

Childhood Obesity: *Facts and Concepts as a Foundation for Policy and Action*

Leona Cuttler, M.D.
Director,

The Center for Child Health and Policy at Rainbow
Rainbow Babies & Children's Hospital
Case Western Reserve University



Outline

1. When did child obesity become an issue?
2. What are the data for Ohio (and U.S.)? Who is affected?
3. Does child obesity really have an impact? Health and economics.
4. Is childhood obesity a disease?
5. What principles should guide our policies and actions?

Childhood Obesity is Now Well-Known

THE CINCINNATI POST
BEING FAT COULD BE CONTAGIOUS
source for the latest research...
11, 2007
evated Blood Pressure
Rise In Childhood
M.S., Marie-Vero Bielo, M.D.

WASHINGTON POST SERIES
YOUNG LIVES AT RISK: Our Overweight Children
...is a Generation
...S. Child...
...Leaving the Health and

The New York Times
January 1, 2008

TIME
Thursday, Jun. 12, 2008
How America's Children Packed On the Pounds
By [JEFFREY KLUGER](#)

Children: Study Ties Too Little Sleep With Too Much Weight
By NICHOLAS BAKALAR
May 16, 2008

THE PLAIN DEALER
MISS A DAY. MISS A LOT.
Too much of a bad thing: Kids overeat, watch TV and forget about exercise
Leona Cuttler and JB Silvers
...16, 2008

Chicago Tribune
May 30, ...
Beware the food-fight backlash - ...
...s may worsen situation
...et Helm

The Daily Star
The Newspaper for the Heartland of New York
September 10, 2008
BMI reports on children a good idea

NEWS
Teens too soon? - Experts say the obesity epidemic is behind what seems to be an increase in premature puberty
By Emma Sapong

Forbes
ep 2008
Parents Battle Bulge, Bullying With Overweight And Obese Kids

Obese Children Miss More School Days
FRIDAY, Aug. 24 (HealthDay News)

Overweight kids at risk for heart disease as adults
Harlan Spector

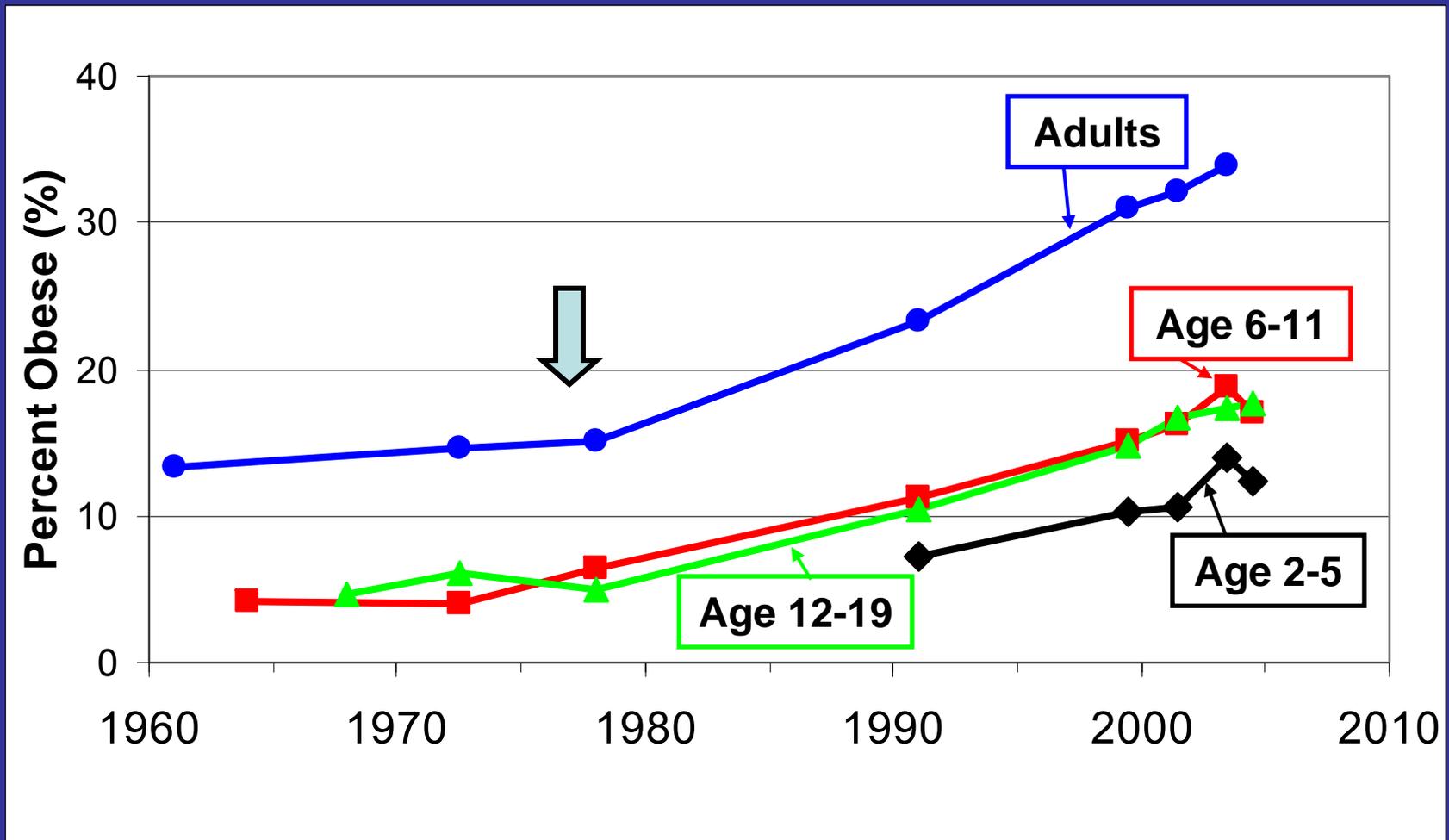
THE PLAIN DEALER
MISS A DAY. MISS A LOT.
December 6, 2007

