

DATA YOU CAN USE

Obesity Related Cancers in Pennsylvania Incidence, Research and Solutions

Presented by:
Data Advisory Committee
A Committee of the Pennsylvania Cancer Advisory Board

April 26, 2018



▶ Today's Presenters

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Disclaimer

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Thank You

Thank you to the Northeast Region
American Cancer Society for hosting
this webinar



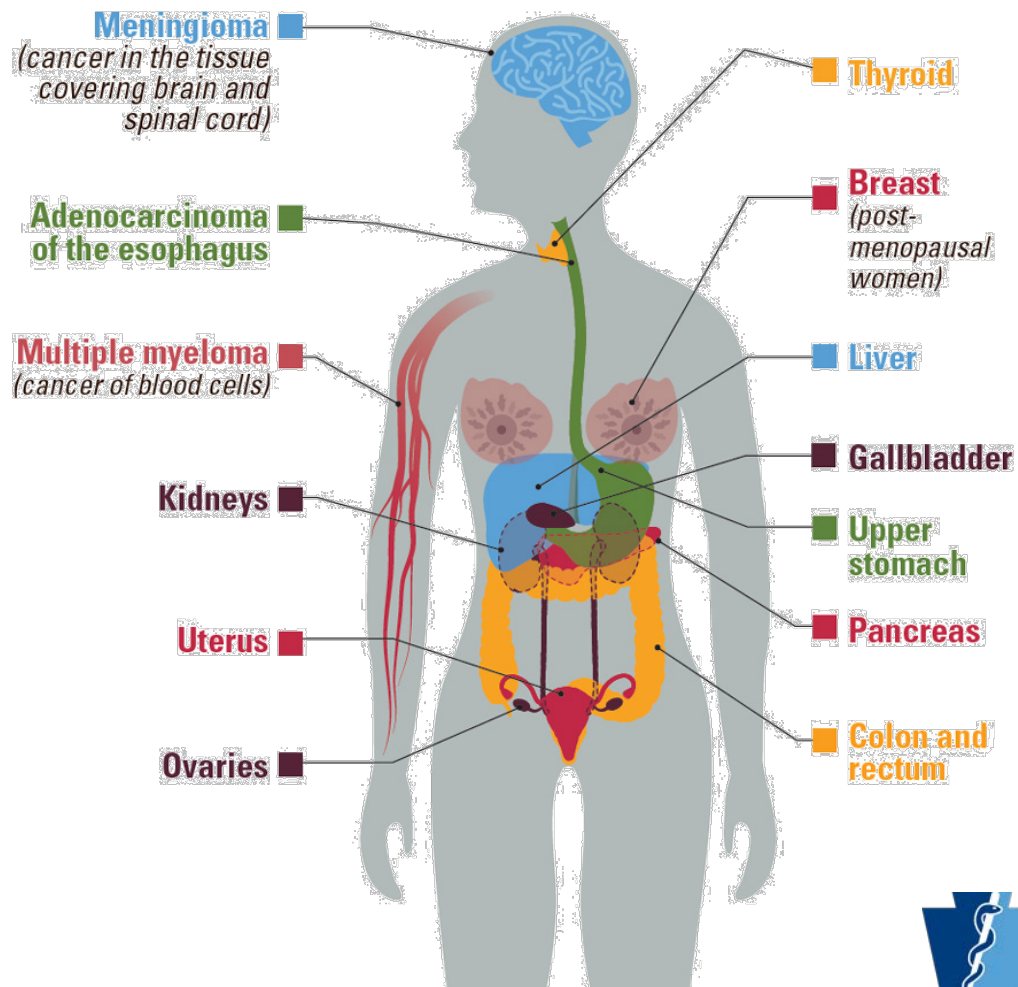


Obesity, Diet and Exercise in Pennsylvania

Division of Health Informatics

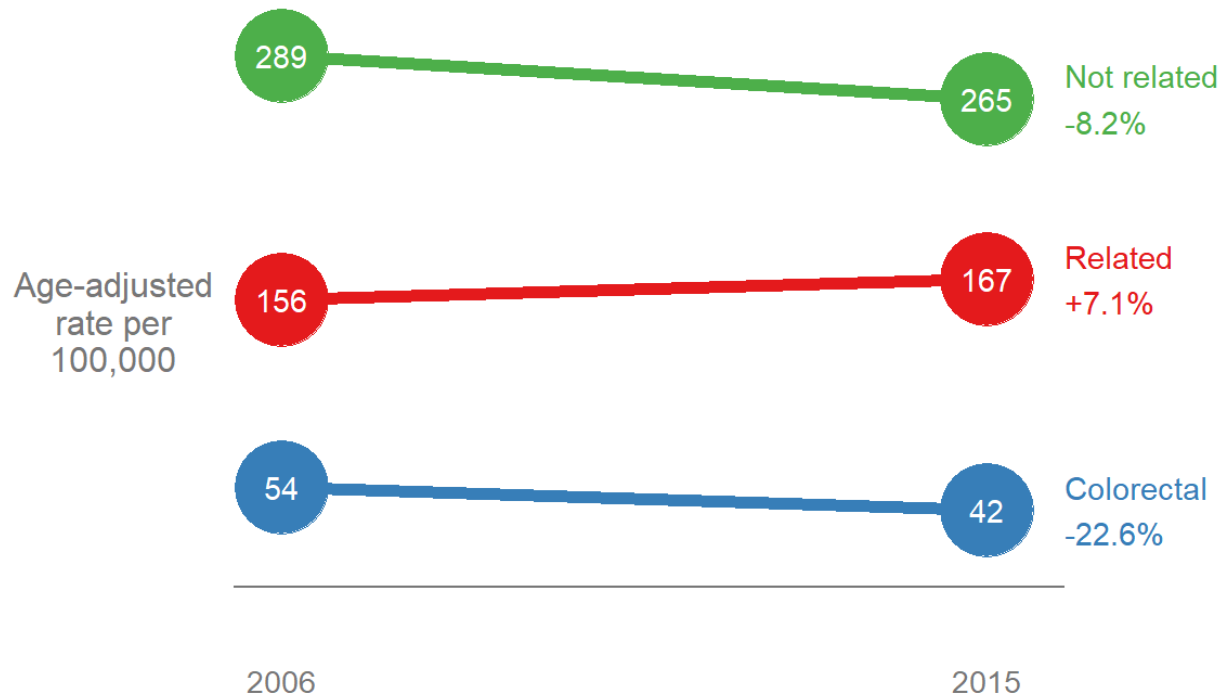
Obesity Related Cancers

13 cancers are associated with overweight and obesity



Trends in Obesity Related Cancers

Trends of obesity-related cancer incidence
New invasive diagnoses among Pennsylvanians

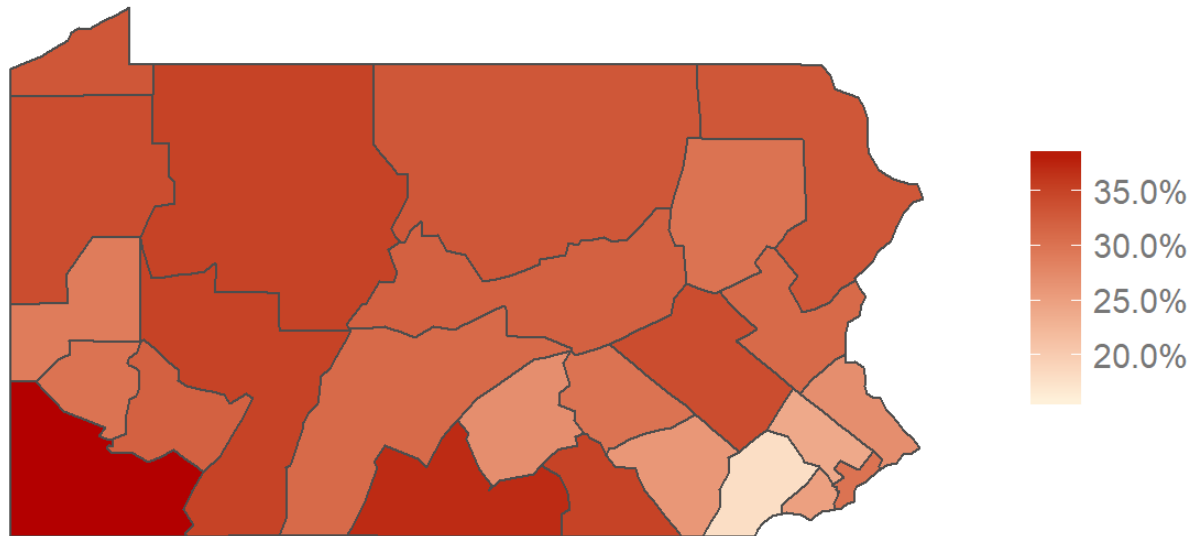


Colorectal cancer separated to remove effect of screening
Source: Pennsylvania Cancer Registry

