Obesity, Nutrition and Physical Activity

NC IOM Task Force on Adolescent Health

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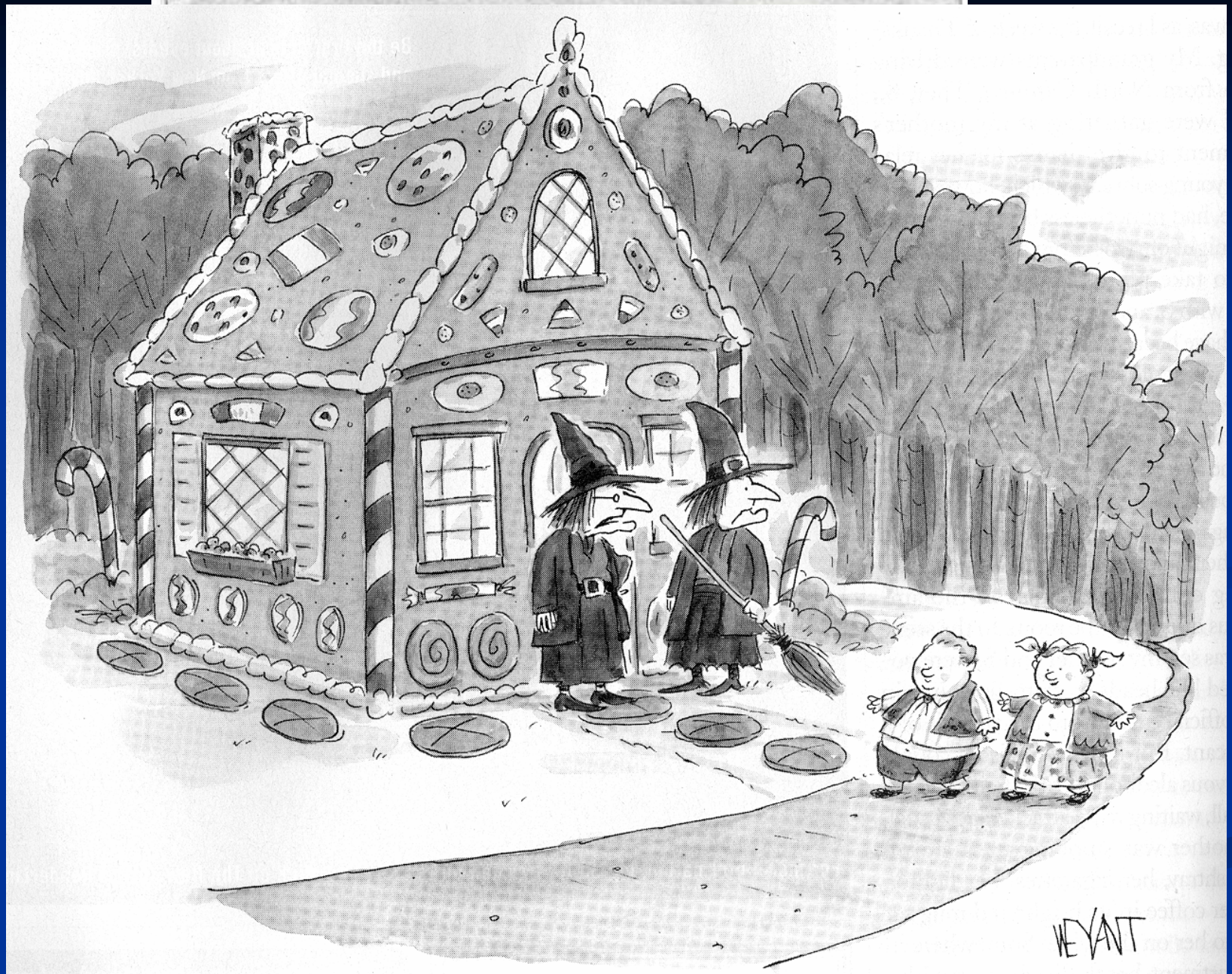
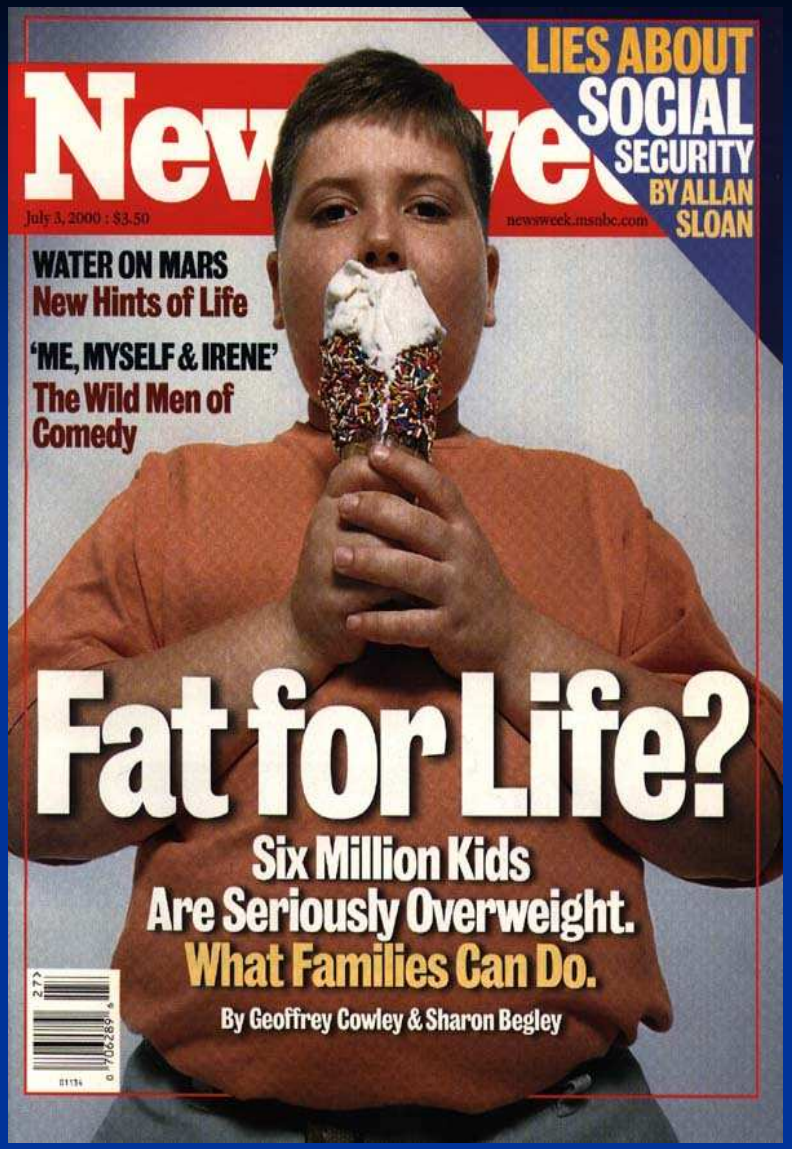
Overview

- What is the situation in North Carolina?
- What are the main contributors to the problem?
- Where are we making progress?
  - Personal behaviors
  - Community/environment
  - Clinical care
  - Public and health policy
- Where are we reaching the tipping point toward greater improvement?
- What can we do to get over the "bump" to achieve greater success?



"Remember when we used to have to fatten the kids up first?"


LIES ABOUT SOCIAL SECURITY BY ALLAN SLOAN
July 3, 2000 : $3.50
newsweek.msnbc.com
WATER ON MARS
New Hints of Life
'ME, MYSELF & IRENE'
The Wild Men of Comedy
Fat for Life?
Six Million Kids Are Seriously Overweight.
What Families Can Do.
By Geoffrey Cowley & Sharon Begley

2000

2003

TIME
JACK ACTS HIS AGE!
Hillary Carroll, 11, has "adult-onset" diabetes
DIABETES
ARE YOU AT RISK?
WHO'S GETTING IT
WHY IT'S STRIKING SO MANY
WHAT YOU CAN DO TO FIGHT IT