But this is a recent phenomenon

*....When did childhood obesity
become a major problem?*

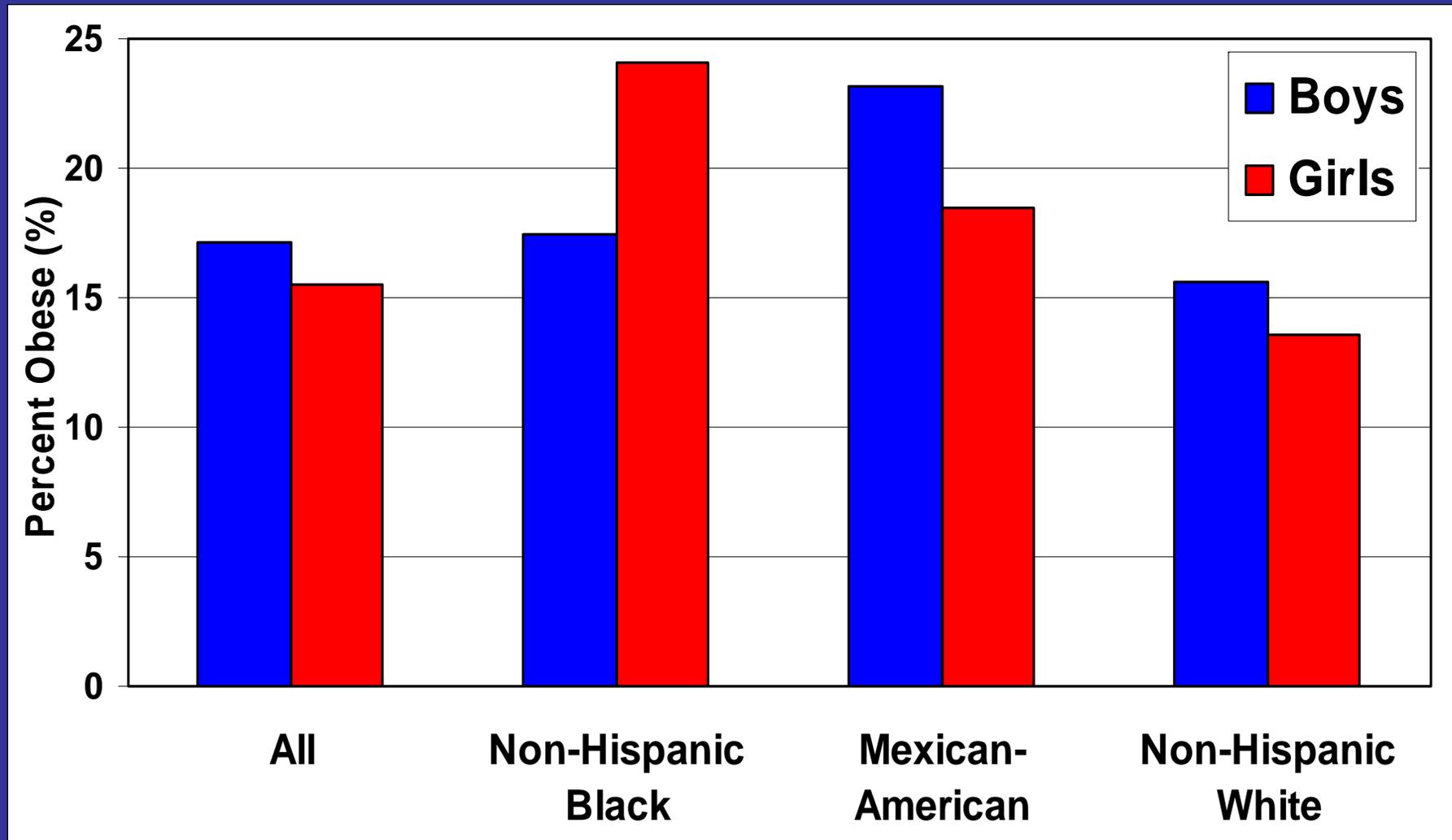
*Was child obesity under-recognized in
the past...or is it really increasing?*