Source: US Cancer Statistics, 2017

Obesity trends

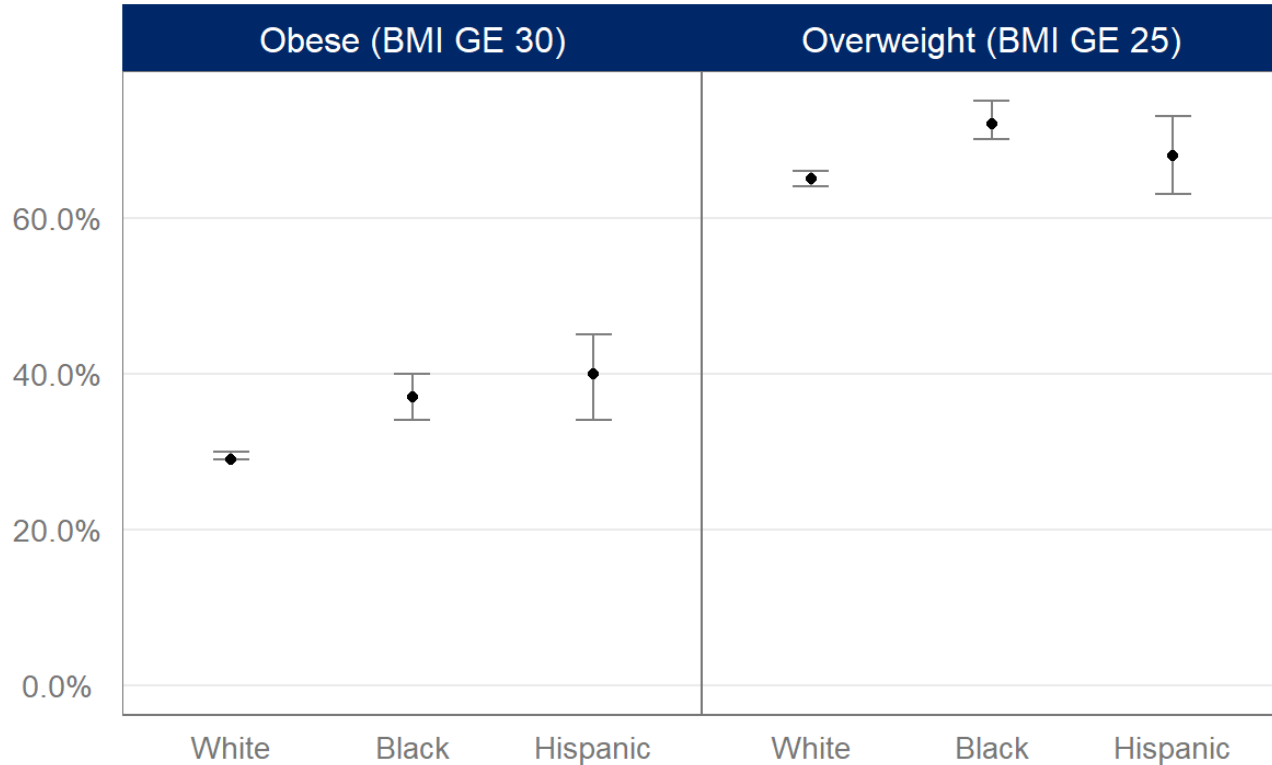
Pennsylvanian obesity (BMI \geq 30)
2014-2016



Source: BRFSS 2014-2016

Disparities in obesity

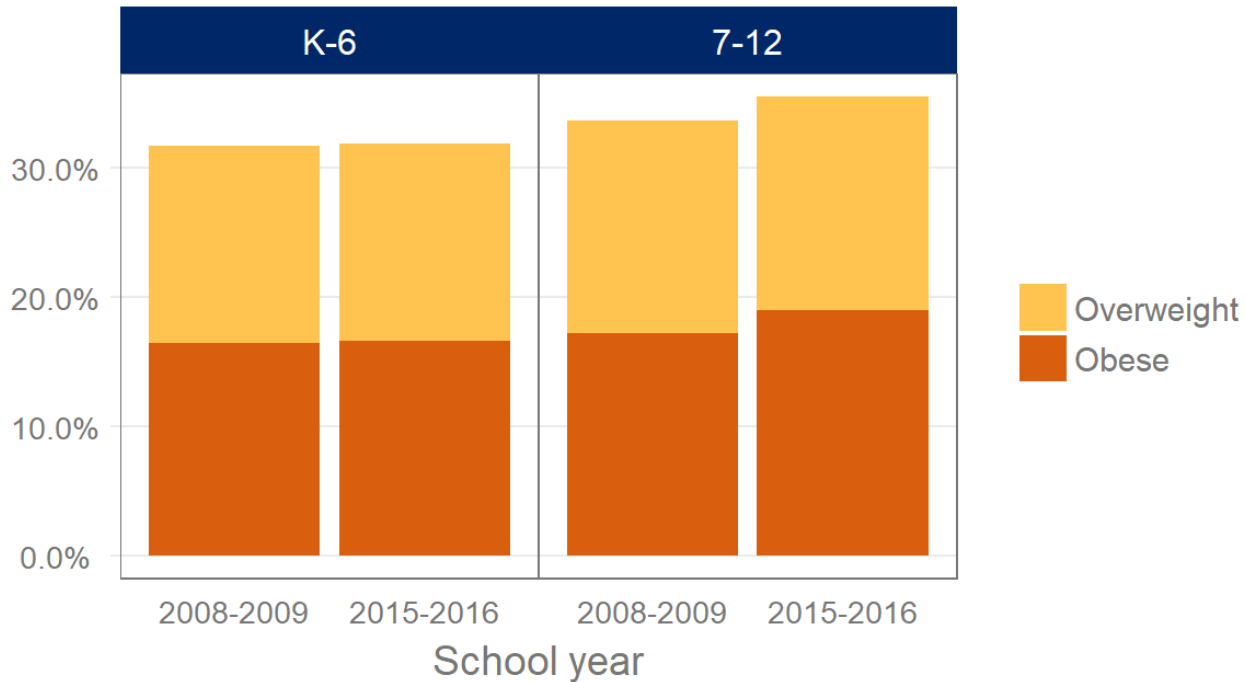
Overweight and obesity prevalence
Shown with 95% confidence intervals



Source: BRFSS 2014-2016

Childhood obesity

High BMI prevalence among Pennsylvanian children by grades and school year

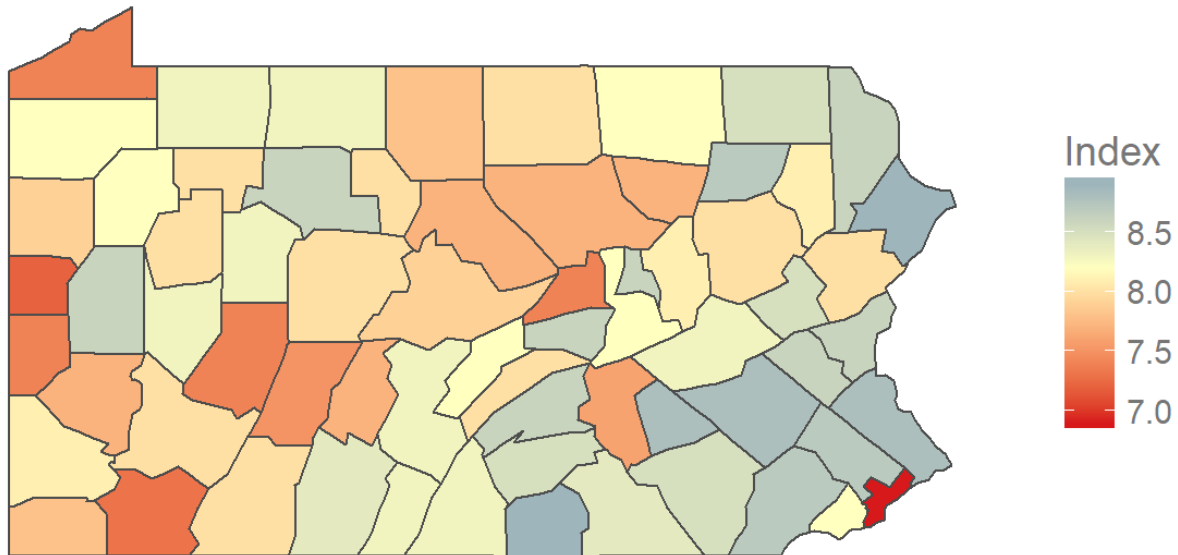


Source: PA Department of Health
Overweight defined as having a BMI in the 85th to < 95th percentile
Obese defined as having a BMI in the 95th or higher percentile

Food Environment

Food environment index (10 is best)