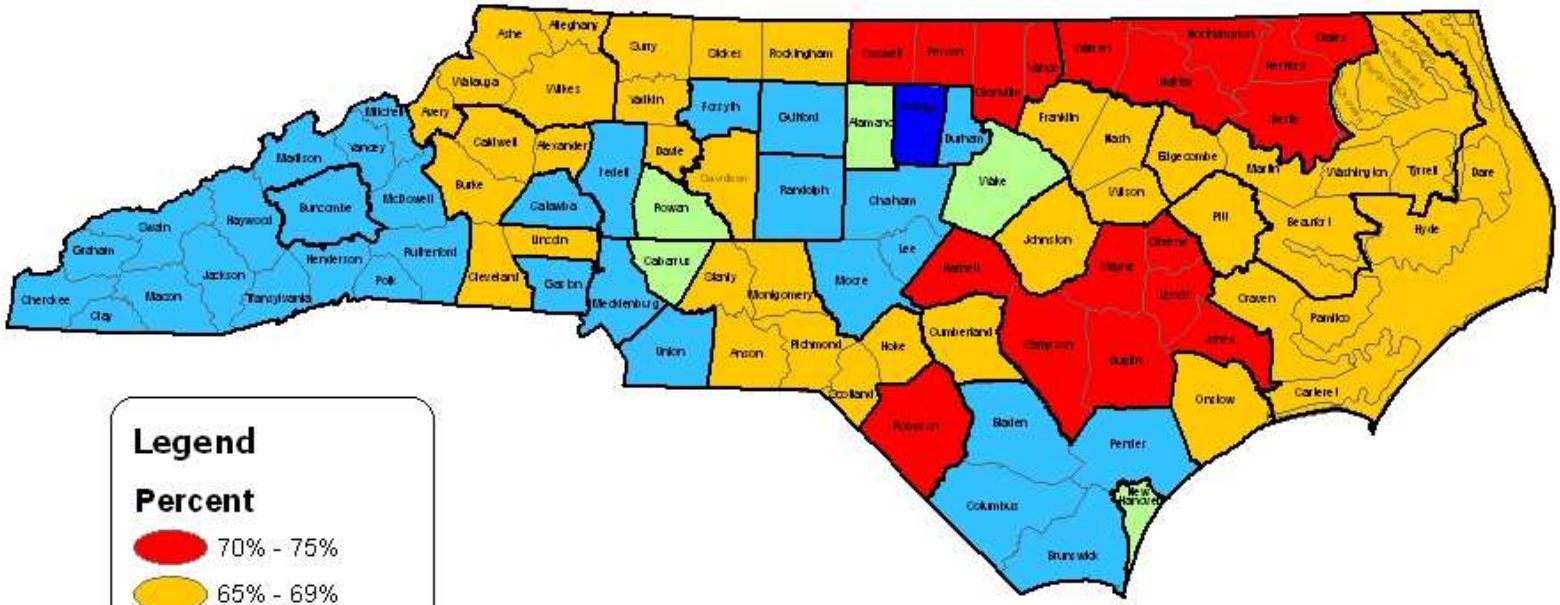
DOUBLE ISSUE
JUNE 23, 2008
How Obama Is Fighting Internet Innuendo
Inside China's Gold Medal Machine
TIME
SPECIAL HEALTH ISSUE
Our Super-Sized Kids
It's not just genetics and diet. An in-depth look at how our lifestyle is creating a juvenile obesity epidemic—and the scoop on how to cure it
www.time.com

2008

Eat Smart Move More NORTH CAROLINA

Percentage of North Carolina Adults Who Are Overweight or Obese

BMI* ≥25



Legend

Percent

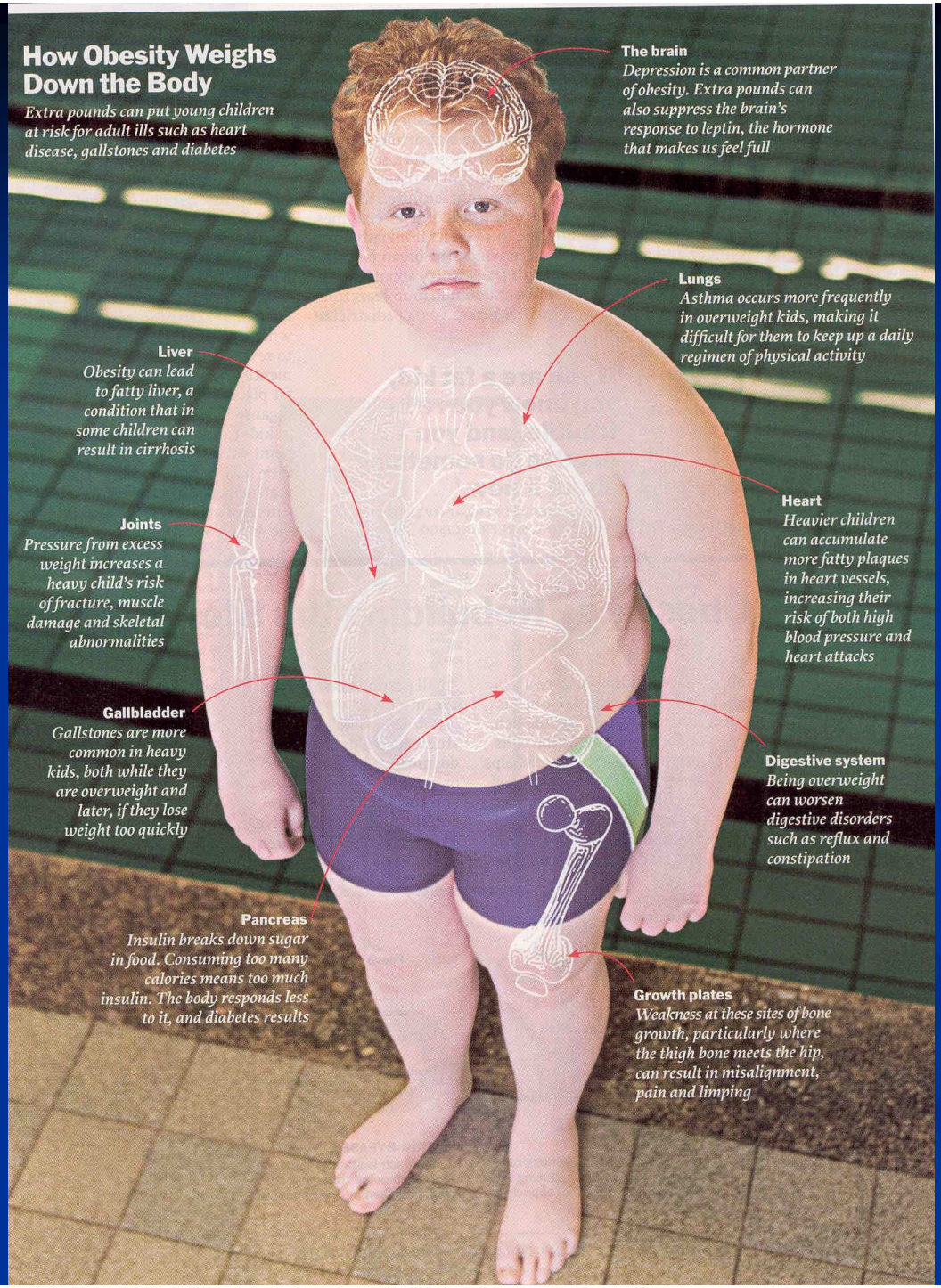
- 70% - 75%
- 65% - 69%
- 62% - 64%
- 57% - 61%
- 47% - 56%
- BRFSS Regions
- County Boundary

Source: 2006 Behavioral Risk Factor Surveillance System (BRFSS)

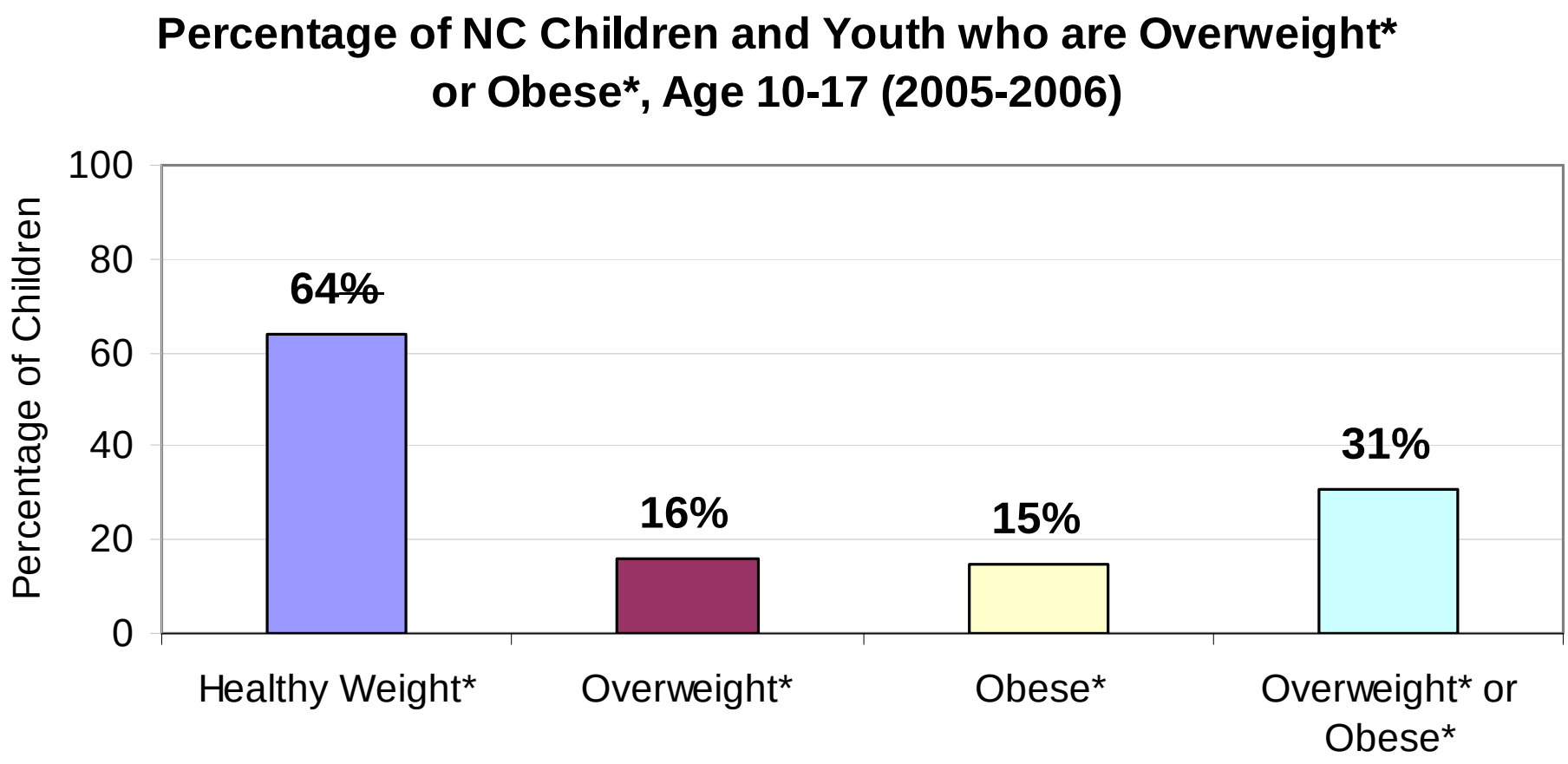
*Body mass index is computed as weight in kilograms divided by height in meters squared:(kg/ m2). BMI is an intermediate variable used in defining overweight and obesity. Underweight=BMI less than 18.5, Recommended Range=BMI 18.5 to 24.9, Overweight=B MI 25.0 to 29.9 and Obese= BMI greater than 30.0

