Overweight and Obesity in Massachusetts:
A Focus on Physical Activity

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The National Crisis

- 1 out of 3 children are overweight or obese.
- 2 out of 3 adults are overweight or obese.

- ~32% Kids 2-19 yrs
- ~69% Adults
Prevalence of Overweight & Obesity in American Students

Energy In vs. Energy Out

Dietary Intake vs. Physical Activity
Lack of Physical Activity

Can Johnny Come Out and Eat?
57% of MA high school students did not meet the 60 min/day recommendation on the past 5 out of 7 days.
Adult Physical Inactivity

Reported **NO LEISURE TIME PA IN THE LAST MONTH**

- Barnstable County 16.6%
- Bristol County 28.1%

CDC, BRFSS 2009
Why? The Staggering Stats
Physical Education

150 min/week of PE for elementary and 225 min/week for middle and high school students
Adolescents Who Attend PE Class in an Average Week

44% of high school students do not attend PE during an average week

Physical education attendance in high school students, 1993-2009 (YRBS).
Recess, Physical Fitness

• MA does not have a recess requirement for elementary school students
• 43% of schools do not administer fitness tests in any grade
## The Somerville FIT Study

<table>
<thead>
<tr>
<th></th>
<th>BMI&lt;br&gt; &lt;85th %tile (n=236)</th>
<th>&gt;85th %tile (n=194)</th>
<th>Fitness&lt;br&gt; Fit (n=192)</th>
<th>Unfit (n=206)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cholesterol</strong>&lt;br&gt;(mg/dL)</td>
<td>155.1 (24.4)</td>
<td>158.8 (26.1)</td>
<td>157.1 (26.0)</td>
<td>156.2 (24.7)</td>
</tr>
<tr>
<td><strong>Triglycerides</strong>&lt;br&gt;(mg/dL)</td>
<td>73.3 (26.1)</td>
<td>106.8 (61.4)**</td>
<td>76.0 (25.9)</td>
<td>100.5 (62.2)**</td>
</tr>
<tr>
<td><strong>HDL</strong>&lt;br&gt;(mg/dL)</td>
<td>56.1 (11.4)</td>
<td>49.6 (10.6)**</td>
<td>55.7 (10.7)</td>
<td>50.9 (11.6)**</td>
</tr>
<tr>
<td><strong>LDL</strong>&lt;br&gt;(mg/dL)</td>
<td>84.4 (20.1)</td>
<td>87.8 (22.7)</td>
<td>86.3 (22.3)</td>
<td>85.3 (20.6)</td>
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**P<0.001**
Built Environment & Free Play
# Out of School Time – Organized Sports

*Time spent at various intensities of physical activity during a 50-min soccer match*

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Males Time</th>
<th>Females Time</th>
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<tbody>
<tr>
<td></td>
<td>Min</td>
<td>%</td>
</tr>
<tr>
<td>Sedentary</td>
<td>25.9 (4.5)</td>
<td>50.0 (8.6)</td>
</tr>
<tr>
<td>Light</td>
<td>10.2 (3.7)</td>
<td>19.7 (6.6)</td>
</tr>
<tr>
<td>Moderate</td>
<td>11.9 (3.0)*</td>
<td>23.0 (5.6)**</td>
</tr>
<tr>
<td>Vigorous</td>
<td>3.9 (2.7)</td>
<td>7.4 (5.0)</td>
</tr>
<tr>
<td>MVPA</td>
<td>15.8 (4.4)</td>
<td>30.4 (8.0)</td>
</tr>
</tbody>
</table>

Values are means (SD). Moderate-to-vigorous activity (MVPA).
* P < 0.05, ** P < 0.01, vs. females
Media Blitz

Oldest children and adolescents consume more than 7.5 hours of media each day.
TV & Screen Time

In MA High School Students….

