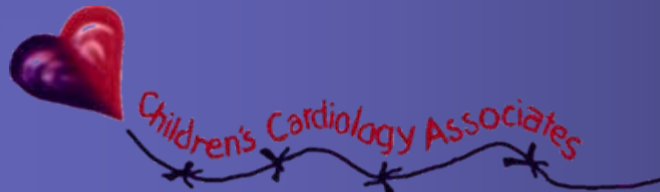
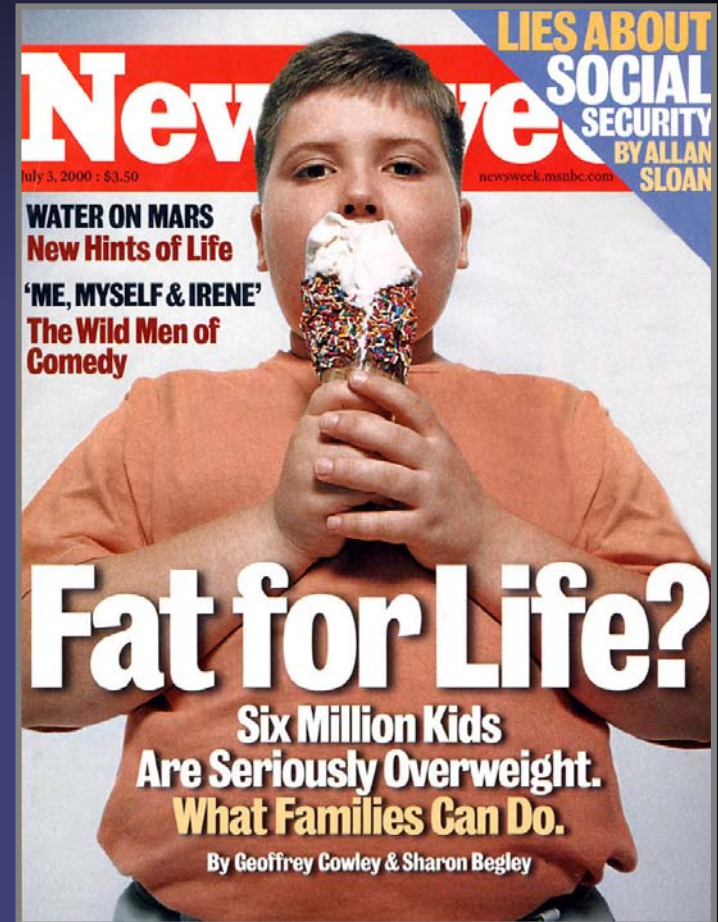


# Cardiologist's Perspective on Obesity

Stuart A. Rowe MD

May 17, 2008



# Why worry about obesity?

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- 300,000 U.S. adults die of obesity related causes
- Direct cost of obesity and inactivity estimated at 9.4% of U.S. healthcare expenditures
- CDC – obesity (behind tobacco products) the second leading contributor to premature death in the U.S.



# Why worry about obesity?

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- 60% of U.S. adults overweight
- Since 1971 percentage of overweight children doubled in ages 6 – 11 and tripled in ages 12 – 19 years
- 20% of children ages 2–5yrs and 30% of children 6–19 yrs are overweight
- Disproportionate in Hispanic males and African American females



# Why worry about obesity?

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- “The great health advances made possible by genetics and other biomedical discoveries could be offset by the burden of illness, disability and death caused by too many people eating too much and moving too little over their lifetime.”
  - Thomas Robinson, MD, MPH
  - Stanford University, Institute of Medicine



# Why worry about obesity?

- **OBESITY BURDEN**

- Hypertension, dyslipidemia, type II diabetes, fatty hepatitis, respiratory ailments, difficulty sleeping, orthopedic problems, POS, pseudotumor cerebri, low self esteem, social rejection
- Autopsy study – BMI correlated with atherosclerosis
- An overweight adolescent tends to become an overweight or obese adult



# What is obesity?

- Excess body fat
  - MRI, bioelectrical impedance, underwater weighing,
  - Skinfold thickness, body fat distribution, weight-height indices and **BMI (body mass index)**
- Adults – BMI definitions
  - $> 25 \text{ kg/m}^2$  = overweight
  - $> 30 \text{ kg/m}^2$  = obese



# Body Mass Index

kg/m<sup>2</sup>

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- Best single measure for obesity from 2 – 20 years of age
- Gender specific growth charts 2 – 20 years
- At risk of obesity - >85%ile to 94%ile
- Obese (overweight) > 95 %ile

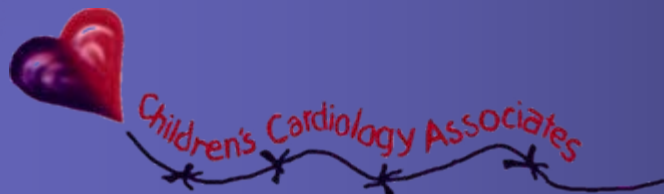


# Metabolic Syndrome

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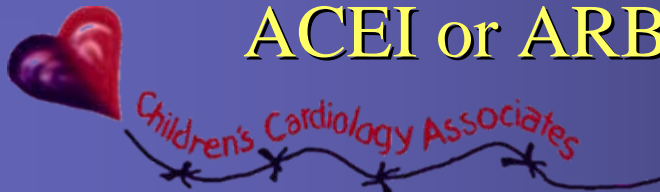
- Abdominal obesity
- Hypertension
- Glucose resistance (HgbA1c  $> 7$  or elevated FBG)
- Dyslipidemia
  - Typically low HDL-C and high TG
  - Atherogenic profile with small dense LDL-C



