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

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The Problem
U. S. Statistics

- Obesity rates among children have \textit{doubled} since 1980 and \textit{tripled} for adolescents
- 15\% percent of children aged six to 19 are considered overweight
- Almost \textit{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
The brain’s **ability to change** in response to experiences

The **amount of effort** such change requires

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Center on the Developing Child, Harvard University

www.developingchild.harvard.edu
Sensitive Periods in Early Brain Development

High

Pre-school years

School years

Low

Years

Sensitivity

Numbers

Peer social skills

Symbol

Language

Habitual ways of responding

Emotional control

Vision

Hearing
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


 References Continued


http://www.huffingtonpost.com/entry/oklahoma-obesity_us_562002e1e1e4b050c6c4a4eb75
Thank you!