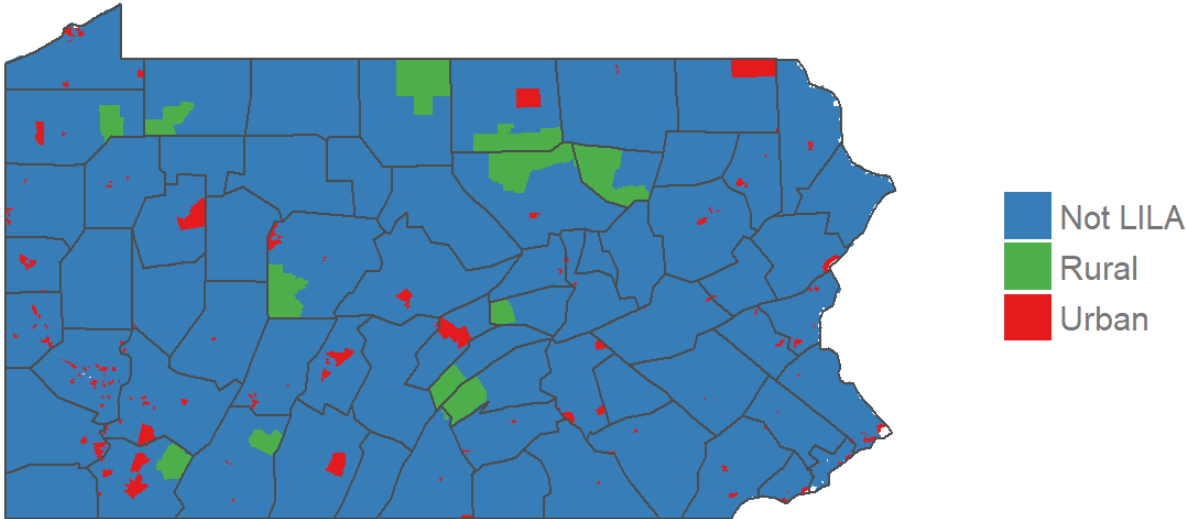
State index: 8.2



Source: County Health Rankings

Food deserts

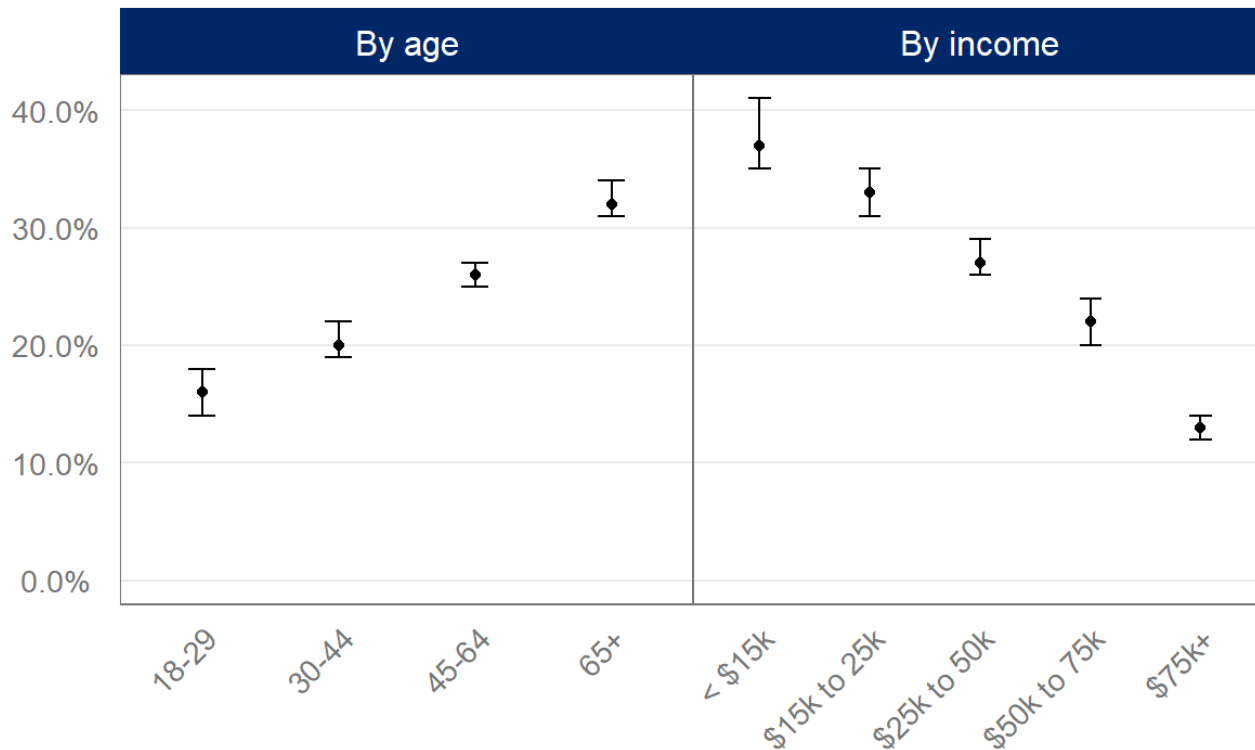
Low-income, low-access (LILA) Census tracts
USDA LILA 1 and 10 measure



Source: United States Department of Agriculture, Food Access Research Atlas
Based on Census 2010 data

Exercise habits

No physical activity in the last month
Shown with 95% confidence intervals

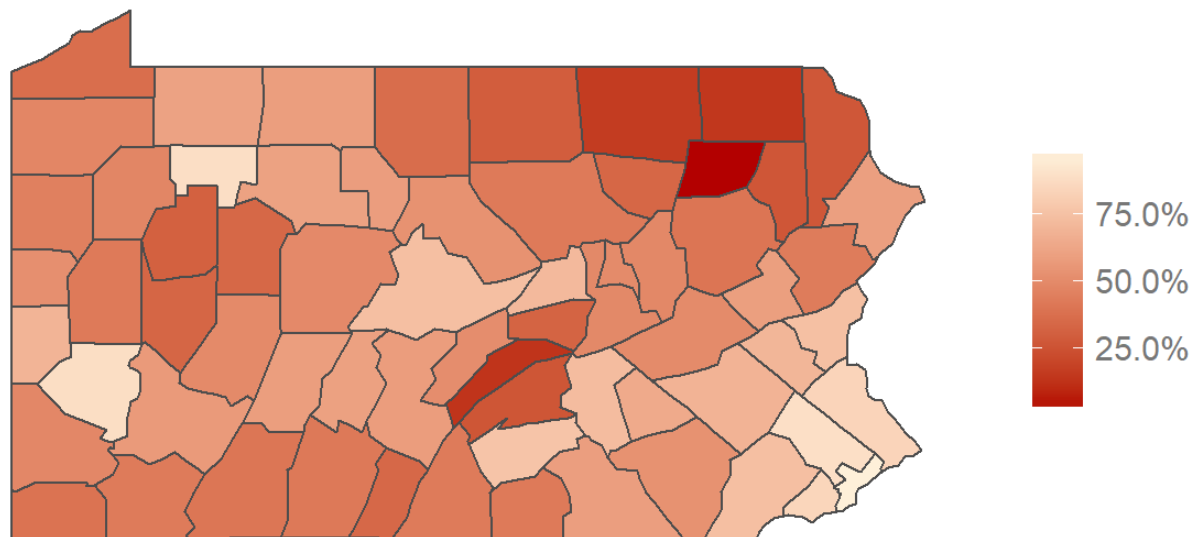


Source: BRFSS 2014-2016

Exercise space

Access to exercise opportunities

Percentage with adequate access to locations for physical activity



Source: County Health Rankings

PA Department of Health Obesity Prevention & Control Strategies

Tiffany S. Bransteitter, MSW
Obesity Prevention & Wellness Section Chief

April 26, 2018

Obesity Section History

- Established 2009 in the Division of Nutrition & Physical Activity, Bureau of Health Promotion and Risk Reduction
- 100% Federal Funding
 - 1305 Grant
 - Preventive Health & Health Services Block Grant

Environmental Approaches

- Promote health and support healthy behaviors across the nation, in states and communities, and in settings such as schools, child care programs, work sites, and businesses
- Changes to policy and social and physical environments that make healthy choices easier, safer, cheaper, and more convenient
- Make the healthy choice the easy choice

Environmental Approaches



Early Care and Education



A web-based continuous quality improvement intervention designed to help child care providers improve the nutrition and physical activity practices within their early childhood care settings.

PA NAP SACC



The Process – Continuous Quality Improvement (CQI)



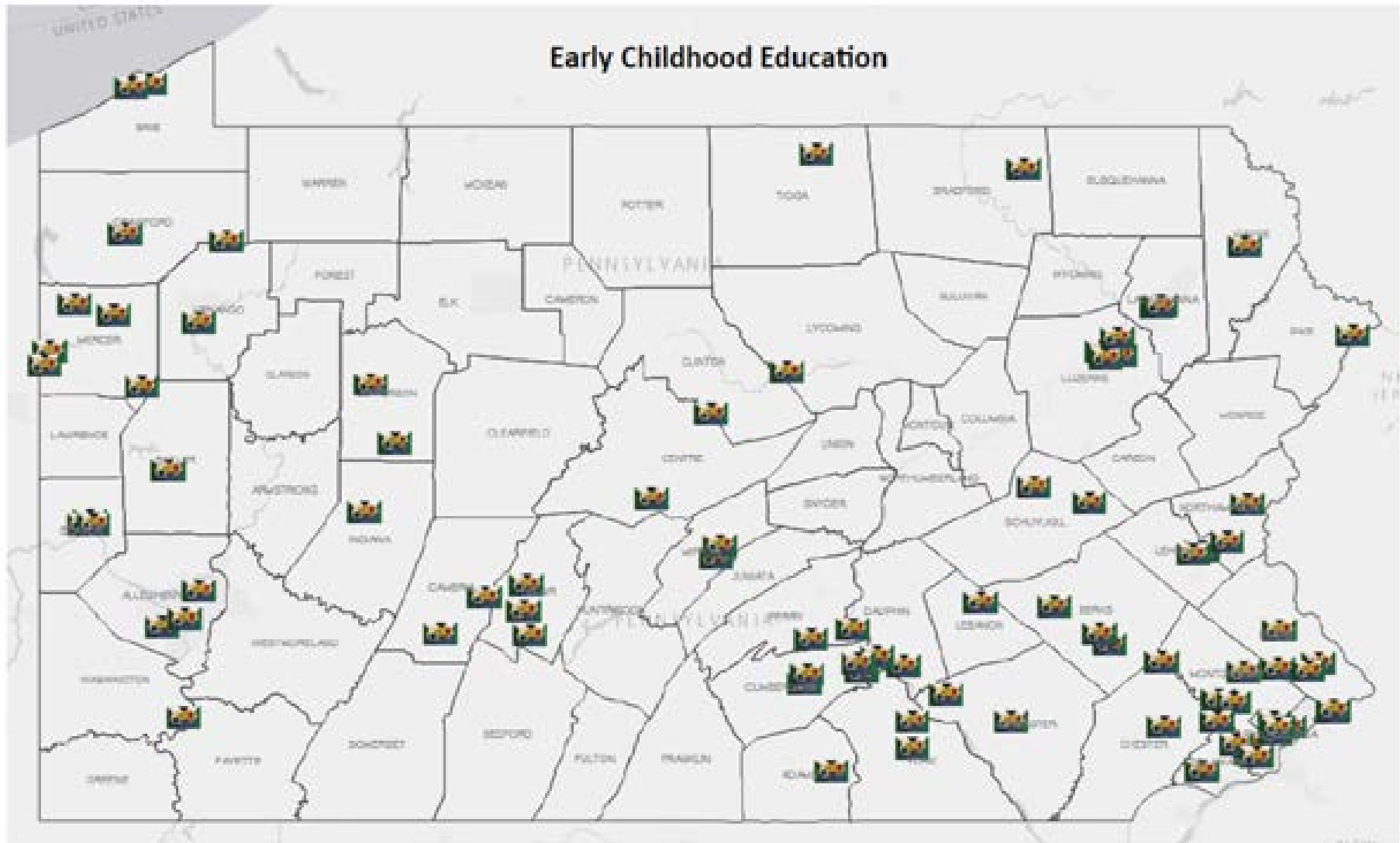
PA NAP SACC Mini-Grants

Who: Licensed early childhood education centers and homes

Benefits:

- \$500 mini-grant incentive
- Technical Assistance throughout the CQI process
- 40 Centers receive 5 consultation hours with a child care health consultant