Rates of obesity in US children (and adults) began to rise in approximately 1980



- **BMI \geq 95th percentile for age and sex and as BMI \geq 30 for adults
- Source: National Health and Nutrition Examination Survey (NHANES), CDC, 1960-2004

U.S. Child Obesity* (2-19 yrs) Rose Disproportionately By Race and Gender



• *BMI \geq 95th percentile for age and sex

• Source: National Health and Nutrition Examination Survey (NHANES), CDC, 2003-2006

What About Ohio?

Overweight or obese:

- **30.5% of Ohio children (10-17 y)¹**
 - 16.3% overweight (vs U.S. 15.7%)
 - 14.2% obese (vs U.S. 14.8%)

- **63.5% of Ohio adults²**
 - 35.4% overweight (vs U.S. 36.7%)
 - 28.1% obese (vs U.S. 26.3%)

¹ National Survey of Children's Health (NSCH), MCHB, 2003

² Behavioral Risk Factor Surveillance System (BRFSS), CDC and ODH, 2007

Behaviors Contributing to Obesity in Children (9th-12th grade): U.S., Ohio, & Cleveland

	U.S. ¹	Ohio ¹	Cleveland ²
<i>Not Exercising Regularly</i>	65.3%	55.3%	65.4%
<i>Watching 3+ h of TV each day</i>	35.4%	32%	57.4%

- Source: ¹ Youth Risk Behavior Survey (YRBS), CDC and ODH, 2007
- Source: ² Steps to a Healthier Cleveland YRBS Report, Center for Adolescent Health at CWRU, 2007

Does Childhood Obesity Really Have an Impact? Health during childhood

Psychological: poor quality of life, depression, ADHD, eating disorders (cause?)

