

Healthy Eating, Obesity, & Diabetes A Pediatrician's Perspective

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The Problem

U. S. Statistics

- Obesity rates among children have **doubled** since 1980 and **tripled for adolescents**
- 15% percent of children aged six to 19 are considered overweight
- Almost **70% percent of adults** are considered overweight or obese

Cochise County Statistics

Death rate from diabetes is almost double of the statewide rate:

45 per 100,000 vs 20 per 100,000

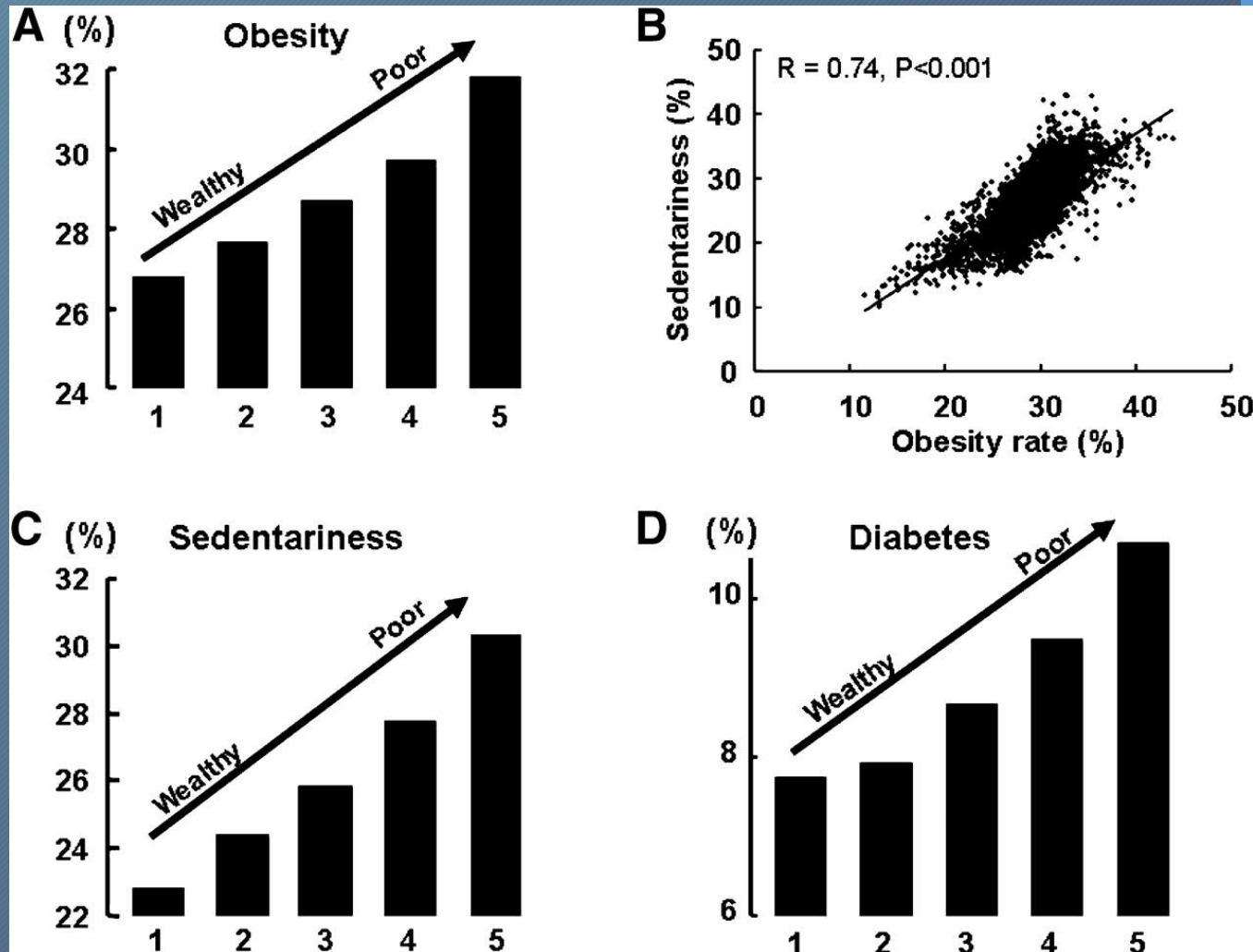
What makes it more difficult to manage weight and diabetes in rural communities?