Participating ECEs



PA NAP SACC Mini-Grant Outcomes

Table 1 : Pre-Post Percentage Compliance on the Nutrition Scales

	Pre	Post	T Score	p Value
N1- Fruits and Vegetables (5 items measuring offerings of fruits and vegetables without use of fats in preparation)	76%	82%	4.7	.0001
N2- Meats, Fats, and Grains (8 items measuring offerings of lean or low fat meats, high-fiber, whole grain foods, and avoidance of fried foods, high-sodium foods, and high fat snacks)	81%	87%	6.1	.0001
N3- Beverages (6 items measuring access to water, and reduction of offerings in fruit juice and sugary or sweetened beverages)	82%	88%	7.7	.0001
N4- Feeding Environment (13 items measuring a variety of factors: 1) children serving themselves; 2) teachers functioning as role models in healthy eating; 3) teaching children to be mindful of whether they are eating due to hunger, or other reasons, and the availability of classroom materials that market healthy foods)	76%	84%	10.2	.0001
N5- Menus and Variety (2 items measuring length of time before menus change and variety of foods offered)	80%	88%	5.1	.0001
N6- Nutrition Education and Professional Development (six items measuring the frequency and breadth of nutrition education provided to the children and their families)	68%	85%	12.3	.0001
N7- Policy Implementation (one item measuring the degree to which ECEs have written policies on a number of child nutrition topics)	54%	79%	13.3	.0001

PA NAP SACC Mini-Grant Outcomes

Table 2: Pre-Post Percentage Compliance on the Physical Activity Scales Pre Post T Score p Value

	Pre	Post	T Score	p Value
PA1- Time Provided (3 items measuring the amount of time for free, unstructured play and structured play, as well as the longest period of time in a given day that a child is expected to remain seated)	64%	76%	8.9	.0001
PA2- Indoor and Outdoor Play Environments (11 items measuring access to portable play equipment, space for indoor and outdoor play, and access to gardening)	71%	84%	10.9	.0001
PA3- Teachers' Practices (4 items measuring using loss of physical play as punishment, functioning as a role model in activities, building physical activity into the routine of the day, and displaying marketing materials that promote physical activity)	75%	88%	12.2	.0001
PA4- Physical Education and Professional Development (6 items measuring the frequency and breadth of physical education provided to staff and the children and their families)	69%	87%	13.2	.0001
PA5- Policy Implementation (one item measuring the degree to which ECEs have written policies on a number of factors that encourage physical activity at the ECE)	57%	82%	12.3	.0001
PA6- Screen Time (11 items that measure limiting the amount of screen time (i.e., watching TV, computer games) children receive)	71%	83%	89.6	.0001

Building Health Schools



Why Schools?

55 MILLION SCHOOL KIDS

Each one of us can help improve the eating and activity habits of the **55 MILLION** school kids in this country and, in the process, improve their health so they can succeed in the classroom.

GOOD FOOD

ACTIVE BODIES

KIDS EQUIPPED FOR SUCCESS!

Kids who attend "healthy" schools have fewer absences, higher academic achievement and self-esteem and are more likely to graduate from high school.

PHYSICAL ACTIVITY SUPPORTS ACHIEVEMENT

Even moderate exercise, like walking, increases brain activity.

KIDS WHO EAT WELL, LEARN BETTER

Students who eat school breakfast have been shown, on average, to attend 1.5 more days of school per year and score 17.5% higher on standardized math tests.

HEALTHIER PRACTICES CAN INCREASE SCHOOLS' BOTTOM LINES

Schools can get a financial boost by offering more nutritious meals & snacks. Students will buy and eat healthier foods and beverages.

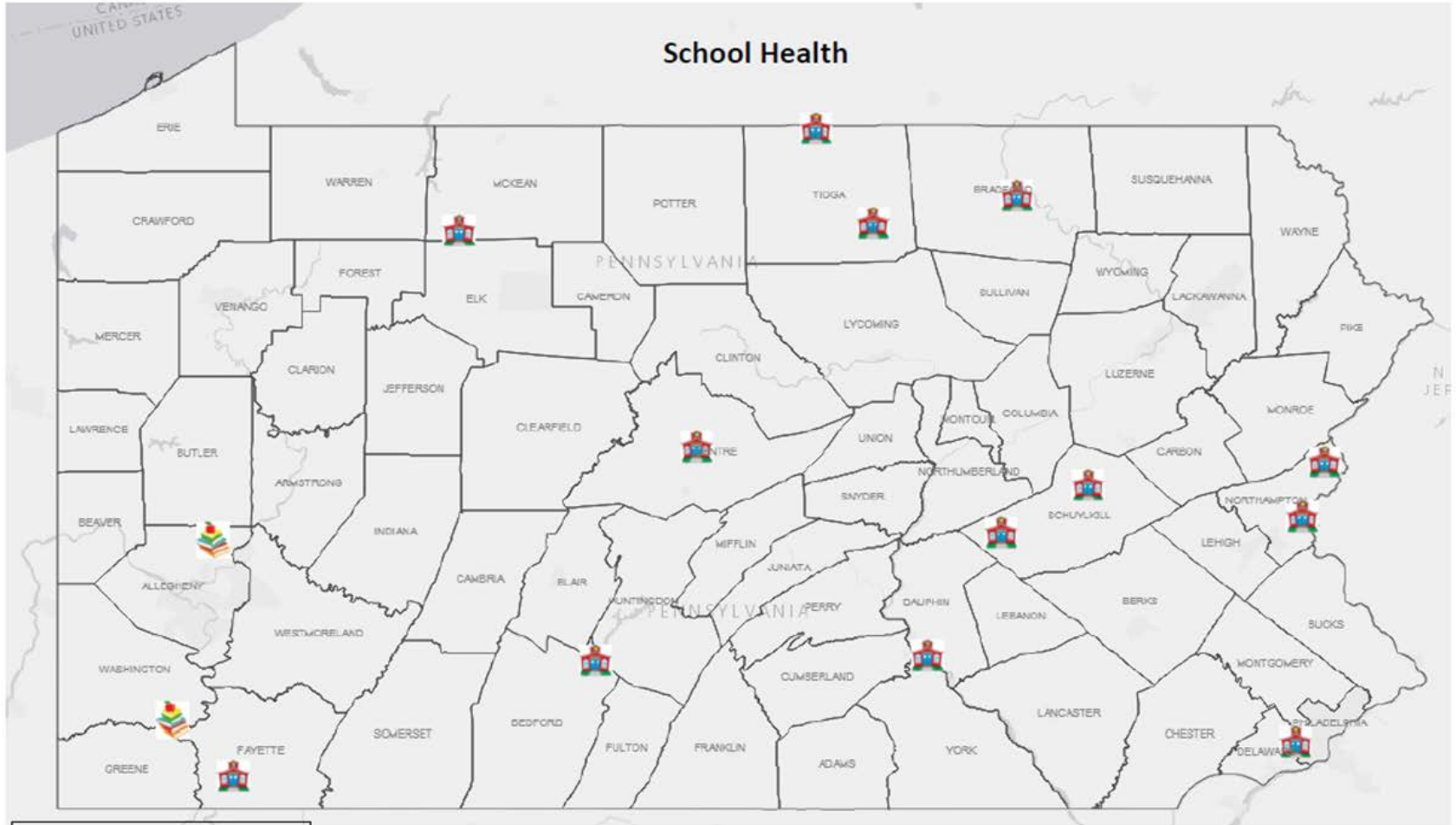
EVERY KID HEALTHY

Visit ActionforHealthykids.org, where you can read *The Learning Connection: What You Need to Know to Ensure Your Kids Are Healthy and Ready to Learn* and in under **1 minute**, you can take the *Every Kid Healthy Pledge*. You'll have access to our **free** programs, volunteer opportunities and school grants.

Action for Healthy Kids®


Northwestern Mutual® Foundation

BHS Participating School Districts




Legend

Targeted School Districts



BHS Affiliates



Building Healthy Schools Program

Healthy Schools Program **framework**

CRITERIA FOR DEVELOPING A HEALTHIER SCHOOL ENVIRONMENT



ALLIANCE FOR A
HEALTHIER
GENERATION



- School Health and Safety Policies and Environment
- Health Education
- Physical Education and other Physical Activity Programs
- Nutrition Services
- Health Promotion for Staff
- Family & Community Involvement

Evaluation & Outcomes

- WellSAT
- Youth Risk Behavior Survey (YRBS)
- School Health Profiles (SHP)
- BMI data
- Number of staff receiving professional development
- Number of students in districts where staff received professional development

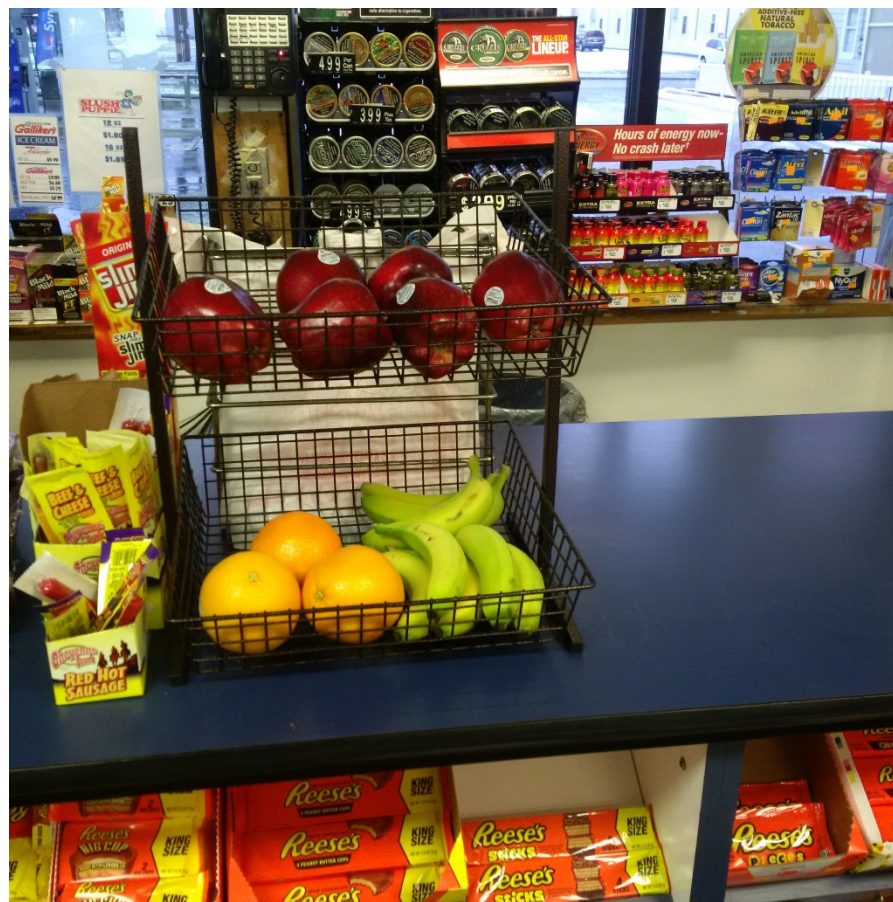
PA Healthy Corner Store Initiative



Pennsylvania Healthy Corner Store Initiative 2017-18 Participating Cities



PA Healthy Corner Store Initiative



WalkWorks



- Increase opportunities for physical activity by planning, implementing and marketing community-based walking routes utilizing the built environment;
- Promote and establish walking groups for social support, and
- Promote policies designed to increase opportunities for physical activity.