NCPH North Carolina Public Health

NC State Center for Health Statistics

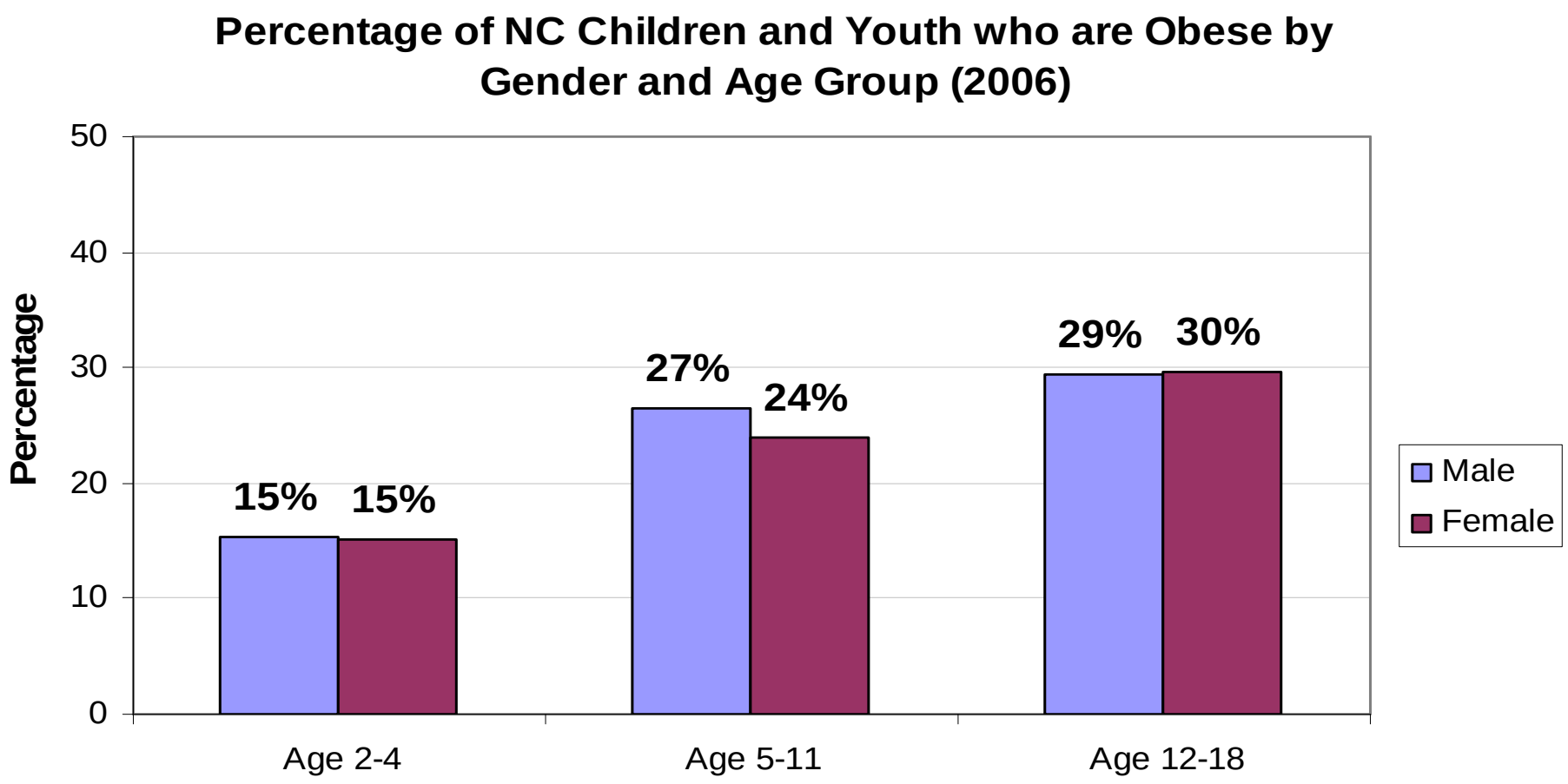

How Obesity Weighs Down the Body
Extra pounds can put young children at risk for adult ills such as heart disease, gallstones and diabetes
The brain
Depression is a common partner of obesity. Extra pounds can also suppress the brain's response to leptin, the hormone that makes us feel full
Lungs
Asthma occurs more frequently in overweight kids, making it difficult for them to keep up a daily regimen of physical activity
Liver
Obesity can lead to fatty liver, a condition that in some children can result in cirrhosis
Heart
Heavier children can accumulate more fatty plaques in heart vessels, increasing their risk of both high blood pressure and heart attacks
Joints
Pressure from excess weight increases a heavy child's risk of fracture, muscle damage and skeletal abnormalities
Gallbladder
Gallstones are more common in heavy kids, both while they are overweight and later, if they lose weight too quickly
Digestive system
Being overweight can worsen digestive disorders such as reflux and constipation
Pancreas
Insulin breaks down sugar in food. Consuming too many calories means too much insulin. The body responds less to it, and diabetes results
Growth plates
Weakness at these sites of bone growth, particularly where the thigh bone meets the hip, can result in misalignment, pain and limping

N.C. Children and Youth



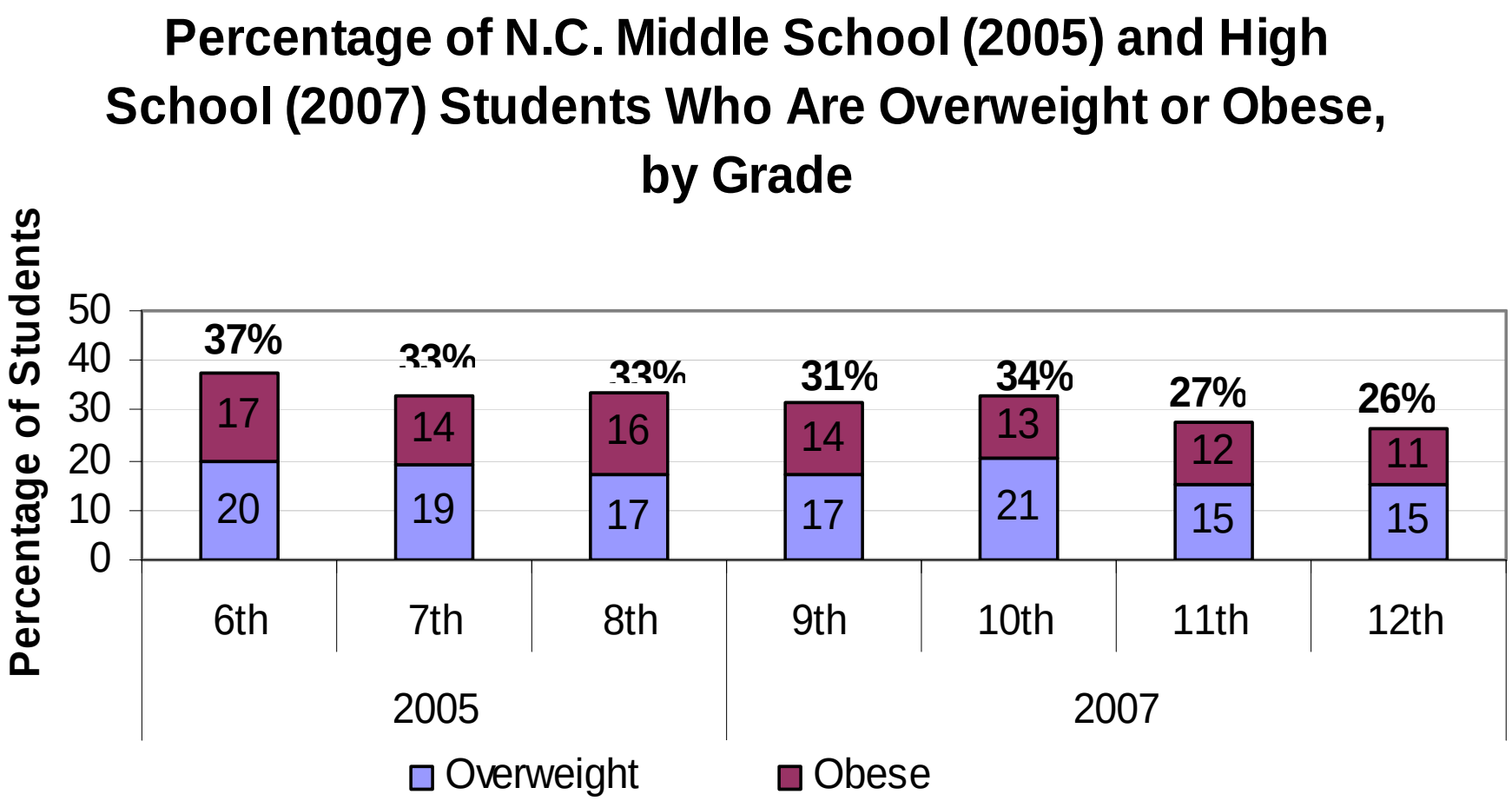
*BMI categories calculated according to parent-reported height and weight of the child.
Source: North Carolina Child Health Assessment and Monitoring Program Data, North Carolina Center for Health Statistics. (2005-2006).