# Metabolic Syndrome

## Therapies

- Weight loss and exercise mainstays of therapy
  - Improves glucose dysregulation, htn, HDL-C and TG
- Lipid goal directed to appropriate LDL-C numbers
- TG – low carbohydrate diet; not typically pharmacologically treated until >600 to 1000. Little risk pancreatitis < 1000
- Glucose dysregulation - ?metformin
- Htn – Follow guidelines; 1<sup>st</sup> drug of choice ACEI or ARBs



# Obesity Therapy

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- Societal
  - Senate and House Bills – “Childhood Obesity Reduction Act”
    - Form Congressional Council on Childhood Obesity
    - Encourage elementary and middle schools to develop and implement plans to reduce and prevent obesity, promote improved nutritional choices and increased physical activity

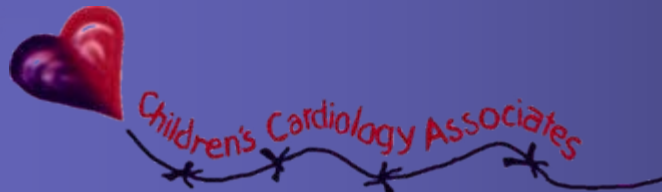


# Obesity Therapy

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- Medicare – July 2004 – changed its policy on obesity – removed the words “obesity is not an illness” from its policy opening funding for obesity therapy



# Obesity Therapy

## Some Thoughts

(stolen from others)

- AAP – limit “screen time to 1 – 2 hours/day  
– 25% of kids watch a screen > 4 hrs/day<sup>102</sup>
- Serving size vs. portion size
- Surgeon General – 60 minutes moderate exercise/day



# Summary – Targeting Obesity and Cardiovascular Risk Factors in Children

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- Establish healthy lifetime habits
- Diet (appropriate nutrition) and exercise are the mainstays of therapy
- Do not smoke
- Avoid obesity



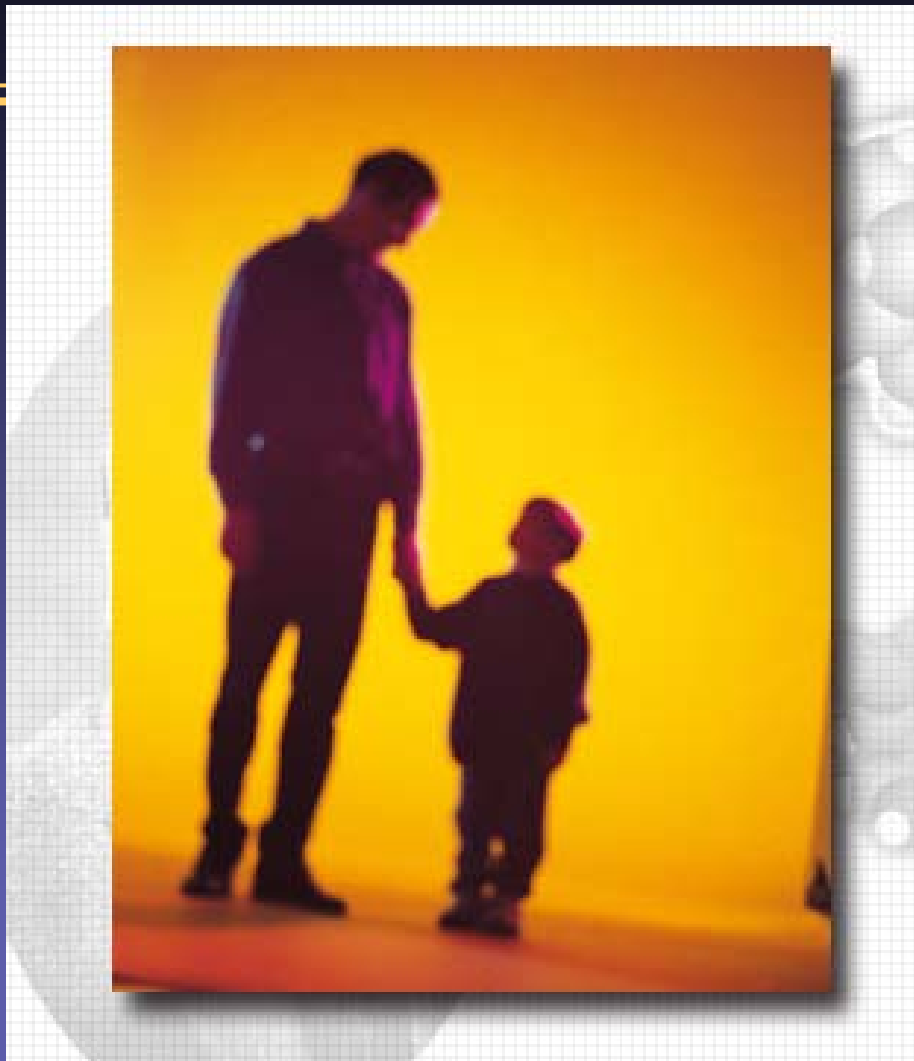
# Guidelines for Drug Therapy for Dyslipidemia

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- > 10 years of age after trial of adequate diet
- LDL > 190 mg/dl **or** > 160 mg/dl with a +ve FHx, or 2 or more risk factors
- There is a need for ongoing research regarding drug therapy of high risk lipid abnormalities in children, particularly regarding long-term efficacy and safety, and impact on the atherosclerotic disease process





 Children's Cardiology Associates

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