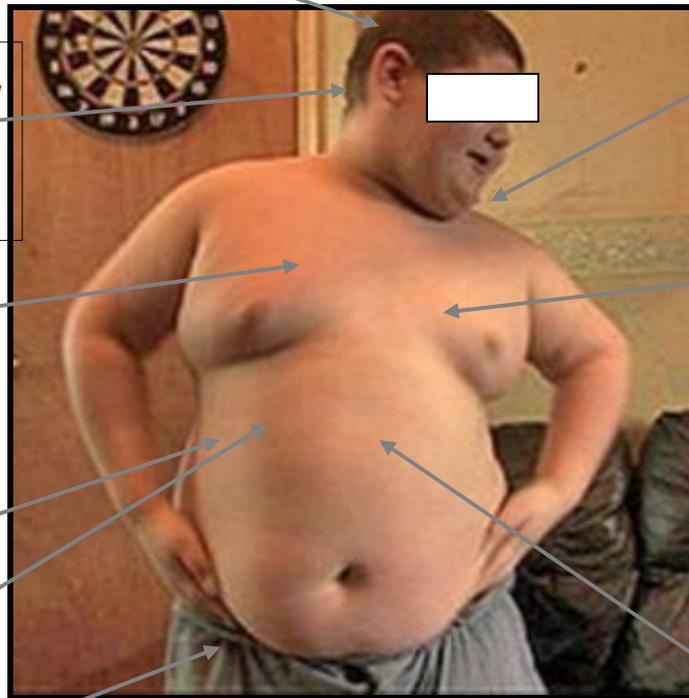
Pseudotumor cerebri

Asthma
2-fold rise in obese

Gallstones

Fatty Liver
Up to 50% in obese

Bone disease
Arthritis, SCFE



Sleep Apnea

3x rise over 30 yrs
25% obese

Cardiovascular:

- Hypertension (2.5-3.7x inc)
- Dyslipidemia
- Risk factors: 60% of obese 5-10 yo have > 1 risk factor
- Metabolic syn (30% obese)

Type 2 Diabetes:

up to 45% new onset pediatric diabetes

Does Childhood Obesity Really Have an Impact? Health during Adulthood

Childhood obesity tends to persist into adulthood, and predisposes to:

- Diabetes
- Cardiovascular disease
- Cancer (colon, pancreas, breast, endometrium)
- etc



Chronic Disease Prevention

Diabetes

Disabling Disease to Double by 2050

At A Glance 2007

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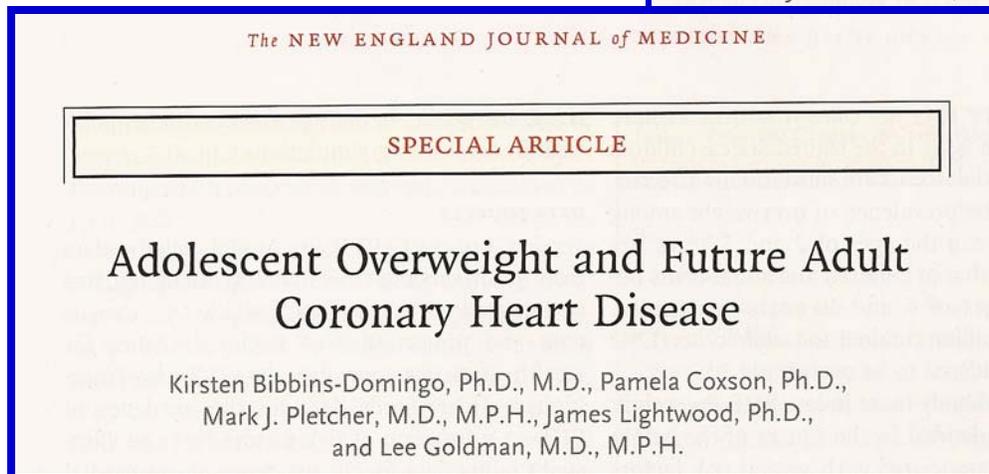
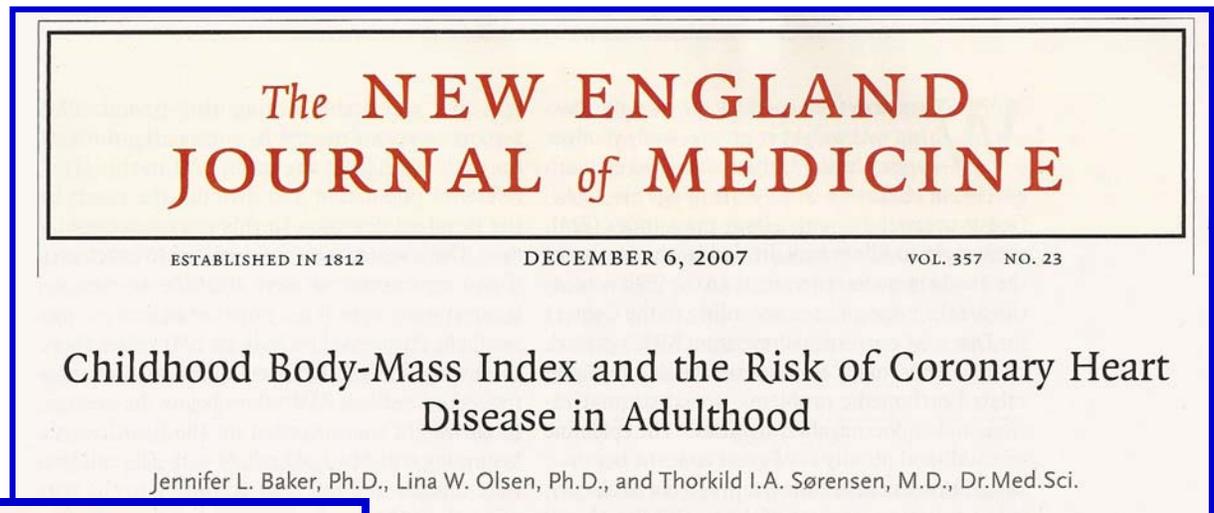
What is the lifetime risk for diabetes for people born in the United States in 2000?