Barriers to Health

- Limited access to health care, especially to specialists such as endocrinologists
- Minimal exposure to diabetes education
- Limited access to safe sidewalks, exercise facilities, and grocery stores with affordable produce.
- High rates of poverty.

Data from 3,139 counties in the U.S. Quintiles are cohorts of counties ranked by the percentage of people living with poverty.



James A. Levine Diabetes 2011;60:2667-2668



**“It is easier to
build strong
children than to
repair broken
men.”**

Frederick Douglass

Prevention is KEY

Prevention of obesity is vital in children.

The likelihood of obese children becoming obese adults is thought to increase from about 20 percent at four years of age to 80 percent by adolescence.

3 Possible Strategies



1. Parents

Empowering Parents

- Importance of breast feeding
- Healthy limits in childhood
- Food as nutrition, not reward or comfort
- Parents as role models

Breast Feeding

- The longer babies are breastfed, the less likely they are to become overweight as they grow older.
- Breastfed babies are 15 to 25 percent less likely to become overweight.
- For those who are breastfed for six months or longer, the likelihood is **20 to 40 percent less**.

Parents as Role Models

- Another important risk factor for childhood obesity is having parents who are obese.
- Children with 2 obese parents are 10 to 12 times more likely to be obese.
- Weight gain in early childhood (3 to 5 years of age) is also significantly greater among children with overweight or obese parents or among those born of overweight or obese mothers.