WalkWorks

- Identifies and promotes safe walking routes;
- Offers social support through guided, community-based walking groups;
- Helps schools develop walk-to-school programs; and
- Educates partners and officials regarding local policies and planning to support walkability.



Southside Cheston Route



- ① Easton Area Neighborhood Center
Urban Farm
- ② Stewart Silk Mill
- ③ Christ United Methodist Church
- ④ Cheston Pioneer Park
- ⑤ Ada B. Cheston Elementary School
- P** Parking

..... Distance 1.2 Miles

Southside Cheston Route

1

Easton Area Neighborhood Center Urban Farm

The Urban Farm's volunteer staff provides fresh-grown produce and teaches sustainable gardening while donating much of the produce to the West Ward through the Veggie Van Project. The Center also provides transitional housing to working families, a food pantry and utility assistance to low-income community families.

2

Stewart Silk Mill

Stewart Silk Company opened on this 4-acre lot in the early 1900's, later becoming Black Diamond Enterprises. Though weeds climb a rusty chain-link fence around its perimeter, a mural painted on an exterior Mill wall in 1996, by children from neighboring Cheston Elementary School, can still be seen through fading paint.

3

Christ United Methodist Church

Music and inclusivity are hallmarks of this South Side Easton landmark. The Church building is a beautiful, towering structure, dedicated in 1926, and serves the community through partnerships with mission work, food drives and by providing meeting space for local organizations.

4

Cheston Pioneer Park

This nice little pocket park, situated across the street from Cheston Elementary, is equipped with playground swings, slide and benches overlooking the expansive Pioneer Field. Great place for families to take a breather after your walk!

5

Ada B. Cheston Elementary School

Cheston enrolls about 550 students in elementary grade levels K-4. Part of the Easton School District, it has served students on Easton's Southside since 1967. In 2015, Cheston became a United Way Community School, which creates partnerships between the school and other community resources to better serve area families.

Plans and Policies

Development of Plans and Policies to Enhance the Built Environment and Expand Opportunities for Physical Activity

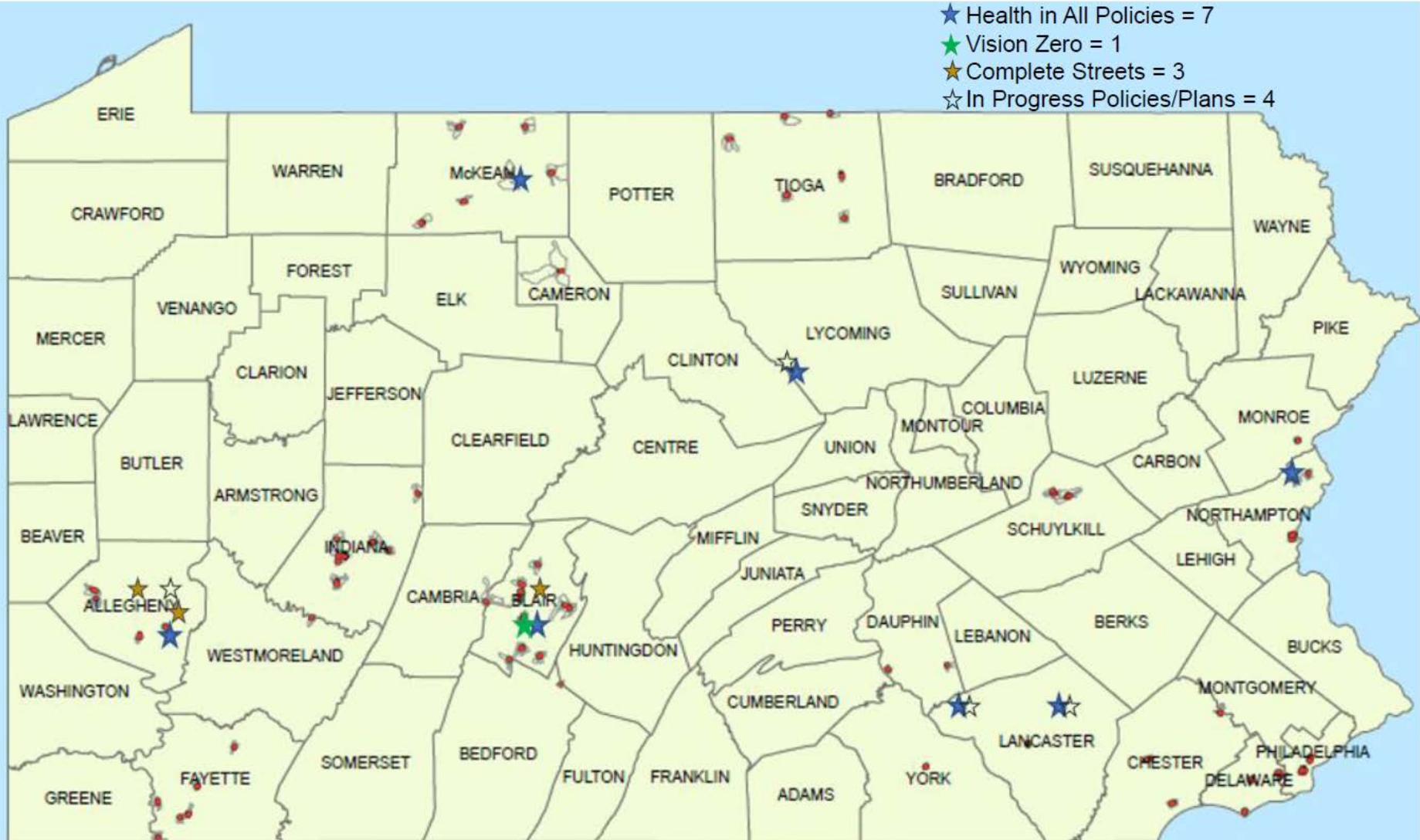
- For municipal or similar local governmental entities

Purpose

1. Develop transportation plans with an emphasis on walking and biking; and/or
2. Develop policies – such as Complete Streets or Vision Zero – that include language in support of environmental changes for enhancing places for physical activity with an emphasis on walking.



WalkWorks



Educating Physicians in their Communities

EPIC® • Pediatric **O****B****E****S****I****T****Y**

Evaluation, Treatment and Prevention
In Community Settings



EPIC Pediatric Obesity

- Assure universal childhood obesity screening of all children;
- Identify appropriate patient education materials to prevent and treat overweight children; and,
- Refer patients to community resources such as weight management programs and registered Dietitian.

What's Next

- Expand on the foundational work of 1305
- Target strategies to address obesity in disparate populations

Thank You

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Obesity and Cancer: Approaches to Weight Loss Treatment

David B. Sarwer, Ph.D.