	<u>1 of 3 Americans</u>	
		1 of 2 Hispanic women
2 of 5 African Americans and Hispanics		

Control diabetes. For life.

Childhood obesity increases the risk of adult coronary heart disease

Higher BMI at 7-13 years
→ higher risk of
coronary heart disease
after age 25 y
(Dec 2007)



**Current adolescent obesity
will cause 100,000 excessive
deaths from coronary heart
disease by 2035 (Dec 2007)**

.....leading to concern that today's children may be the first generation with life expectancy shorter than their parents....

Economic Costs of Obesity: *Overall*

- **U.S.** obesity-related health costs: **\$117 Billion** (direct and indirect, HHS 2000)
- **27% of the rise** in inflation-adjusted per capita health spending 1987-2001 (Thorpe '04)
- Costs similar to smoking or alcohol (Sturm '02)
- **Ohio: est. \$3.3 Billion** obesity-related medical expenditures 2000 (Finkelstein '04)

Economic Costs of Obesity: *Children*

- Obesity-related *hospital* costs 1979→1999: **tripled** (\$35 to \$127 Million; Wang, Dietz 2002)
- *Overall* costs for obese children (Kaiser, CA): 50,000 kids→\$500,000 excess (Estabrooks 07)
- *Overall* significantly increased health care use and costs (MO; **\$172 pp/yr**) (Hampl 2007)
 - **Over \$ 1 Billion/y for all obese U.S. children?**

Is Childhood Obesity a Disease?