– 32% played video games or used the Internet for non-school activities 3+ hrs/day
– 28% reported 3+ hrs/day of TV viewing

MA YRBS, 2011
Consequences & Costs
WHO estimates that 1.9 million deaths worldwide are attributable to physical inactivity
Student Academic Achievement
National Security: Too Fat to Fight

75 Percent of Young Americans Cannot Join the Military

Able to Join 25%
Unable to Join 75%

17- to 24-year-old Americans

Source: Dr. Curtis Gilroy, Director of Accessions Policy, U.S. Department of Defense

Too Fat to Fight Report, 2010
Economic Costs

$190.2 \text{ BILLION}

ESTIMATED ANNUAL COST OF OBESITY-RELATED ILLNESS.

$4.3 \text{ BILLION}

IN ANNUAL LOSSES TO BUSINESSES BECAUSE OF OBESITY-RELATED JOB ABSENTEEISM.

21%

OF ANNUAL MEDICAL SPENDING IS ON OBESITY-RELATED ILLNESS.
Policy & Program Landscape
IOM – Accelerating Progress in Obesity Prevention

5 SOLUTIONS FOR CHANGING OUR COMMUNITIES

INTEGRATE PHYSICAL ACTIVITY EVERY DAY IN EVERY WAY.

STRENGTHEN SCHOOLS AS THE HEART OF HEALTH.

ON THEIR OWN, ANY ONE OF THESE FIVE SOLUTIONS MIGHT HELP SPEED UP PROGRESS IN PREVENTING OBESITY, BUT TOGETHER, THEIR EFFECT WOULD BE REINFORCED, AMPLIFIED, AND MAXIMIZED.

MARKET WHAT MATTERS FOR A HEALTHY LIFE.

EAT WELL!

FRESH PRODUCE AVAILABLE!

MAKE HEALTHY FOODS AVAILABLE EVERYWHERE.

GET MOVING!

ACTIVATE EMPLOYERS AND HEALTH CARE PROFESSIONALS.
MA Department of Public Health Initiatives

• **Mass in Motion** – statewide obesity prevention initiative that promotes physical activity and healthy eating
  – Community-based wellness grants to 53 towns & cities
  – BMI testing in grades 1, 4, 7, 10
  – Working on Wellness Program

• **CORD Grant Funding from CDC**
  – to improve nutrition and physical activity levels among underserved children by investing in existing community efforts that combat childhood obesity

• **Coordinated School Health**
  – Coordinates between communities and schools to deliver health education, policies, and promotion of healthy school environments
Pending Bills

1. Mandatory Physical Activity Time in Schools (House Bill 1157 Sanchez)

2. Quality Physical Education in Schools, K-12 (House Bill 1053 Fox)

3. Zoning Regulations for Healthy Community Design (Senate Bill 1019 Eldridge)
School-Based Programs

Up to 1/2 of children's waking hours are spent in school.
MA law requires PE in all grades, but regulations mandating minimum annual hours were repealed in 1996.
Healthy Hunger-Free Kids Act of 2010

School Wellness Advisory Committees
(Aug 2012)

- Comprehensive inclusion
- Annual plan - nutrition, physical activity and obesity prevention
- Set physical activity goals & key strategies for implementation
- Evaluation
Most Promising **SCHOOL-BASED Policy Options**

1. Set state-wide policies for:
   - Quality physical education
   - Physical activity time
   - Recess time
   - Fitness testing

2. Provide funding to schools to enhance quality physical education and develop other innovative school-based initiatives
Most Promising Built Environment Policy Options

1. Implement zoning changes in the built environment around access to open spaces, public transportation, and safe routes to walk

2. Build communities that are pedestrian and cyclist friendly, create schoolyards, open spaces, and trails that are safe and accessible, and improve public transit systems to promote active living
Policy for Physical Activity Progress

1. GET A PLAN!
   - Design and support a Massachusetts Physical Activity Plan to ensure that physical activity is a priority in our state

2. SUPPORT & ALLOCATE FUNDING
   - Increase Department of Public Health funding for physical activity programs via Mass in Motion

3. SURVEY AND EVALUATE PROGRAMS
   - Inform best practices and sustain the success of existing initiatives
Have a Plan! Raise Awareness, Build Support, and Catalyze Change!
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• Harvard Pilgrim Healthcare Foundation
• The Boston Foundation
• Blue Cross Blue Shield Massachusetts
"The boss wants all money managers to exercise more. Get off your assets and move!"

Thank You