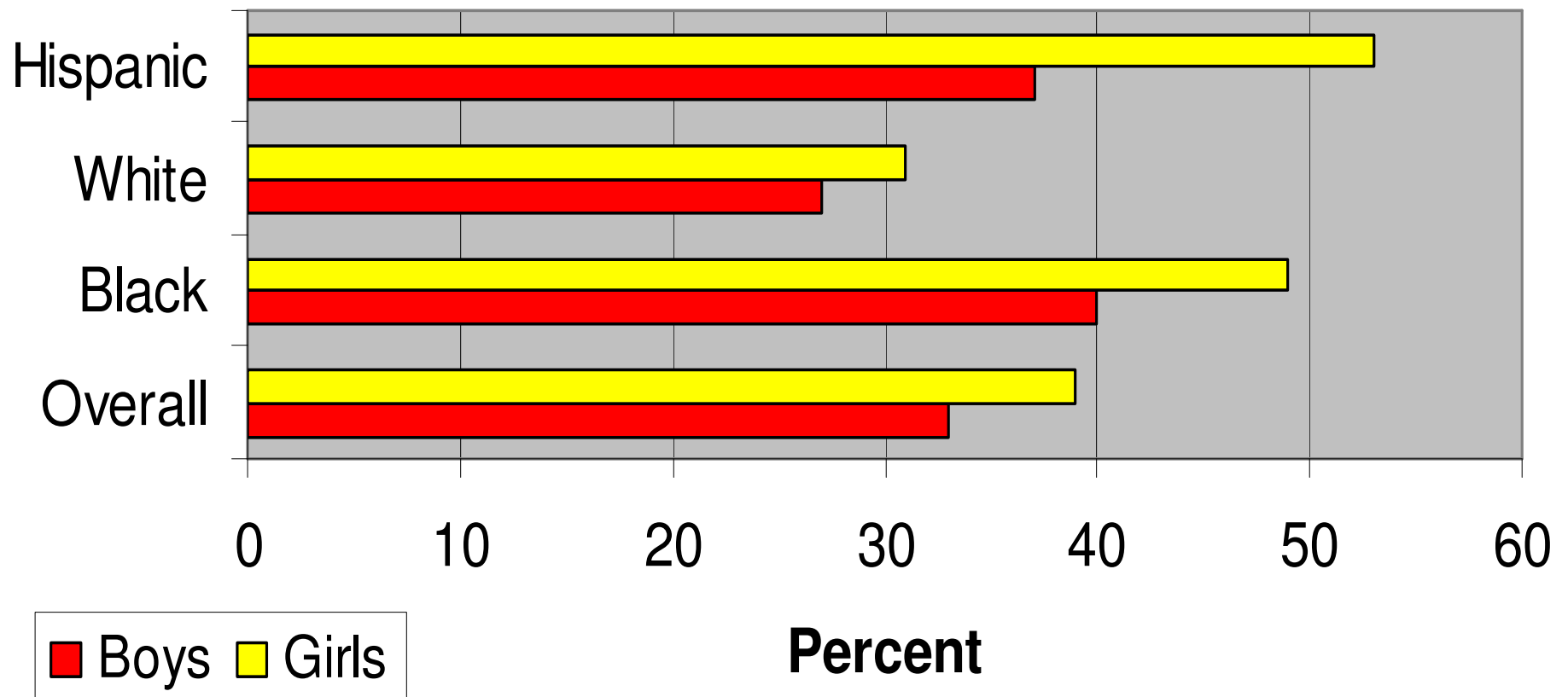
“Today’s children may become the first generation in the history of mankind to have a life expectancy projected to be less than that of their parents”

# Why bother?

## CDC Warns of Diabetes Crisis

***“1 in 3 Toddlers born in year 2000 to face diabetes”***

**Estimated lifetime risk of developing diabetes  
for children born in 2000**



# Why Begin with Preschoolers?

- While the predisposition for obesity may begin in-utero, the “roots” of obesity are often established between ages 2 and 5 years.
- More than 12 million American children of that age are enrolled in preschool programs, an average of 24.8 hours a week.

**“Access for Wellness”**

# Where are we now?

## Childhood Obesity: The past 40 years

	Percent with BMI > 95 %ile	
	<u>Age 6 – 11</u>	<u>Age 12 – 19</u>
1963-1970	4%	5%
1971-1974	4%	6%
1976-1980	7%	5%
1988-1994	11%	11%
1996-2000	15%	15%
2003-2006	17%	17.6%

# Where are we now?

## Maryland WIC age 2 - 5

	June 2006	Dec 2007
Total Children	33,154	36,002
BMI < 5 %ile	3%	3%
BMI 5 – 85 %ile	64%	64%
BMI 85 – 95 %ile	17%	16%
BMI > 95 %ile	16%	17%

(One in three overweight or obese at 5 yrs)

# Racial Disparity in Increased Health Risk

- The increased health risk does not begin suddenly at the 85<sup>th</sup> or 95<sup>th</sup> %ile
- Racial disparity is quite dramatic
  - In Asians, the increased risk for cardiac and endocrine complications begins at the 50<sup>th</sup> %ile
  - In Hispanics, the risk increases at the 80<sup>th</sup> %ile.