N.C. Children and Youth by Age



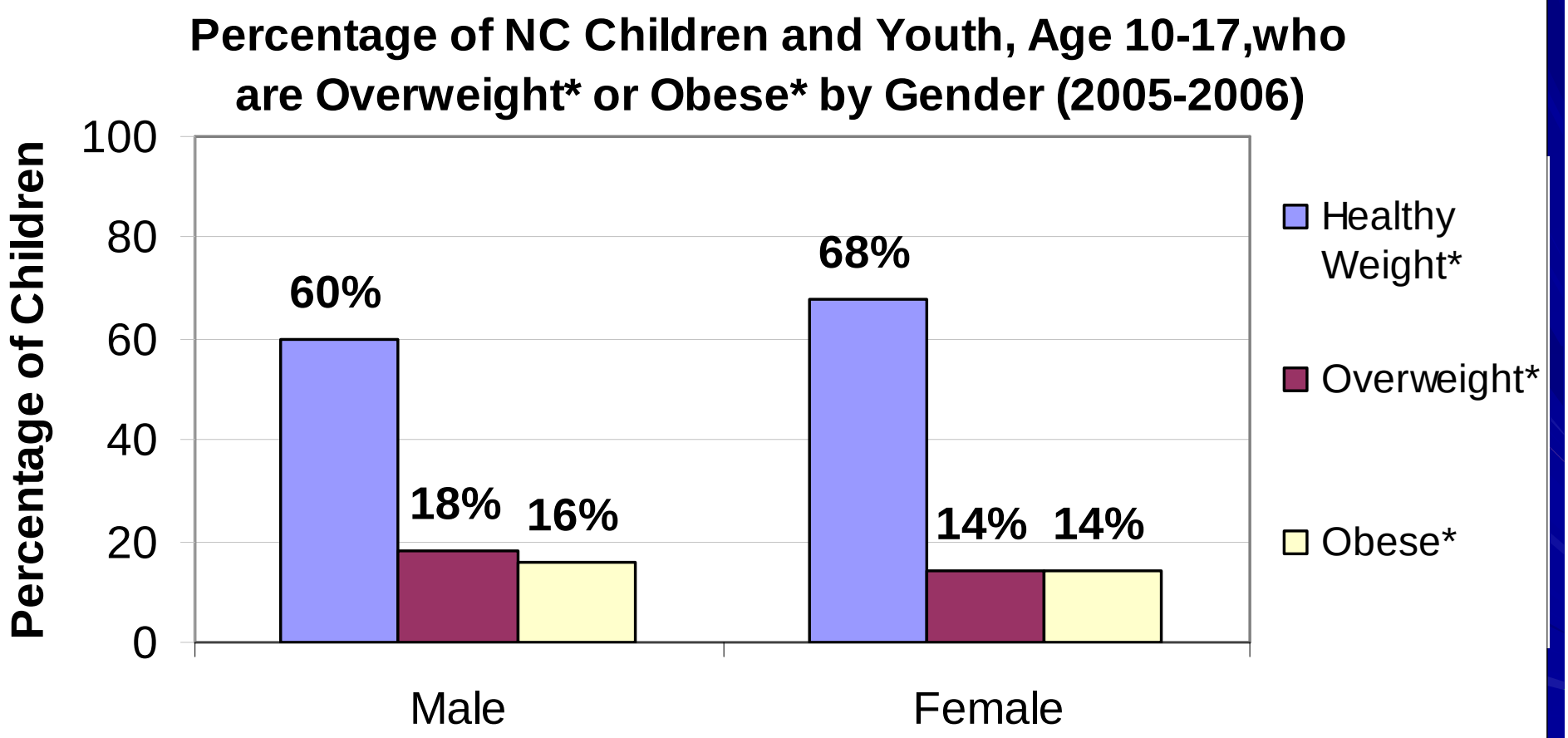
Source: North Carolina-Nutrition and Physical Activity Surveillance System (NC-NPASS) includes data on children seen in North Carolina Public Health Sponsored WIC and Child Health Clinics and some School Based Health Centers. (2006)

N.C. Middle and High School



Source: North Carolina Youth Risk Behavior Surveillance System, North Carolina Department of Public Instruction and North Carolina Department of Health and Human Services. (2005 and 2007).

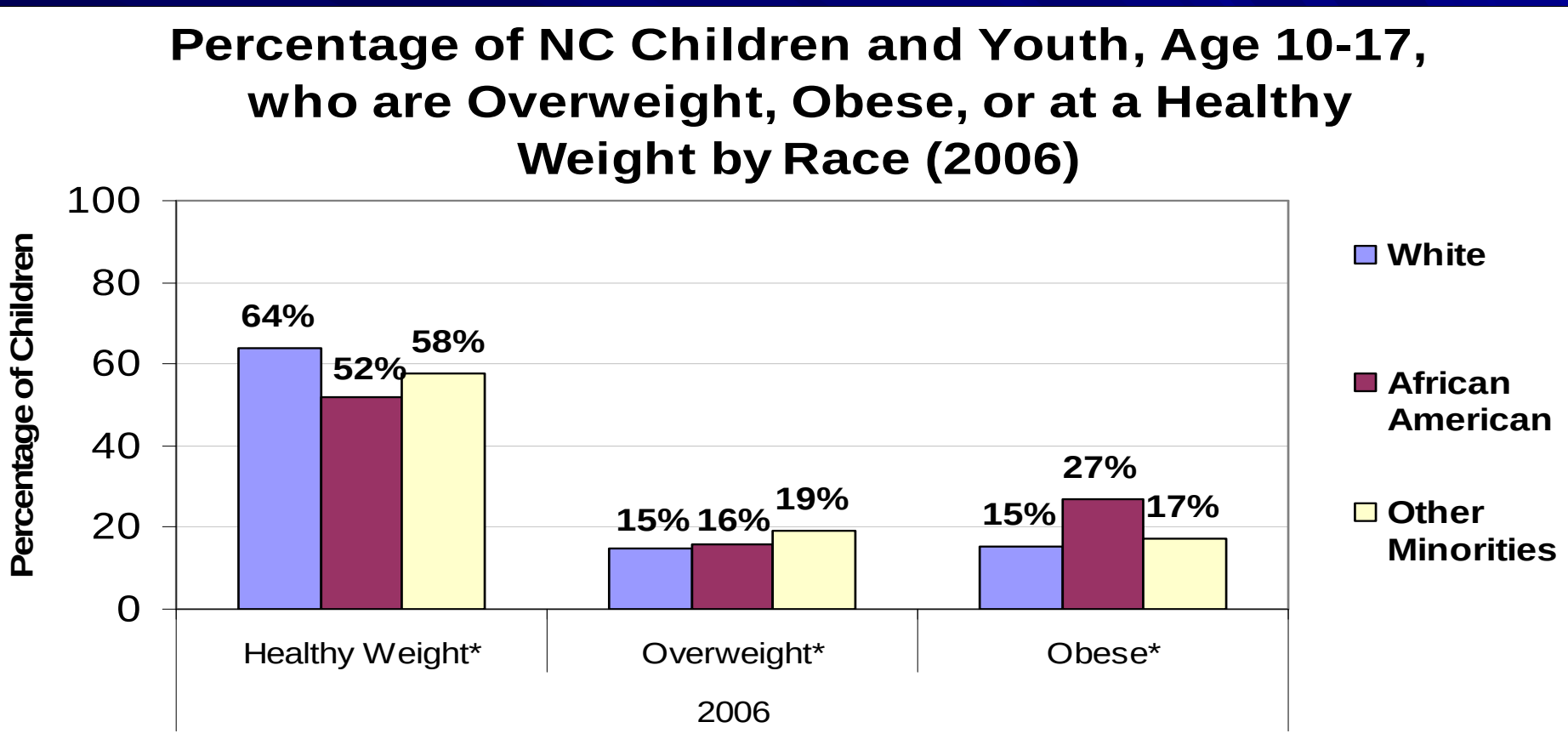
N.C. Children and Youth by Gender



*BMI categories calculated according to parent-reported height and weight.