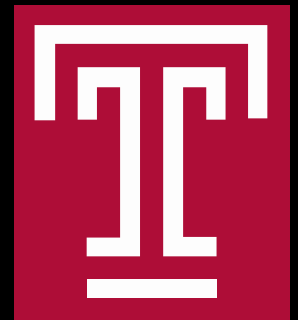
Associate Dean for Research

Professor of Social and Behavioral Science

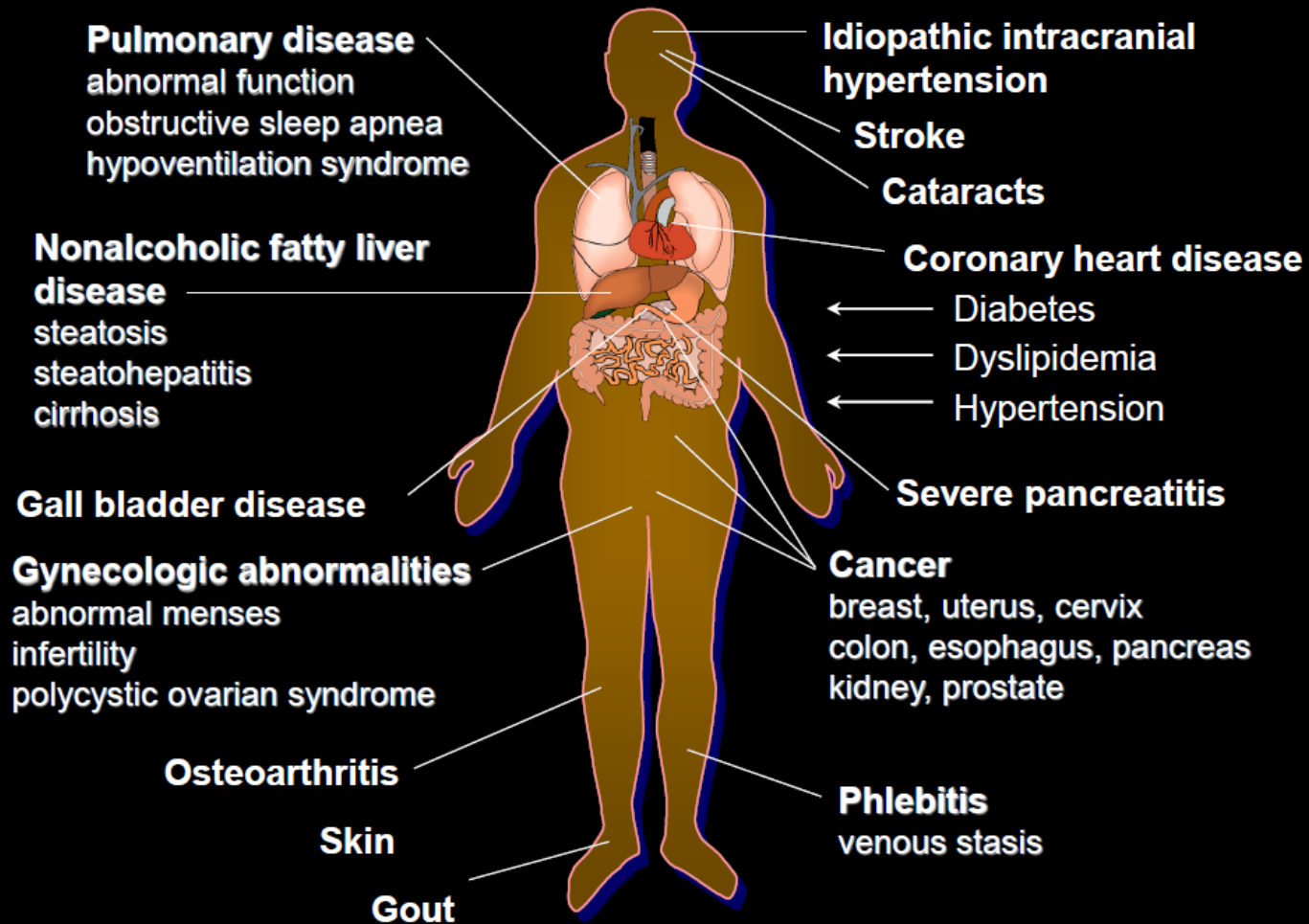
Director, Center for Obesity Research and Education

College of Public Health

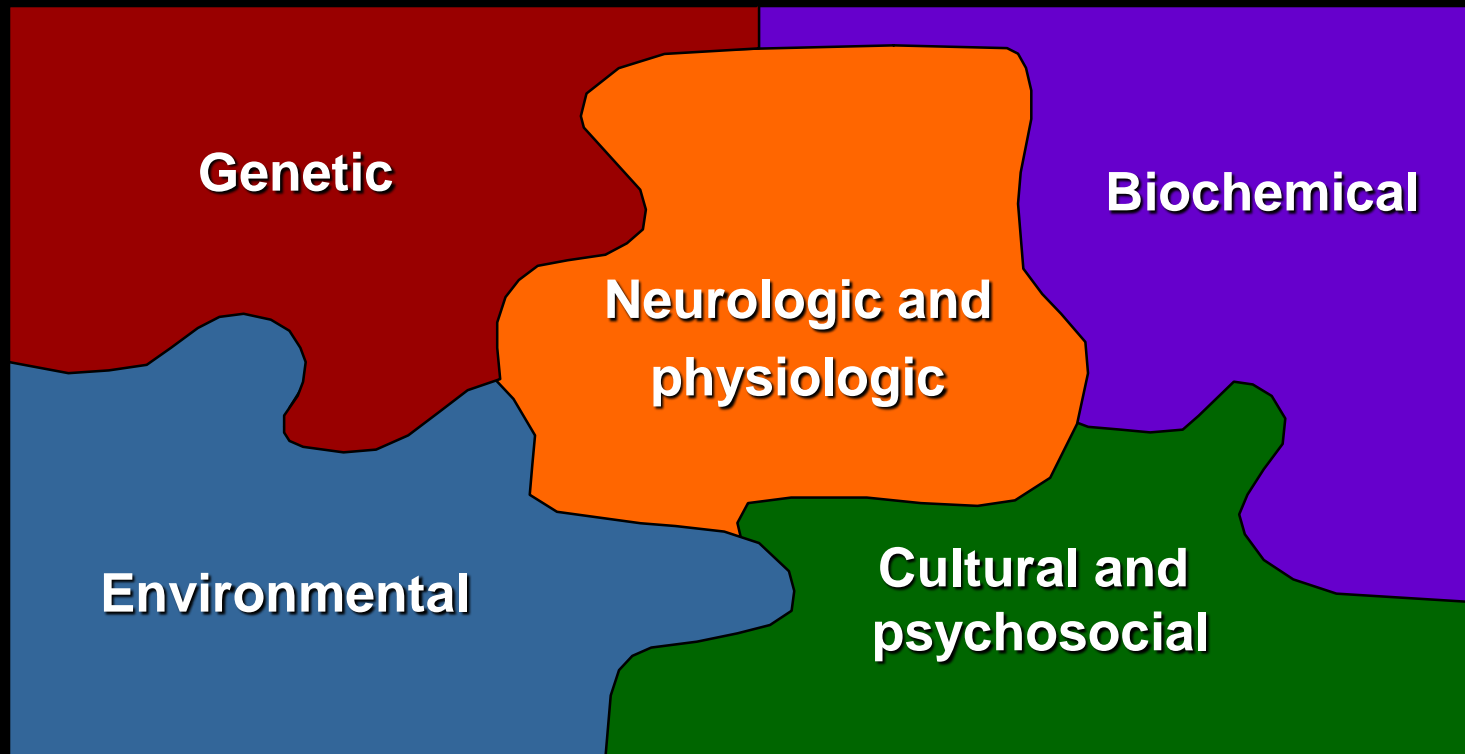
Temple University



Medical Complications of Obesity

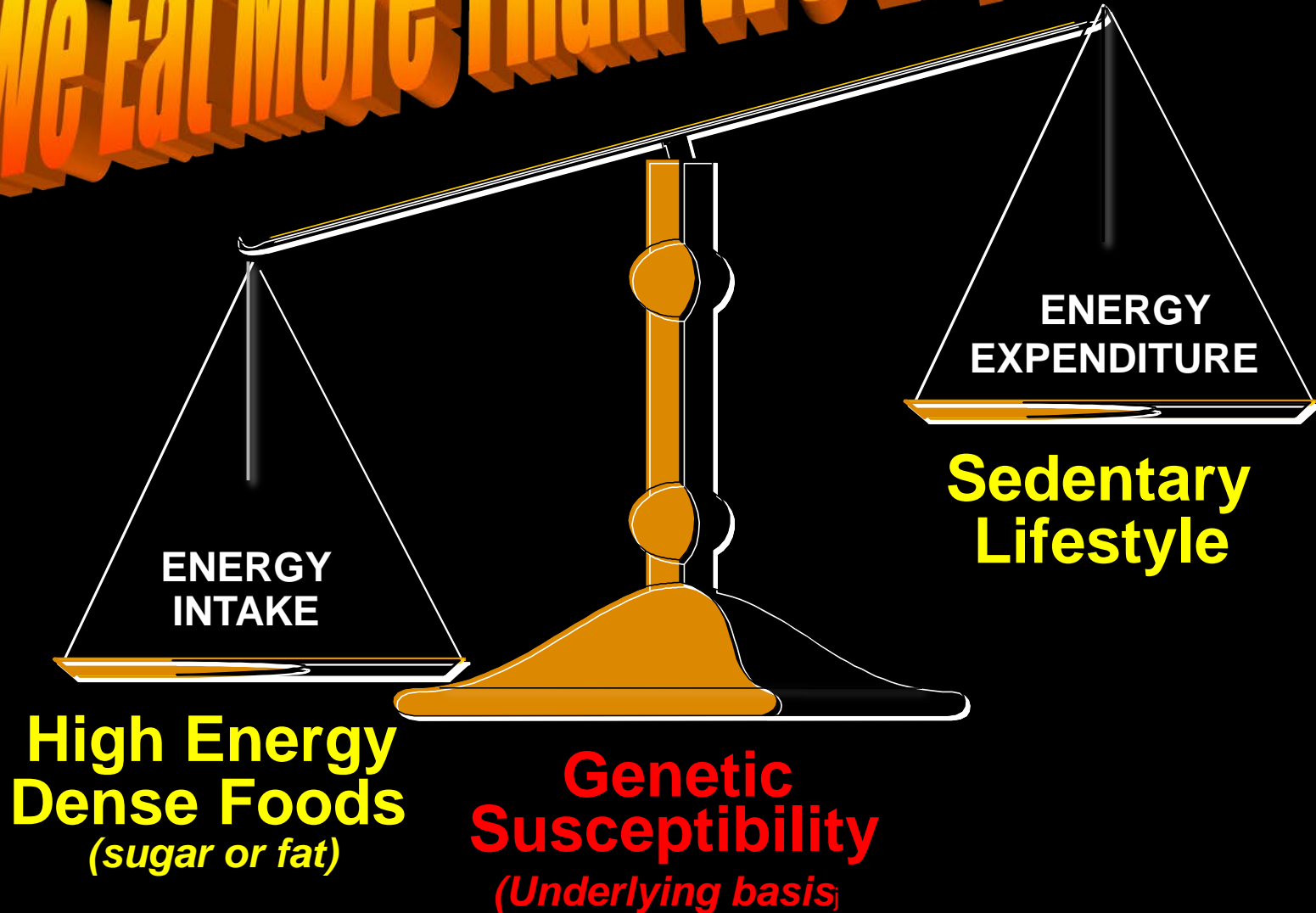


Obesity as a Multifactorial Disease



Thomas PR, ed. Weighing the Options. Wash DC: Natl Acad Press; 1995:2; Williamson DF. N Engl J Med. 1999;341:1140; Koplan JP, Dietz WH. JAMA. 1999;282:1579