## Relevance of early obesity ?

- If a child is above the 95%ile wt/ht at one year, 3 fold greater risk of >95% BMI at 3 years
- Overweight 3 year olds begin increased adiposity at age 3 months, with 50% overweight by age 2
- Of the children with BMI > 95%ile at 3 to 6 years, 50% will remain obese as an adult

# **“White House: Let’s Move”**

## **2/9/2010**

- Michelle Obama and “Taskforce”
- \$10 billion dollars over 10 years to begin in 2011
- Includes awareness of role for improving preschool nutrition education, preschool meal content, and increased physical activity
- What works best? Top down?

# What is a Preschool Wellness Policy?

- It is a commitment to improve the nutrition and physical activity of all children, it is NOT a piece of paper.
- It is the product of the child's "environment": family, extended family, daycare/preschool, media, industry, public resources, the medical community, and public policy.

# Nutrition: Improving parent/family awareness

- Education should begin pre-natally
- It should be consistent in that the programs from WIC, Head Start, cooperative extension staff, and the medical community should be a seamless transition; culturally and cost aware.

# Nutrition

- Family nutrition counseling, prior to and during pregnancy
- Encourage and support breastfeeding
- Appropriate transition to solids and table foods
- Emphasis on family meal
- Parent chooses when and what to eat with the child “self-regulating” intake

# What is “Self-regulation”

- Studies at Penn State confirm that from 18 months to around 4 years, a child recognizes caloric need and eats to that level, unless forced to “clean plate”.
- If offered food of higher caloric content, they eat less and if offered food of low caloric density, they eat more.

# Why does self-regulation end?

- Replaced by “habit” eating, use of snacks, influence of role models and media.
- Impact can thus be minimized by avoidance of pre-programmed snacks and providing good examples from parents and day care providers.

# The Preschool Nutrition Agenda

- Three healthy, nutritious meals a day and one or two healthy snacks a day
- 5 or more fruits and veges a day
- Serving size is the size of the child's fist
- Use of low fat dairy products and 100% fruit juice only once a day. Offer water freely.
- Avoid high sugar sodas and juices and high salt snacks

# What are toddlers eating?

## The FITS study: 2002

- FITS 2002, 3000 children ages 4-24 months with 27% in WIC, 3 day diary
- By age 2, caloric intake 31% above estimated need (40% above in WIC)
- By age 2, 30% ate no fruit and 20% ate no veges in the three days noted
- By age 2, 37% drinking juice daily and 27% eating potato chips daily

# What are toddlers eating?

## The FITS study: 2008

- FITS 2008: 3273 children from 4 months to 4 years, preliminary data
- 32% of preschoolers do not consume a single serving of veges; and those that do eat veges consume primarily white potato with less than 10% consuming green veges daily

## FITS 2008 cont:

- 80% of toddlers eat sweets daily, down 2% from 2002
- 71% of 2 year olds and 84% of 4 year olds consume excess salt, up from 58% in 2002
- 75% of toddlers consume excess saturated fat

# **Are toddlers picky? or Are parents impatient?**

- A toddler, on average, must be offered a new food 10 – 12 times before they will even put it in their mouth, especially with new texture
- A parent, on average, will only offer a food up to 3 times before giving up
- Do not mix new texture with an existing preferred food

# How is Head Start doing?

## Survey of 1810 programs: 2008

- Arch Pediatr Adolesc Med: 2009, 163: 1144 – 1150
- 87% responded, 828,707 children enrolled
- 70% serve only 1%/skim milk
- 97% serve daily vege other than potato
- 94% served daily fruit other than juice
- 54% did not have vending machines

# How are parents doing in the Preschool Lunch sent?

- 55% of parents admit offering less than 5 veges and fruits a day;
- 63% of parents sent a lunch they “knew the child would eat”
- Only 29% had adequate fruit/ veges
- 20% of children served milk for lunch

# Preschool wellness policy: Nutrition Opportunities

- Survey of existing nutrition practices
- Provide nutrition guidelines
- Reward compliance with guidelines and improvement in practice
- Determine “best practices” and incorporate into program
- Eventually require implementation for certification

# The Preschool Physical Activity Agenda

- AAP/CDC/NASPE Guidelines
- Reduce daily tv and video to less than 2 hours for ages 2 and above, aim for none in those less than 2 years
- 60 minutes of active structured play a day and another 60 minutes of free play. No more than one hour interval of inactivity in preschool

# The role of play

- Play is essential to normal brain development by contributing to the cognitive, physical, social, and emotional well-being of the child
- Play is recognized as a right of every child by the United Nations High Commission for Human Rights

# Preschool physical activity

- Toddlers should be encouraged to play in a developmentally appropriate way to build the foundations for more complex movement tasks
- Physical activity is a constant, not subject to being a reward or a punishment
- Outdoor, safe areas for play and the development of large muscle function should be available

# Preschool physical activity: Where do we stand?

- At present, the average American toddler spends more than 75% of the waking hours inactive.
- When offered “free play”, the average child in preschool is in moderately active play only 11% of the time.