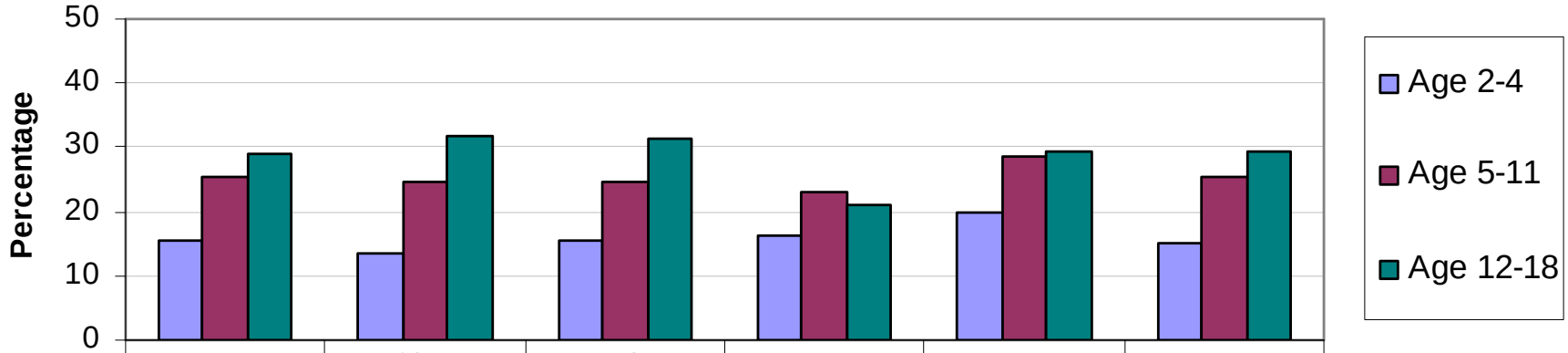
Source: North Carolina Child Health Assessment and Monitoring Program Data, North Carolina Center for Health Statistics. (2005-2006).

N.C. Children and Youth by Race



*BMI categories calculated according to parent-reported height and weight.
Source: North Carolina Child Health Assessment and Monitoring Program Data, North Carolina Center for Health Statistics. (2006).

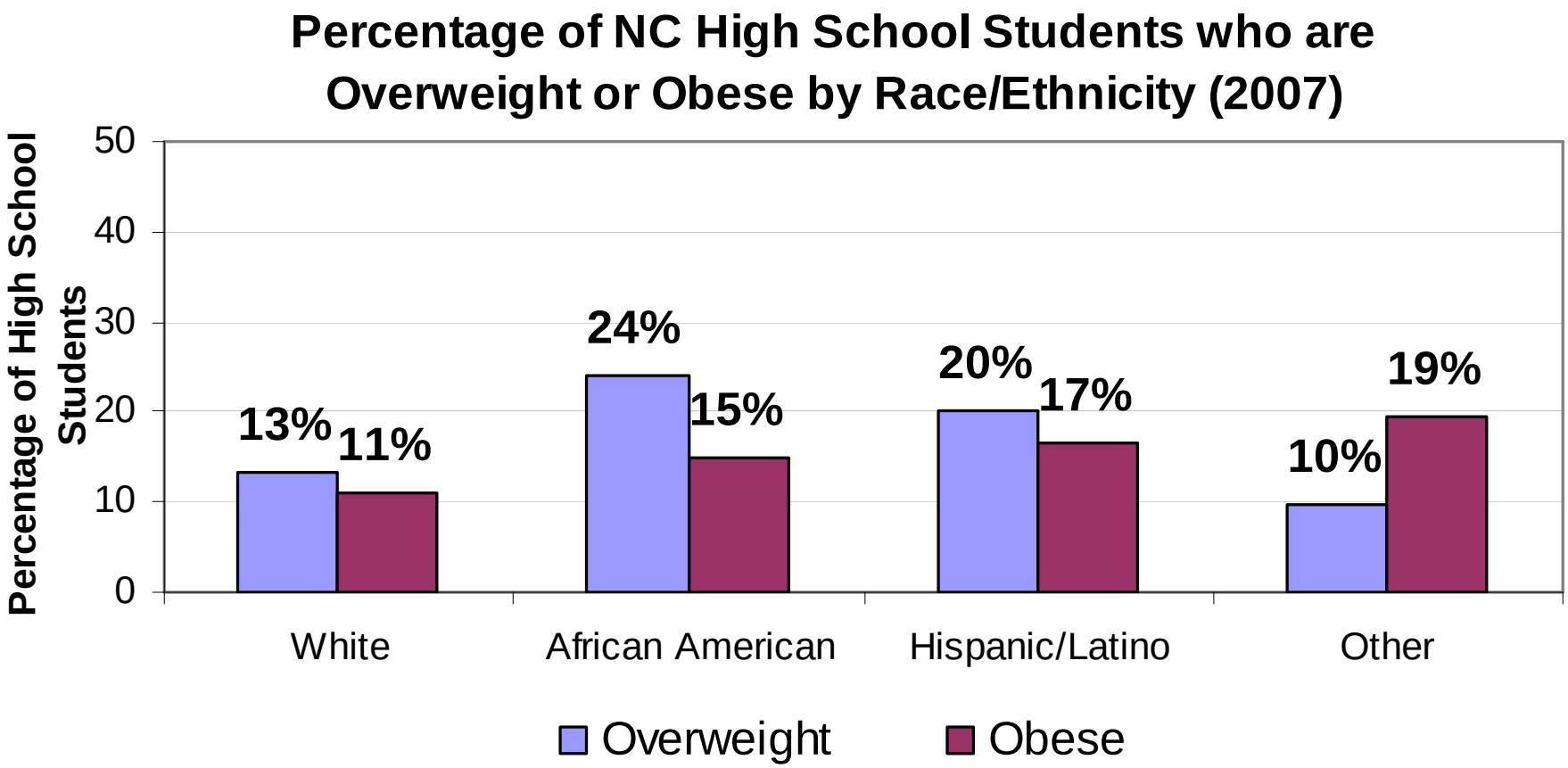
N.C. Children and Youth by Race and Age



	White	African American	Native American	Asian	Hispanic	Total
Age 2-4	15.6	13.3	15.3	16.4	20	15.2
Age 5-11	25.3	24.7	24.8	22.9	28.7	25.2
Age 12-18	28.8	31.8	31.5	21.2	29.4	29.5

Source: North Carolina-Nutrition and Physical Activity Surveillance System (NC-NPASS) includes data on children seen in North Carolina Public Health Sponsored WIC and Child Health Clinics and some School Based Health Centers. (2006)

High School Students by Race/Ethnicity



Source: North Carolina Youth Risk Behavior Surveillance System, North Carolina Department of Public Instruction and North Carolina Department of Health and Human Services. (2007).

TION, $1.50 SUNDAY, JUNE 13, 2004
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THE SUNDAY NEWS & OBSERVER

RACE FOR THE CURE

An estimated 16,500 people turn out to support breast cancer research. CITY & STATE - PAGE 1B

THE REAGAN LEGACY

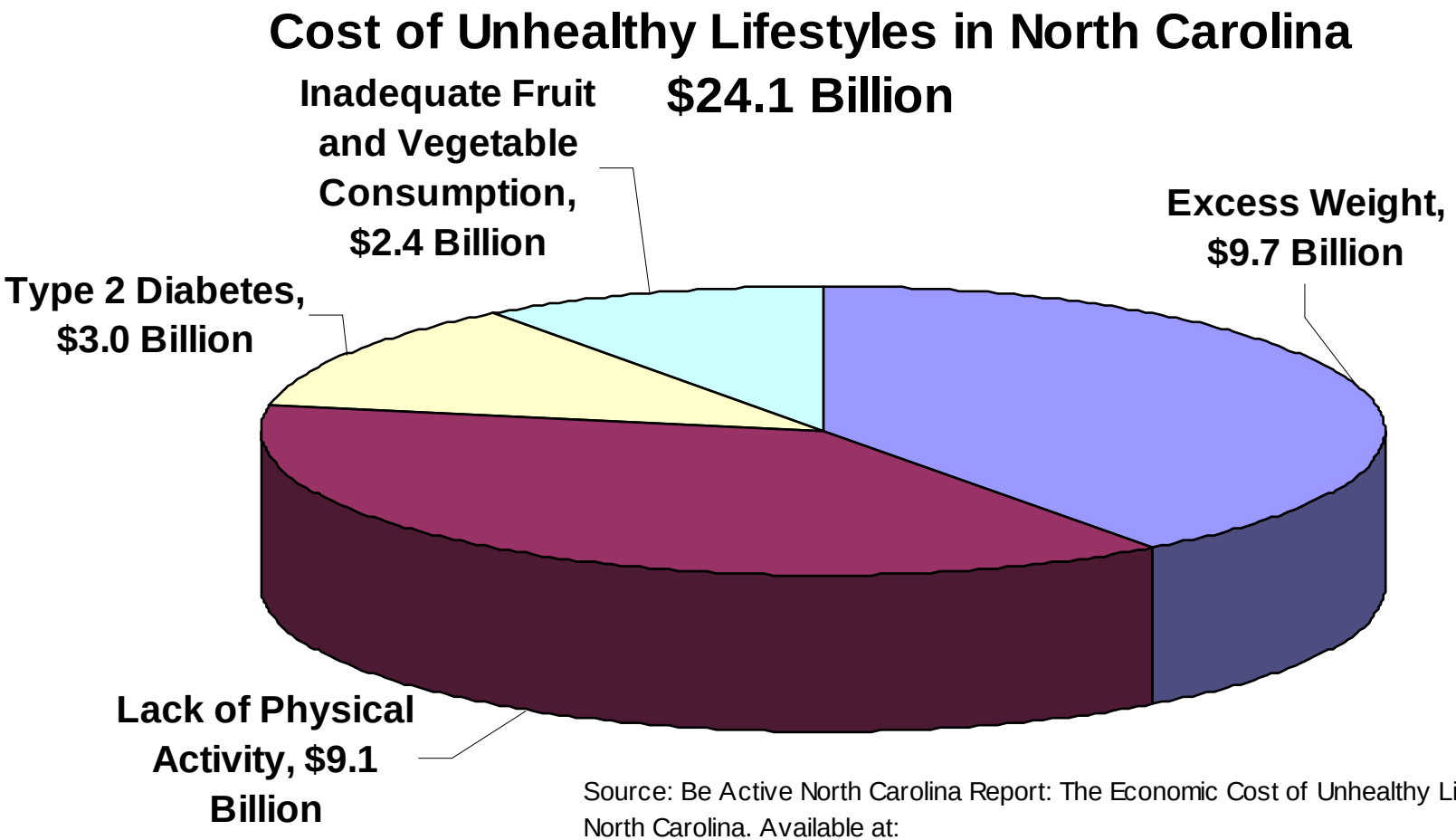
The 40th president had a lasting influence on the global community and U.S. policy. Q - PAGE 21A