- **Yes**

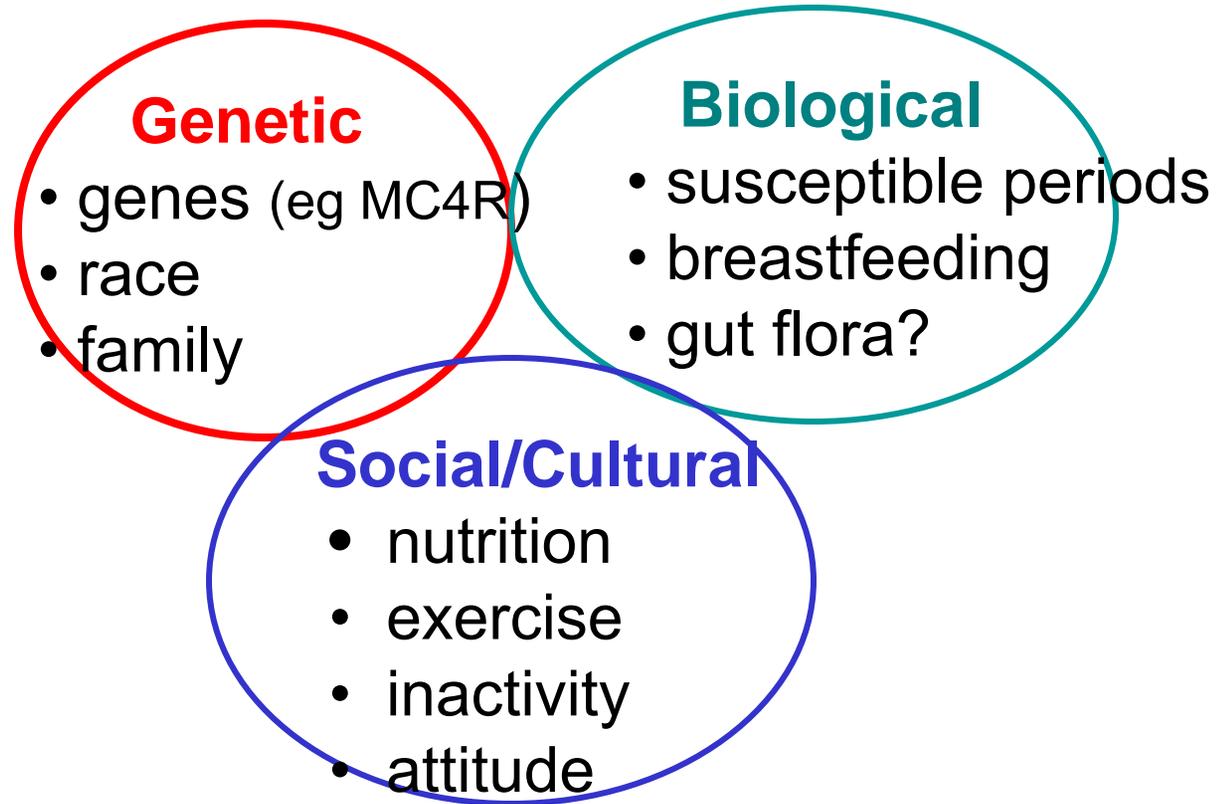
- a significant deviation from the norm
- unlikely to resolve spontaneously (80% of 10 y olds with BMI > 95% will be obese adults)
- associated with clear morbidity
- CMS precedent for adults

- **No**

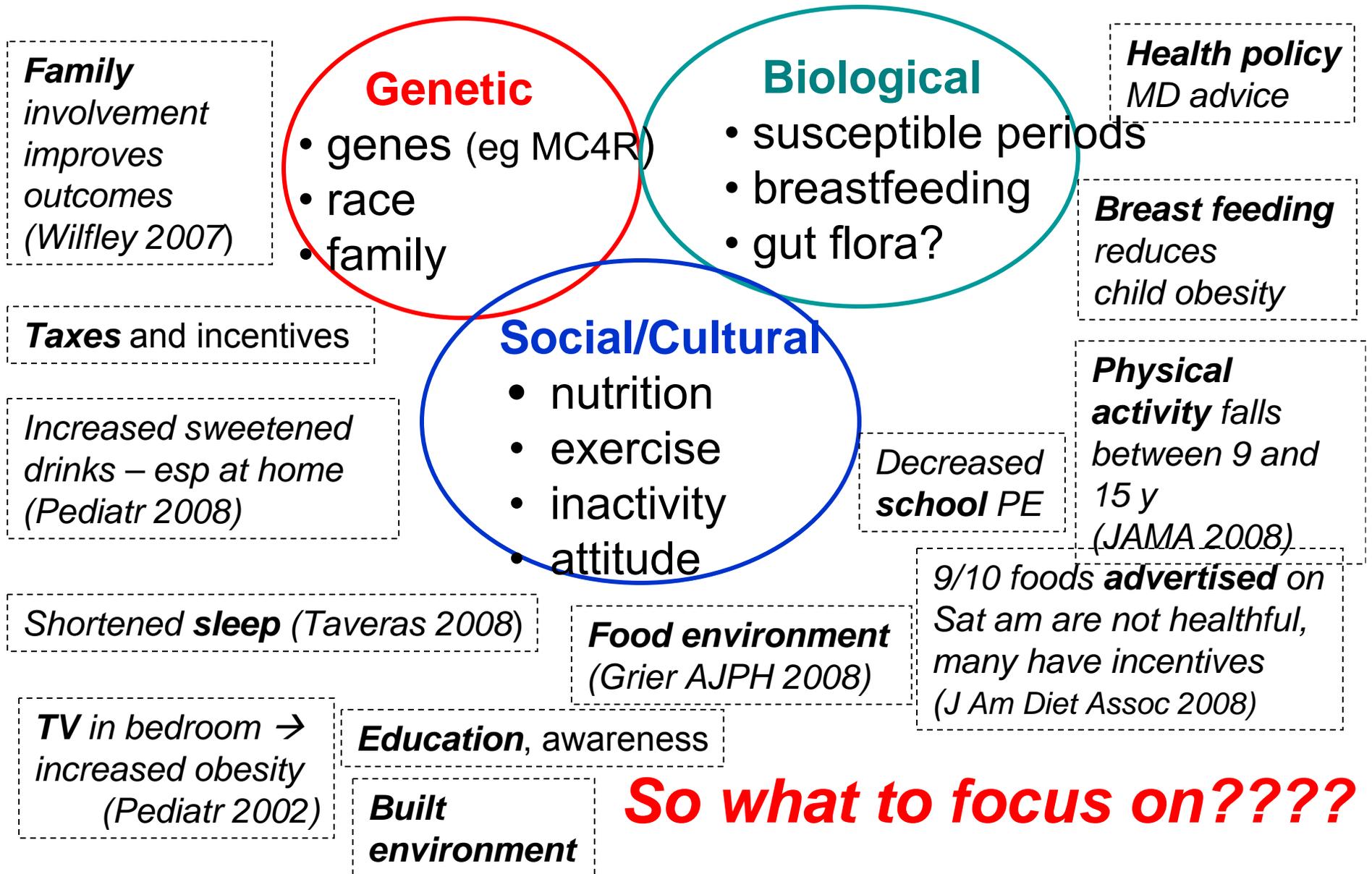
- a risk factor, not a disease (vs hypertension?)
- personal choice