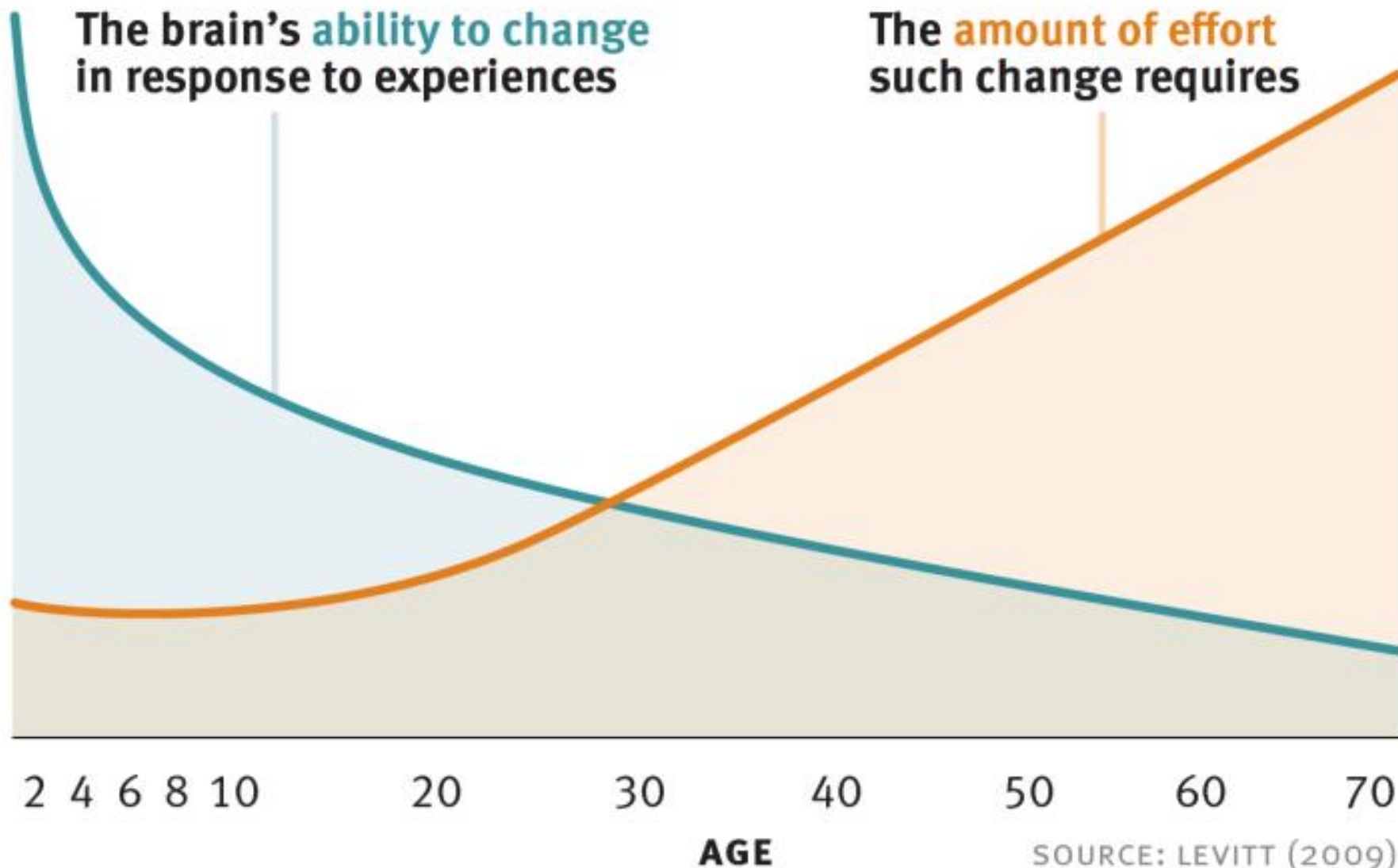
2. Pediatric Providers

The Remarkable Newborn



90% OF A CHILD'S BRAIN DEVELOPS BY AGE 5





Group Well Baby Care

- Characteristics of mothers and infants were comparable between intervention (n = 47) and comparison (n = 140) groups. Children enrolled in WBG were significantly less likely to be overweight/obese at 2 years than children receiving traditional well-child care (2.1% vs. 15.0)
- In multivariable regression analysis, WBG remained a significant independent protective factor adjusting for birthweight and parity.

3. Our Environment



“The Power of Context” aka “Broken Window Theory”

- Malcolm Gladwell, *The Tipping Point*
- New York City subways had the highest crime rate in the late 1980's (20,000 felonies/yr)
- Dramatic decrease (75%) by the late 1990's from changing the environment:
 - Repairing broken windows
 - Removal of graffiti
 - Targeting petty crimes (fare beating)

Oklahoma City

- The power of one mayor...



Oklahoma City's Attack on Obesity

- Mayor Cornett challenged his city to lose 1 million pounds
- 47,000 citizens lost over 20 pounds on average
- Tax rise funded a redesign of the state capital around people: bike lanes, sidewalks, landscaped walking trails.

References

Stanford Health Care (2017). *Obesity Prevention*.

Retrieved from

<http://www.stanfordhealthcare.org/medical-conditions/healthy-living/obesity/prevention.html>

Machuca, H. (2016). *Well Baby Group Care: Evaluation of a Promising Intervention for Primary Obesity Prevention in Toddlers*. *Childhood Obesity*.

Levine, James. (2011). *Poverty and Obesity in the U.S. Diabetes*. Retrieved from <http://diabetes.diabetesjournals.org/content/60/11/266>

References Continued

Fuemmeler, B., Lovelady, C., Zucker, N. (2013). *Parental obesity moderates the relationship between childhood appetite traits and weight*. Obesity.

DeNoon, Daniel. (2013). *Cities can learn lessons about diabetes from rural areas*. Harvard Health Publications, Harvard Medical School.

Birrell, Ian. (2015). *The Fat City That Declared War on Obesity*. Huffington Post.
http://www.huffingtonpost.com/entry/oklahoma-obesity_us_562002e1e4b050c6c4a4eb75

Thank you!