FIGHTING **FAT** | Three of five North Carolinians are overweight. Everyone pays when heart disease, stroke, diabetes or cancer result.

The bill's a whopper

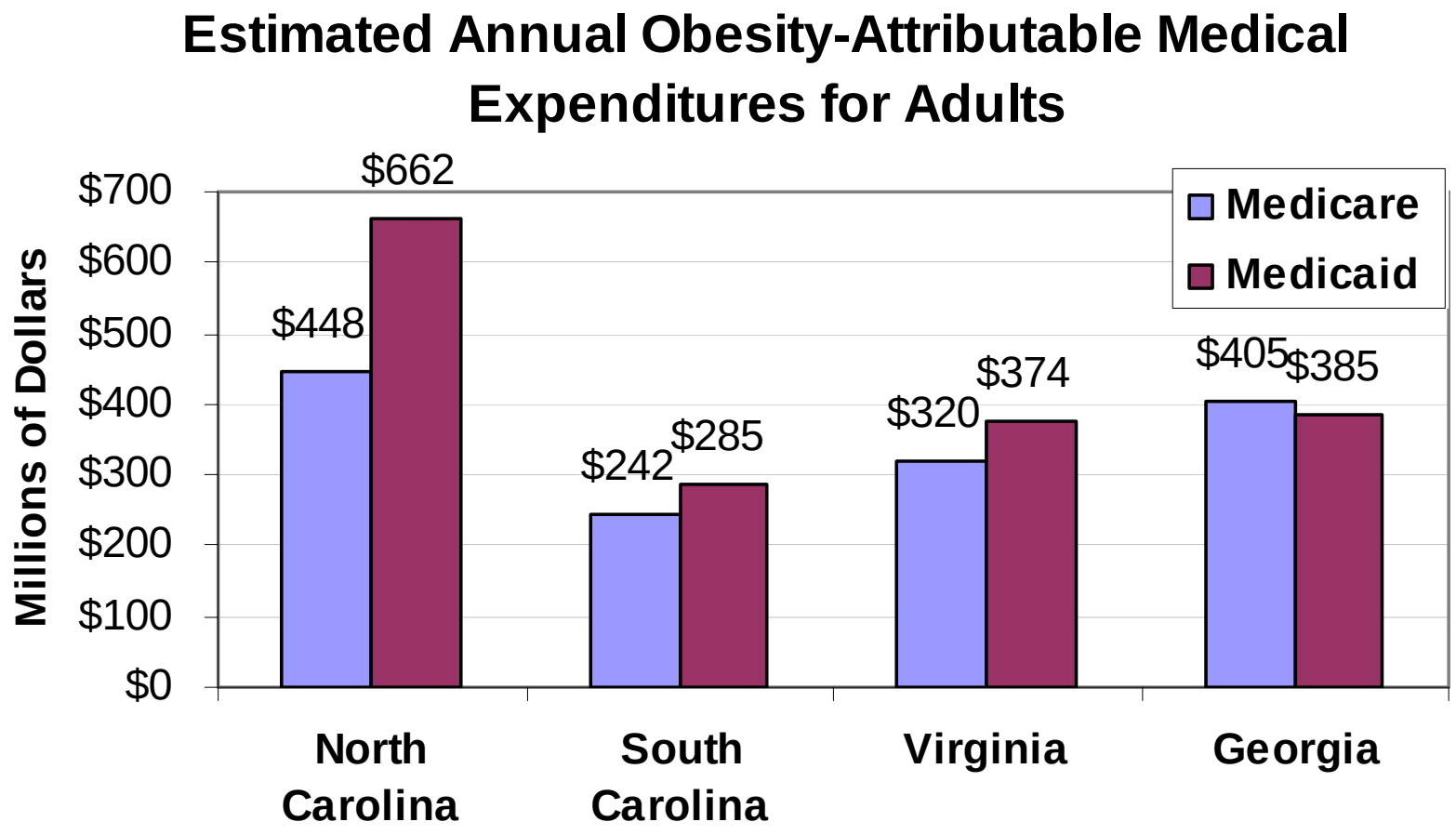
STATE'S ANNUAL TAB FOR OBESITY IS $2.1 BILLION

North Carolina Costs



Source: Be Active North Carolina Report: The Economic Cost of Unhealthy Lifestyles in North Carolina. Available at: http://www.beactivenc.org/mediacenter/Summary%20Report.pdf

Obesity-Attributable Medical Costs
Southern States



Finkelstein EA., Fiebelkorn IC, Wang G. State-level estimates of annual medical expenditures attributable to obesity. Obes Res. 2004; 12: 18-24.

How America's Children Packed On the Pounds

It wasn't easy to produce a generation of overfed kids—but it might well have been inevitable

BY JEFFREY KLUGER

AMERICANS DISAGREE ABOUT A LOT of things, but we rarely quarrel when it comes to our food. For a nation built on grand democratic virtues, there is still nothing that defines us quite like our love of chow time.

We have plenty of reasons to fetishize our food—not the least being that we've always had so much of it. Settlers fleeing the privations of the Old World landed in the new one and found themselves on a fat, juicy center cut of continent, big enough to baste its coasts in two different oceans. The prairies ran so dark with buffalo, you could practically net them like cod; the waters swam so thick with cod, you could bag them like slow-moving buffalo. The soil was the kind of rich stuff in which you could bury a brick and grow a house, and the pioneers grew plenty—fruits and vegetables and grains and gourds and legumes and tubers, in a variety and abundance they'd never seen before.

With all that, was it any wonder that when

Photo-Illustrations for TIME by Ann Elliott Cutting

So what the heck is going on??

TODAY
Kids are increasingly sedentary, spending three hours a day in front of a TV or computer. Phys ed is vanishing too, with only 25% of kids still attending

THEN
In the 1950s, kids had three cups of milk for every cup of soda. Today that ratio is reversed, meaning they get all the calories and none of the nutrients

Factors contributing to obesity

- Personal behaviors
- Community/environment
- Clinical care
- Public and health policy

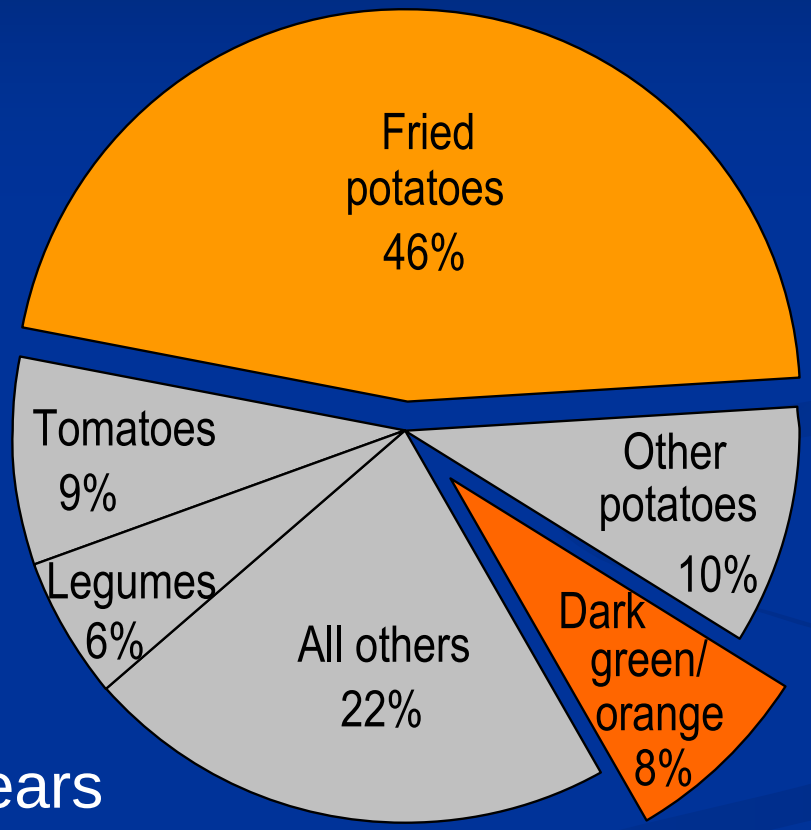
Socio-Ecologic Model

Personal Behaviors

(with MAJOR upstream influences)