# Preschool Physical Activity: How are we doing?

- Although all states have regulations, only 17 states set limits on screen time and only 8 states mandate even 30 minutes of moderate physical activity
- Head Start Survey: 2008
  - 89% had on-site outdoor play area
  - 74% had structured play for > 30 min
  - 73% had unstructured play for > 30 min

# Preschool Wellness Policy: Physical Activity

- 60 minutes of structured, adult guided play daily and 60 minutes of free play
- No intervals of seated inactivity > 30 mins
- Outdoor active play at least twice daily
- Equal opportunities for active play for children with special needs
- Providers expected to participate in daily play and provide education

# Three Home "Routines" Reduce Obesity by 40%

Anderson SC et al Pediatrics 2010 125: 420-428

- 8550 preschool aged children
- Ate dinner as a family > 5 nights a wk
- Slept at least 10.5 hours a night
- Limited "screen time" to less than 2 hours a day on weekends
- 1:7 did all three, 1:8 did none

# **School Wellness Policies**

## **Grades K - 12**

- Established by Sept of 2006 in each school district by Congress mandate
- School-based goals for physical activity and nutrition education
- Involve parents, students, nurses, school administrators, general public
- Document implementation
- Required for school lunch/breakfast

# Alliance for a Healthier Generation

- Joint initiative of the American Heart Association and the William Clinton Foundation with Robert Wood Johnson
- Healthy School program in Baltimore County: 41 schools applied
- Schools commit to improved nutrition education, healthier meals, increased physical activity and staff wellness

# The reality of school meals in Baltimore County: 2011

- Baltimore County: 163 schools with 106,000 students
- School breakfasts: 15,800
- School lunch: 45,000
- 40% free or reduced price
- Self-supporting: \$18 million for food
- Federal support of \$1.8 million from USDA Commodity excess program

# The Goals in Elementary School

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- Reduce screen time to less than 2 hours a day
- Reducing TV time alone of no value
- Increase physical activity to 30 – 60 minutes a day, 50% as vigorous
- Establish wellness agenda of improved nutrition and physical activity
- Family and school-based role models

# The “reality” of physical education/activity in schools

- Elementary goal of 150 min/week
  - One county in Maryland complies
- Secondary School goal of 225 min/wk
  - No county in Maryland complies

Note: 80% of schools (180) built since 1985 do not have a gym. NO outdoor play if any mud puddles on playground!

# The reality of physical activity in secondary schools

- Daily gym class in the U.S. 6.4% of middle schools, 5.8% of high schools
- 37 states mandate PE in all grades
- Less than 20% of high school students get more than one hour of exercise daily
- Only 17% of students who live within a mile of school walk to school
- As girls age from 9 to 19, 83% decline in daily physical activity

# The Wellness Goals for Teens

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- Increase responsibility for food choices and food preparation
- Healthy breakfast, 3 balanced meals
- Avoid after school “chicken box”
- Support exercise, dance, and family activities in evenings and weekends
- Support school PE – American Heart recommendation is 225 mins/wk

# Documenting Fitness in Maryland Schools

- President's Challenge ( 2 districts)
  - Performance relative to national norms
- Fitnessgram (19 districts)
  - Six assessments to define "fitness zone"
  - Better than BMI to assess health status
  - Allows data collection by student, school, and district
  - MSDE expects to standardize for state
  - 2009: Gwendolyn Britt Act mandates yearly

# Texas Fitnessgram and School performance 3/09

- 6,532 schools, 2.4 million students
- Assessments done in grade 3 to 12
- Students within healthy fitness zone have better grades, higher standardized testing scores, better attendance and less disciplinary referrals
- In 4th grade, 78% "fit", by 12th grade, only 20% remain "fit"

# Fitnessgram Data: Baltimore County 2007 - 09

- Percent meeting fitness goal for age
  - Elementary: 60 – 70%
  - Middle: 70 – 80%
  - High school: 65 – 70%
- Cardiovascular/Pacer fitness goal
  - Elementary: 80%
  - Middle: 50 – 60%
  - High school: 25 – 30%

# Practicing Wellness in Primary Care

- Assess wellness of ALL children
- Measure Wt, Ht, plot BMI %ile
- Document blood pressure
- Review family history for risk concerns
- Perform complete physical exam
- Assess nutrition and physical activity practices and attitudes
- Utilize “motivational interview” method to address concerns with family

# Web Sites for Information

- [www.aap.org/obesity](http://www.aap.org/obesity)
- [www.mdaap.org/obesityresources](http://www.mdaap.org/obesityresources)
- [www.cdc.gov/nccdphp/dnpa](http://www.cdc.gov/nccdphp/dnpa)
- [www.VERBparents.com](http://www.VERBparents.com)
- [www.shapingamericasyouth.org](http://www.shapingamericasyouth.org)
- [www.kidshealth.org](http://www.kidshealth.org)
- [www.shapeup.org](http://www.shapeup.org)
- [www.brightfutures.org](http://www.brightfutures.org)
- [www.eatright.org](http://www.eatright.org)
- [www.napsacc.org](http://www.napsacc.org)

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