We Eat More Than We Expend



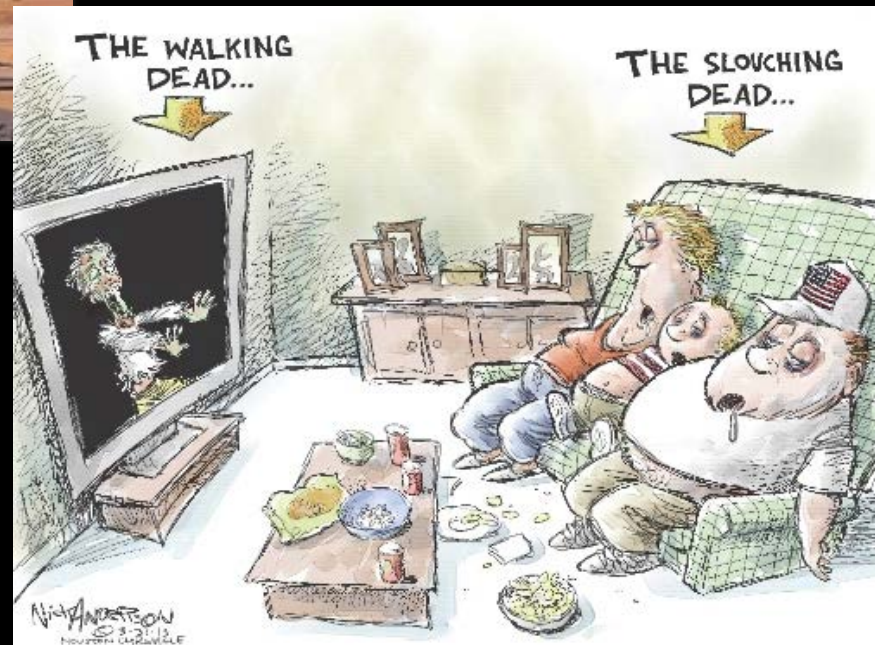
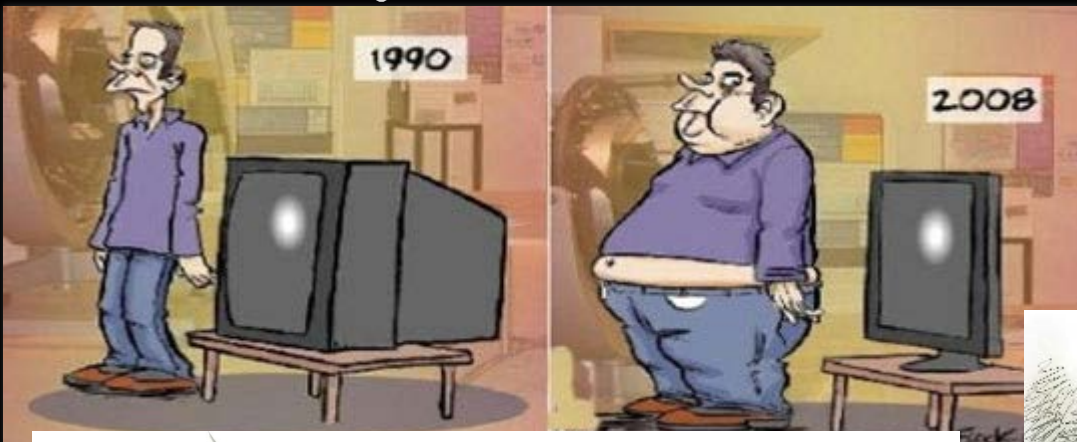
Increasing Caloric Intake

Energy Intake (kcal)	NHANES 1 (1971-74)	NHANES 2 (1976-80)	NHANES 3 (1988-94)	NHANES 4 (1999-2002)
All	1968 ± 20	1942 ± 16	2172 ± 18	2205 ± 16
Men	2420 ± 30	2409 ± 26	2627 ± 27	2616 ± 22
Women	1537 ± 17	1503 ± 13	1741 ± 14	1820 ± 20

Increasing Portion Sizes

20 Years Ago	Today	Difference	20 Years Ago	Today	Difference
 333 Calories	 590 Calories	257 More Calories	 85 Calories	 250 Calories	165 More Calories
 500 Calories	 850 Calories	350 More Calories	 210 Calories	 500 Calories	290 More Calories
 500 Calories	 1,025 Calories	525 More Calories	 270 Calories	 630 Calories	360 More Calories

Sedentary Lifestyle



Physical Inactivity and Media Use

- The average child spends upwards of 7 hours per day with screen media, including television, computers, and video games (Kaiser Family Foundation, 2010).
- 76% of 8 to 18 year olds own an iPod or MP3 player, 66% own a cell phone, and 29% own a laptop computer (Rideout et al., 2010).
- The average American home has 4 TVs, 2 computers, and 2 videogame consoles.
- More than half of children ages 8- to 10-year-olds and three quarters of adolescents over age 11 have a television in their bedroom (Rideout et al., 2010).

A Guide to Selecting Treatment: NIH Guidelines*

BMI Category

Treatment	25–26.9	27–29.9	30–34.9	35–39.9	≥40
Diet, physical activity, behavior therapy	Yes with comorbidities	Yes with comorbidities	Yes	Yes	Yes
Pharmacotherapy		Yes with comorbidities	Yes	Yes	Yes
Weight loss surgery				Yes with comorbidities	Yes

*Yes alone indicates that the treatment is indicated regardless of the presence or absence of comorbidities. The solid arrow signifies the point at which therapy is initiated

Lifestyle Modification for Weight Control

- Caloric Restriction--Reduce energy intake by 500-1000 kcal/day (by reducing portion size, fat, and sugar).
- Physical Activity--Exercise \geq 180 min/week.
- Behavioral Modification—Self-monitoring of weight, caloric intake and physical activity

Dietary Plan

- Plan meals/snacks at regular times
- < 250 lb: 1200-1500 kcal/d
 ≥ 250 lb: 1500-1800 kcal/d
- Reduce portion sizes (and sugar/fat)
- Protein: 12%-15%; Fat: 20-35%; Carbohydrate: 40-55%
- ↑ Fruits/vegetables; monounsaturated fats
 (e.g., extra virgin olive oil, almonds)

Physical Activity Recommendations

- Encourage activity ≥ 5 days/week
 - Make it a habit
- Start slowly
 - Begin at 10 min/day and build
- Walking
 - 3-4 mph
 - Bouts of at least 10 min
- Increase programmed activity

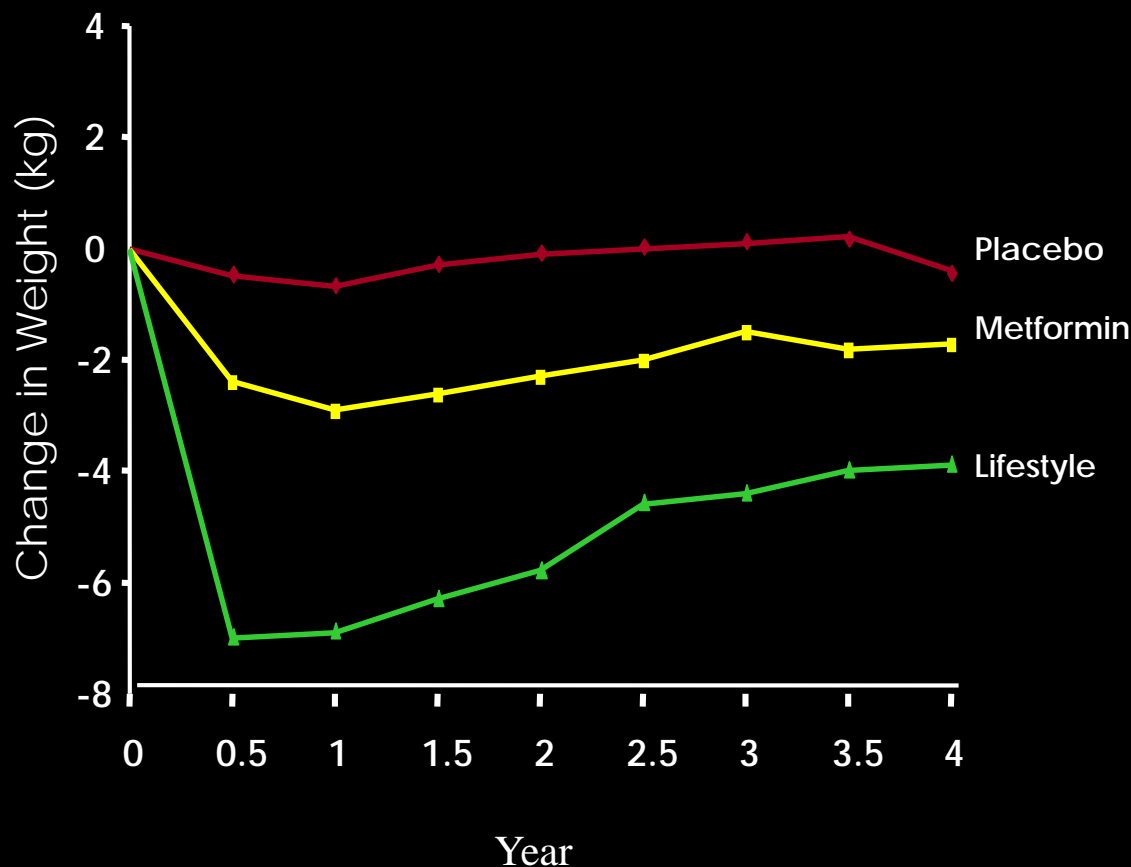
Behavior Modification Strategies

- Self-monitoring
- Stimulus control
- Slowing the rate of eating
- Problem solving
- Cognitive restructuring

Diabetes Prevention Program (DPP)

- Can a 7% reduction in initial weight, combined with increased physical activity, reduce the risk of developing type 2 diabetes in at-risk individuals?
- 3234 patients; BMI = 34.0 kg/m²; Impaired glucose tolerance (95-125 mg/dl)
- Randomly assigned to 4-year trial
 - Placebo
 - Metformin (850 BID)
 - Lifestyle modification intervention