- Breastfeeding
- Fruit and vegetable consumption
- Sugar sweetened beverages
- Screen time (TV and computer)
- Daily physical activity – 60 minutes recommended for kids
- Meals at home with family
- Big portion sizes too often

Fruit and Vegetables: What's Missing for Kids

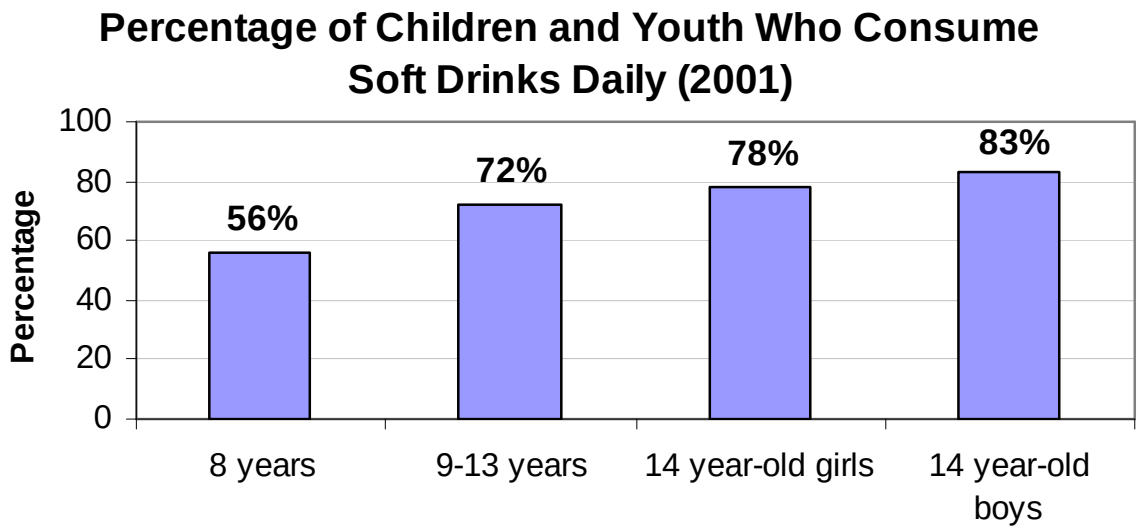


Children 2-19 years

Target = At least 1/3 dark green/orange

Note: Data are age adjusted to the 2000 standard population for adults 20 years and over.
Source: National Health and Nutrition Examination Survey, NCHS, CDC.

Kids and Soft Drinks



Squires S. Soft drinks, hard facts: research suggests kids who drink a lot of soft drinks risk becoming fat, weak-boned, cavity-prone and caffeine addicted. Washington Post; February 27, 2001, p.HE10.

410 Calories

150 Calories

Drinking your calories

- A 12-ounce can of soda has 10 teaspoons of sugar in the form of high fructose corn syrup.
- One soda a day could lead to a weight gain of 15 pounds in one year.

Portion Size

	1950	2006
Burger King Hamburger	2.8 oz., 202 calories	4.3 oz., 310 calories
McDonald's French fries	2.4 oz., 210 calories	7 oz., 610 calories

Meals Away from Home

- One in four Americans eats a fast-food meal every day
- Meals eaten away from home are higher in fat and calories, lower in nutrients
- Kids who eat more meals at home with family have improved health/education outcomes

Community, Environment

The Perfect Storm….

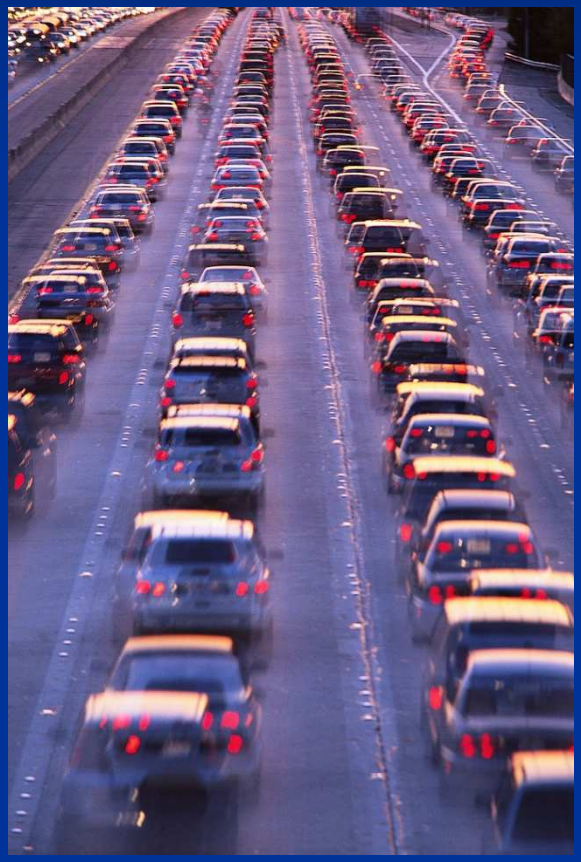
- Too little access to healthy food, esp. fruits and vegetables
- Too much access to energy dense, nutrient poor foods
- Too easy to be a couch potato
- Too hard to be physically active as a part of normal daily activities

Trends in Schools

The decline of PE and Recess

- Nationally the percent of students who attended a daily physical education
  - 42% in 1991
  - 28% in 2003.
- Daily physical education or its equivalent for the entire school year for students in all grades:
  - 4% of elementary schools
  - 8% of middle schools
  - 2% of high schools
- Overall, 22% of schools did not require students to take any physical education.

Transportation Trends



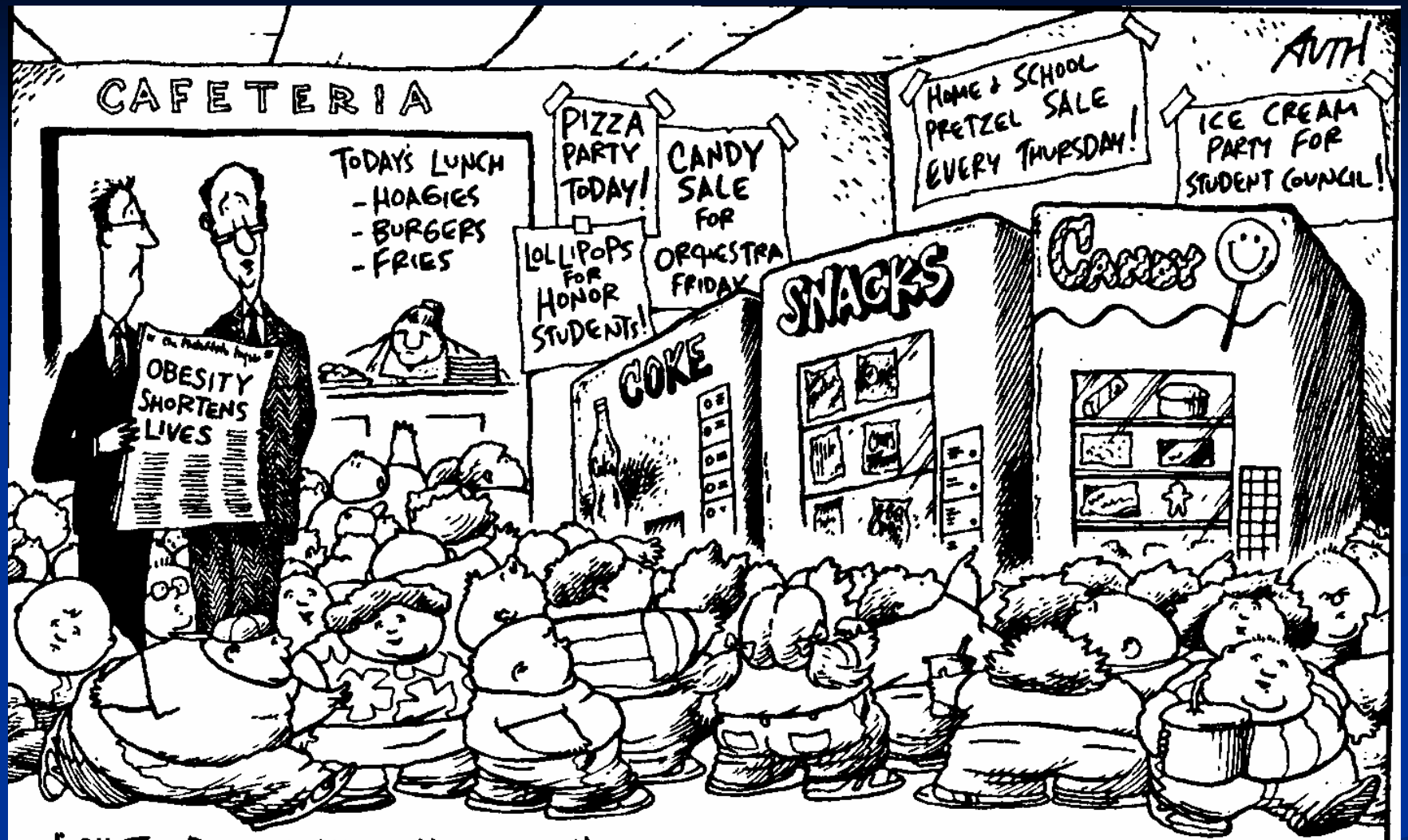
Walking or Biking to School

Then?