“Disease” confers need to prevent and treat

Childhood Obesity: Many Components

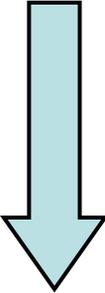


Childhood Obesity: Many Components



To stem child obesity in a sustained way:

Child/Family
Decisions and
Self-Management



Improved health outcomes
(reduce obesity and its sequelae)

What principles can guide our policies and actions?

1. A multicomponent problem requires a coordinated multicomponent solution
 - Reach family, schools, physicians, insurers, employers, community, and legislators
 - No single intervention will solve this

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2. Consider child obesity a disease
3. **Prevention and/or Treatment?**

What principles can guide our policies and actions? (cont'd)

4. **Target & prioritize goals** (common message)

What principles can guide our policies and actions? (cont'd)

4. Target & prioritize goals (common message)
5. **Learn from precedents** (tobacco, seat belts):
 - *Shape active decisions*
 - individual chooses not to engage in risky behavior (education, awareness, laws, incentives) eg “tobacco kills”, tax, insurance premium, cover programs
 - *Make passive decisions*
 - difficult to engage in risky behavior (legislation, rules) e.g. no smoking rules
 - *Align incentives*

What principles can guide our policies and actions? (cont'd)

6. **Recognize barriers:** public skepticism, incomplete knowledge, imbalance of resources, no clear route to success

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7. Build on best *available* evidence

- Support acquisition of knowledge, demonstrations
- Evaluate and re-evaluate

Pediatric Obesity Policy

The Danger of Skepticism

Arch Pediatr Adolesc Med 2003

¹ Leona Cuttler, MD

Department of Pediatrics

Rainbow Babies and Childrens Hospital, Room 737

Case Western Reserve University

11100 Euclid Ave

Cleveland, OH 44106

June L. Whittaker, MPH

Eric D. Kodish, MD

Cleveland

- **Thanks to Ann Nevar, MPA**

Coordinator, The Center for Child Health
and Policy at Rainbow

Rainbow Babies & Children's Hospital

Cleveland, OH

216-844-6253; 216-844-3661

ann.nevar@uhhospitals.org

leona.cuttler@uhhospitals.org