Diabetes Prevention Program: 4 Year Outcomes



COMPREHENSIVE LIFESTYLE MODIFICATION PROGRAM

Weight Loss Induction:
16 individual visits over 6 months

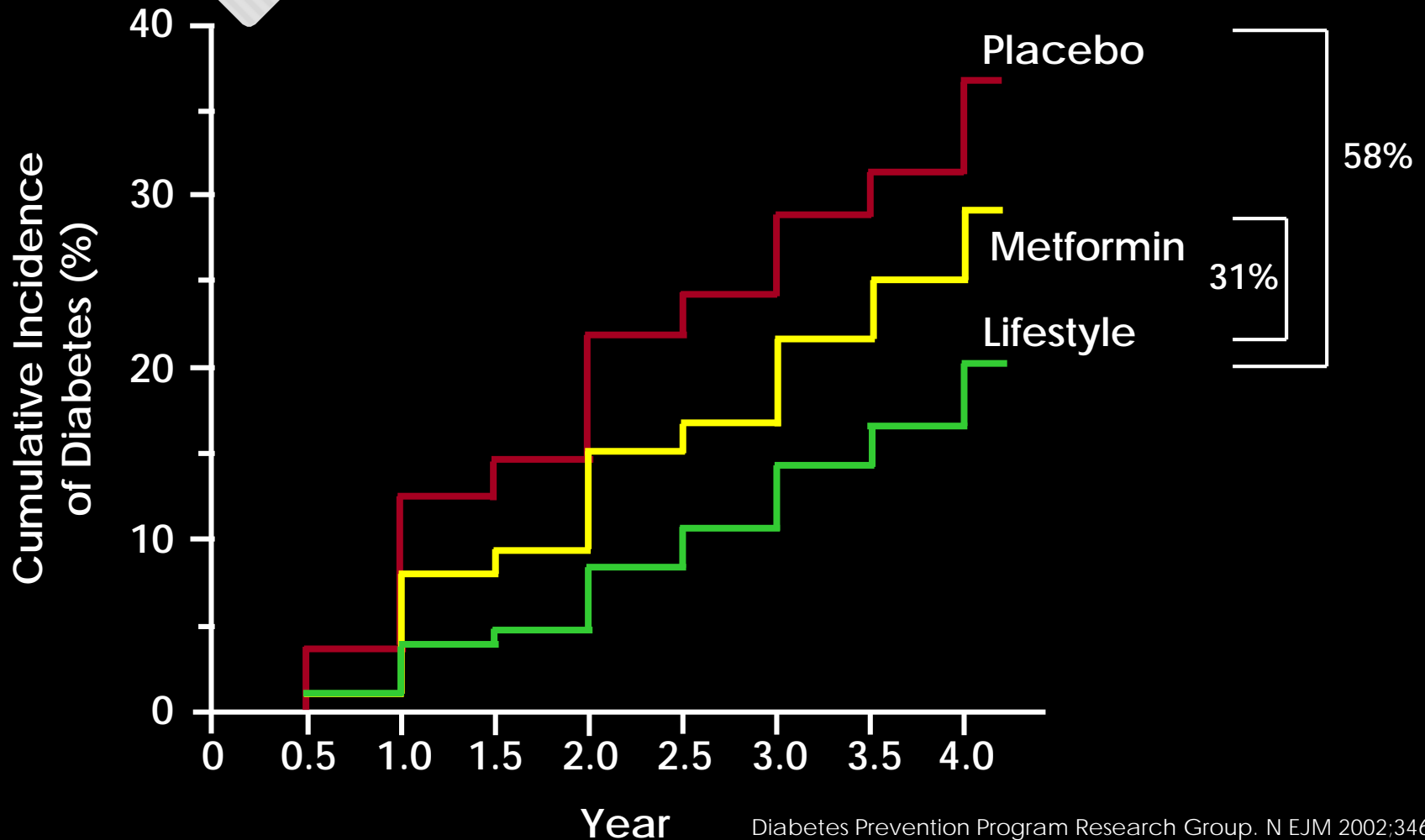
Diet: Low-fat diet, conventional
foods (1200-1800 kcal/d)

Activity: ≥ 150 minutes/week of
moderate intensity exercise

Weight Maintenance: Individual
visits at least every 2 months.

- Three group classes/year for
4-6 weeks (campaigns)
- Toolbox

Diabetes Prevention Program: 4 Year Outcomes

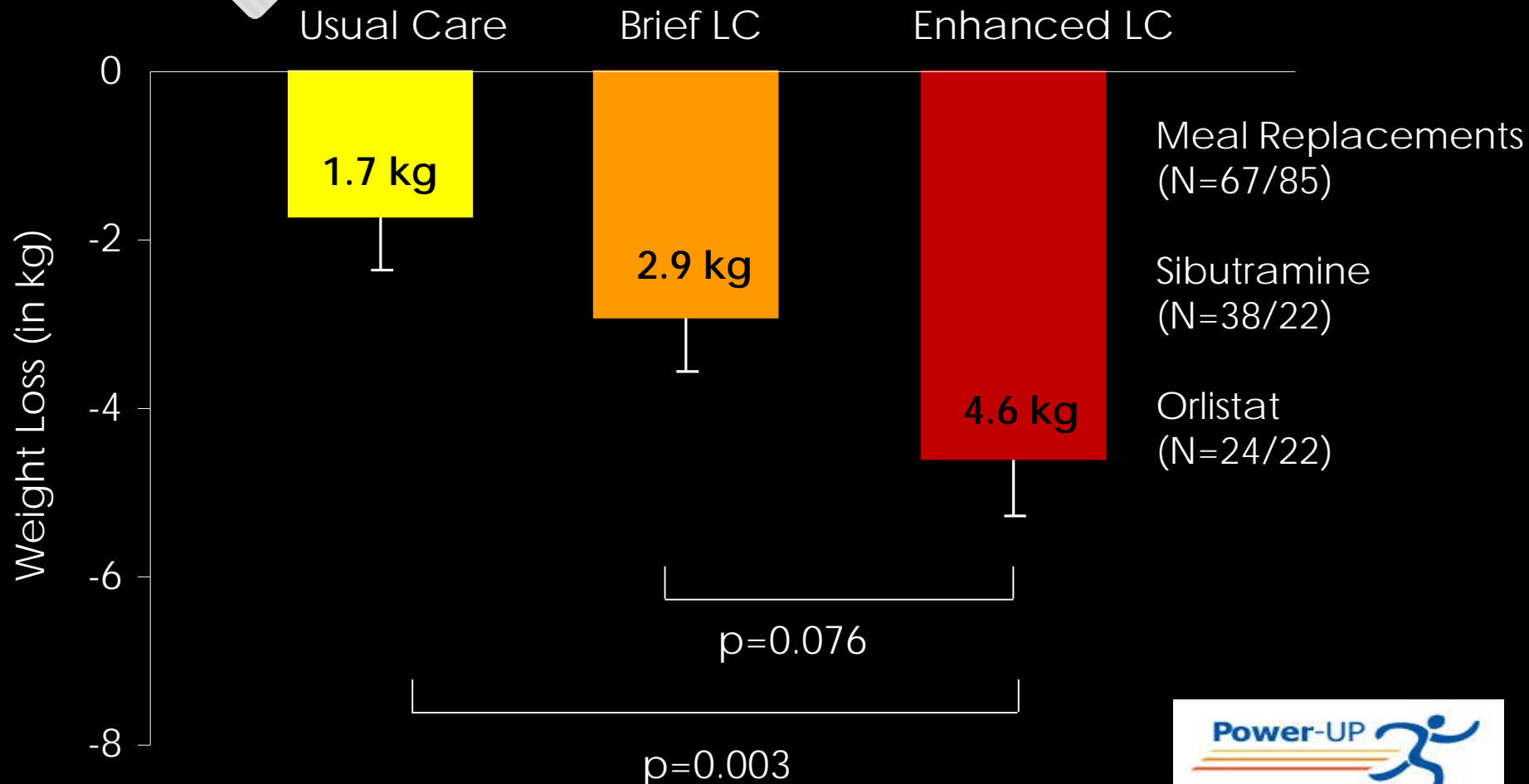


POWER-UP: A Two-Year, Randomized Trial of 3 Interventions with 390 Individuals with Obesity and the Metabolic Syndrome

- **Usual care:** Quarterly PCP visits.
- **Brief lifestyle counseling:** Quarterly PCP visits and approximately monthly, brief visits with medical assistant.
- **Enhanced lifestyle counseling:** PCP visits, same brief lifestyle counseling, and use of meal replacements or weight loss medications (sibutramine or orlistat).



Weight Loss at Month 24 for the Three Interventions



Lifestyle Modification for Weight Control: The Good News

- Several major efficacy studies (DPP, LookAHEAD) have shown that individuals can lose 7-10% of their initial body weight within the first 6-12 months of treatment.
- These losses are associated with significant improvements in weight related comorbidities.
- For these reasons, the AHA and TOS(2014) now consider a 5% weight loss to be “clinically significant” and an appropriate initial goal for weight loss treatment.

Lifestyle Modification for Weight Control: The Promising News

- Several recent studies have suggested that these interventions are feasible and acceptable to cancer survivors (Haggerty et al., 2017; Sturgeon et al., 2018; Winkels et al., 2017).
- In some studies, cancer survivors achieve clinically significant weight losses as well as improvements in weight related comorbidities (Haggerty et al., 2016; Lynch et al., 2017).
- Many contemporary studies now use eHealth/mHealth approaches to foster engagement and reduce burden to patients (Haggerty et al., 2016; Lynch et al., 2017).

Lifestyle Modification for Weight Control: The Bad News

- eHealth/mHealth interventions appear to be somewhat less effective than interventions delivered in face-to-face interactions between patients and providers.
- Regardless of the approach, approximately one-third of patients regain weight within one year; most regain all of their weight within 5 years.
- This observation underscores the need to see weight management as a chronic, lifelong health care behavior.

Important Themes in Weight Loss Counseling

- Use of “Person First” language
- Building Rapport
- Assess with non-judgmental, open-ended questions
- Active, reflective listening
- Empathy v. Finger wagging/scare tactics
- Focus on the “toxic environment”
- Supportive, Problem Focused
- Use of Motivational Interviewing to change health behaviors; avoid personal anecdotes
- Consider referrals for more intensive treatment (pharmacotherapy or bariatric surgery) when appropriate
- Persistence with patience

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QUESTIONS?

Thank you for attending
today's webinar!

*Please take a moment to complete the
survey for the webinar*

Questions?

Contact Joanna Stoms

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