Now?

Access to Healthy Foods

Access to Healthy Foods



"ON THE BRIGHT SIDE, VENDING MACHINE PROFITS GO TOWARD OVERSIZE UNIFORMS FOR THE MARCHING BAND."

TONY AUTH, PHILADELPHIA INQUIRER

Clinical Care

- Too much to do and too little time
- Limited to no reimbursement for preventive services
- Low self-efficacy among providers regarding obesity management
- Physicians alone are not enough… evidence shows bigger impact with community resource links

Public and Health Policy

- Goal is to make the healthy choice the easier choice
- LOTs going on in this area but limited experience/research regarding the impact
- Requires political will and resources
- Often requires priority setting regarding health vs. economic issues… eg) school nutrition

Tipping Point: Personal Behaviors

- What works?
  - Intensive, long term interventions with social support and problem solving /skill development
- What's up in NC?
  - MULTIPLE innovative public health interventions and research efforts - see grid
- The tipping point?
  - Facilitate more research-practice collaboration
    - leverage research funding
    - assure broad dissemination of evidence-based interventions.

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http://www.eatsmartmovemorenc.com/

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Try our site-wide search, powered by Google.

Google™ Custom Search | Search

MyEatSmartMoveMore.com

Want simple solutions on how you can eat smart and move more? Visit our consumer site, My Eat Smart, Move More!

Success Stories

Read about how a farmers market encouraged people to eat more fruits and vegetables by working with a valuable resource: KIDS! Read On...

Read how local elementary school students get excited about healthy eating habits! Read On...

Fruits & Veggies Symposium a Sell-Out Success

July 30, 2008

Over 175 professionals attended the NC Fruits & Veggies Nutrition Coalition Symposium, held July 30, 2008, at Johnson & Wales University in Charlotte, NC. The annual symposium attracts NC Fruit & Veggies Nutrition Coalition members and others interested in promoting fruit and vegetable consumption. Read more...

New tool helps schools track physical activity and nutrition policies

August 21, 2008

North Carolina schools have a new way to track how they are doing in helping kids to eat better and be more physically active. The Successful Students Scorecard was launched this week to coincide with the start of school. The Scorecard is an online assessment tool to help schools measure their progress toward implementing Local Wellness Policy.

Read the complete Press Release

The 5th Edition of F As In Fat: How Obesity Policies are Failing in America was released this week!

Tipping Point: Community - Environment

- What Works?
  - Community-wide campaigns and mass media
  - Increased access to healthy foods, decreased access to unhealthy foods
  - Built environment changes to support physical activity
- What's up in NC?
  - New opportunity: Community level Childhood Obesity Prevention Projects
  - Growing interest and evidence regarding walkability and bikability, community gardens

Community – Environment (cont.)

- The tipping point?
  - Longer term $ support of community-based projects
  - Leverage WIC policy changes to increase fruit and vegetable access among low income populations
  - Build on interest/growth in local foods to increase access through Food Stamps
  - Schools as community resources for physical activity
  - New partnerships and collaborations eg.) Department of Transportation

Tipping Point: Clinical Care

- What works?
  - Must be intensive and long term
  - Clinicians alone are not enough… works best with community resource collaboration
- What's up in NC?
  - Very strong primary care networks – support of Medicaid population
  - Very strong public health system
  - Innovative 3rd party payers
  - Budding collaborations among all

- Tipping point?
  - Facilitate collaborations across clinical care, public health, industry, and academia
    - Remove barriers
    - Reward collaboration
    - Cross traditional boundaries
  - Improve reimbursement for obesity-related clinical care – need evidence to do this
  - Use the clout of clinical care to support public health policy efforts re obesity

Kids Eating Smart and Moving More (KESMM)

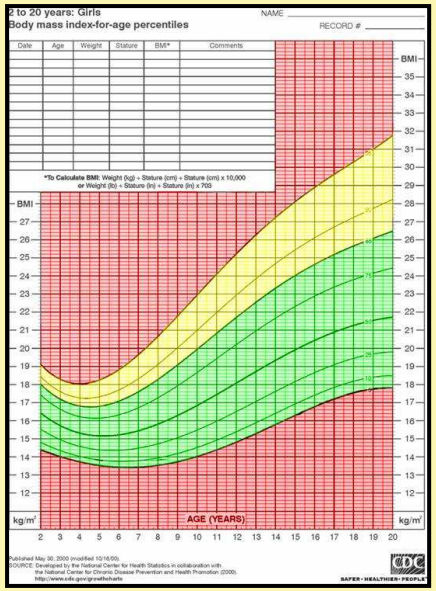
THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Eat Smart Move More NORTH CAROLINA™

Community Care of North Carolina

What Are The KESMM Tools?

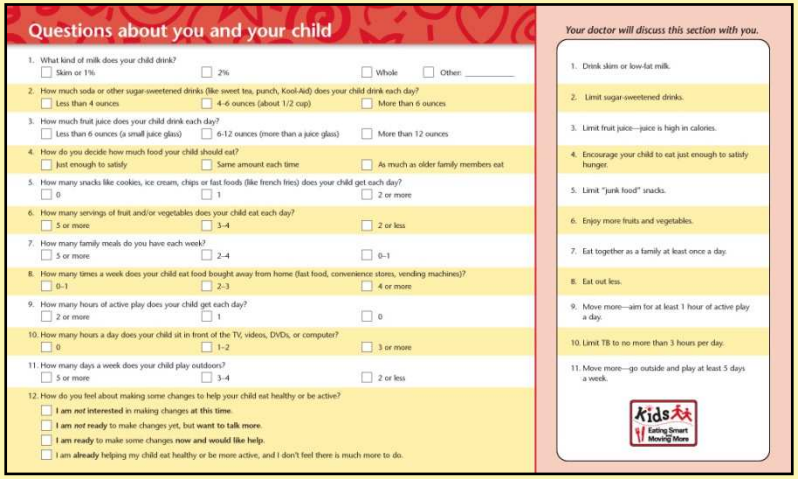
Provider Toolkit



Self Monitoring Log

Color Coded BMI

Starting the Conversation (STC)



What Are The KESMM Tools? *(cont.)*

CM / EFNEP Paraprofessional Toolkits

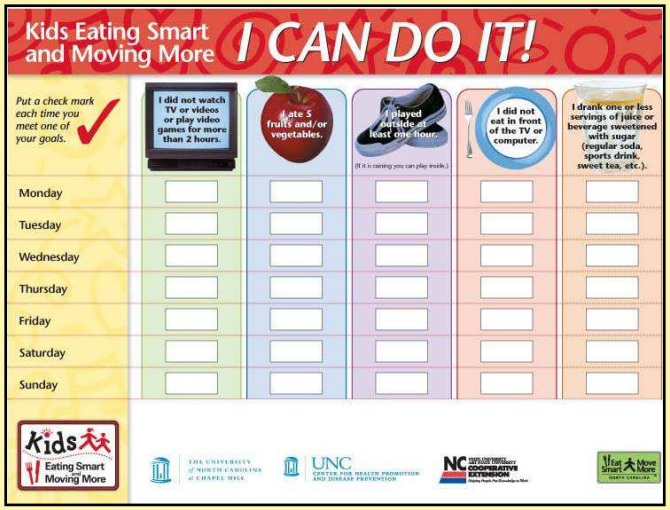
FESMM Toolkit

→ Study Resources and Materials Kit

→ 8-10 Nutrition and Physical Activity Lessons

Shopping List

Self Monitoring Log



Tipping Point:
Public and Health Policy

- What works?
  - Some evidence for school-based and worksite/organizational policies
  - Some data showing that state/community wide efforts have a positive impact:
    - Flattening of childhood obesity curve in Arkansas
    - Somerville, MA community-based environmental intervention decreased BMI (n=1178)
  - Biggest challenge may be implementation and enforcement

Public and Health Policy (cont.)

- What's up in NC?
  - Child nutrition standards
    - Primary school pilot – revenue loss and push back
    - Despite lack of state funding, primary level beginning to implement, indirect costs are a significant local barrier
    - Anticipate greater revenue loss with secondary schools
    - Secondary school pilot recommended, never funded
  - Local school wellness policies – unfunded, minimally enforced mandate
  - Physical activity in schools
    - 30 minute requirement
    - Evaluating potential for increased require PE

Public and Health Policy (cont.)

- Support child nutrition standard implementation
  - Identify and address related costs
  - Soften the barrier of indirect costs
- Support School Wellness Plan Implementation
  - Tools, incentives, enforcement
- Improve access to healthy foods through farm to school and community garden programs
- Improve the built environment
- Improve the school PA environment and requirements for PE
- Collaboration among stakeholders is key!

Questions ????