Pediatric Obesity: Tools to Take on the Elephant in the Room

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Speaker Declaration

• Neither Dr. Johnson has any financial interest or affiliation with any organization providing commercial support for this CME activity.
Change in obesity prevalence between 1995-2009

Adults with BMI > 30

<10%           10%–14%     15%–19%           20%–24%          25%–29%          ≥30%
Pediatric obesity is epidemic

- Similar trend for 3-5 year olds
- Washington state #18
  - 30 % of children overweight or obese
  - >50 % for lowest SES and Hispanic children

Percent obese by age from 1963–2004
How to begin?

- Participation in Washington State Obesity Collaborative
Pediatric obesity is uniquely challenging

- Weight issues in the context of growth and development
- Pediatric patients are dependent on family
- Critical research gaps in identifying effective interventions
- “Elephant in the room”
Case: Dustin

Age 11
raised by GP
behavior problems

Well Child visit
Objectives

• Provide a practical primary care approach to implementing current guidelines for prevention and management of pediatric obesity

• Enhance skills in applying motivational interviewing techniques to promote lifestyle change for overweight children

• Review obesity prevention and treatment resources available to providers and families
Obese children become obese adults

- Most common chronic disease in childhood
- Persistence to adulthood
  - 20% of obese 4 year olds become obese adults
  - 50% of obese 6 year olds
  - 80% of obese adolescents
- 1 in 3 children born in the US will develop DM
- Prevention is the goal
Glucose intolerance
Insulin resistance
Type 2 Diabetes
High blood pressure
High cholesterol
Hepatic steatosis
Cholelithiasis
Sleep apnea
Asthma
Skin conditions
Menstrual abnormalities
Impaired balance
Orthopedic problems

Low self esteem
Negative body image
Depression

Stigma
Teasing and bullying
Negative stereotyping
Discrimination
Social marginalization
2007 AMA Expert Committee on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity

- Expert committee convened in 2005: AMA, HRSA and CDC
  - Representatives from 15 national health care organizations
  - Medicine, nursing, nutrition, psychology and epidemiology
  - Evidence based where evidence exists

- NICHQ Childhood Obesity Action Network
  - Implementation tools

- USPSTF 2010- Endorsed screening for children over 6 years
1. Identification
Calculate and plot BMI at every WC visit

BMI 5th–84th%

- History & exam
- Growth trend
- Parental obesity
- Family history

BMI 85th–94th%

- History & exam
- Growth trend
- Parental obesity
- Laboratory (as needed)

BMI > 95th%

- History & exam
- Growth trend
- Parental obesity
- Family history

BMI > 99th%

- History & exam
- Growth trend
- Parental obesity
- Laboratory

2. Assessment
Medical risk  Behavior risk  Attitudes

- Family and Patient concern and Motivation
- Sedentary time
- Eating habits
- Physical activity

3. Prevention

- Target behavior
- Identify problem behaviors
- If none, reinforce healthy habits

Patient/Family Counselling:
- Review risks
- Use MI to encourage behavior change

Intervention
Advance through stages based on age and BMI

Stage 1: Prevention Plus
(Primary care office)

Stage 2: Structured Weight Management
(Primary care office with support)

Stage 3 & 4: Comprehensive Multidisciplinary Intervention
(Pediatric wt management center)
Step 1: Calculate and Plot Body Mass Index

- **BMI** provides a convenient *estimate* of body fat
  - Waist circumference can be additional resource

- **Calculating BMI**
  - ACCURATE height and weight measurements
  - Weight (kg)/height (cm)/height (cm) x 10,000
  - Conversion tables: [http://www.cdc.gov](http://www.cdc.gov)

- **Pediatric BMI changes with age**
  - Plot BMI for age on CDC graph
  - Interpret based on percentile rather than absolute number
Use BMI to diagnose nutritional status

• Measure and plot BMI at every WC visit from age 2

• Classify BMI: diagnose nutritional status
  • < 5\textsuperscript{th} % Underweight
  • 5\textsuperscript{th}-84\textsuperscript{th} % Healthy weight
  • 85\textsuperscript{th}-94\textsuperscript{th} % Overweight
  • 95\textsuperscript{th}-99\textsuperscript{th} % Obese
  • > 99\textsuperscript{th} % Greatest health risk-no name

• Evaluate trend over time

• Use wt/ht curve for children < 2 yo
  • Implementation of WHO standards to replace CDC
Dustin’s BMI curve
Age 11 years

BMI %

BMI classification
trend
Early Identification - BMI vs Visual Diagnosis

85%  
$\approx 95^{th} \%$  
$\gg 95^{th} \%$
Step 2:
Assess Risks: for all children at WC visit

- **Medical risk**: clinical evaluation
- **Behavioral risk**: lifestyle assessment
- **Attitudes toward change**
Medical risk factors: Past Medical History

- Mother’s weight gain during pregnancy
  - IDM
  - LGA

- Maternal smoking

- Disrupted sleep patterns

- Rapid early infant weight gain: first 3-6 months

- Psychosocial issues:
  - History of food insecurity: poverty, neglect
  - Maternal depression
  - Child stress and eating behavior secondary to physical or sexual abuse
Medical risk factors:
Focused Family History

• Overweight: role of genetics in obesity
  • Child with one obese parent has a 3 fold increased risk of becoming obese
  • 13 fold risk if 2 obese parents
• Type 2 Diabetes
  • Ethnicity: Hispanic, African American, Native American
• Cardiovascular disease
  • Early death from heart disease or stroke
  • Hypertension
  • Hyperlipidemia
## Focused Review of Systems

<table>
<thead>
<tr>
<th>Associated condition</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>Anxiety, school avoidance, social isolation</td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>Polyuria, polydipsia</td>
</tr>
<tr>
<td>Pseudotumor cerebri</td>
<td>Headaches</td>
</tr>
<tr>
<td>Sleep apnea</td>
<td>Daytime sleepiness</td>
</tr>
<tr>
<td>Asthma</td>
<td>Night breathing difficulty</td>
</tr>
<tr>
<td>GERD</td>
<td>Heartburn</td>
</tr>
<tr>
<td>Gall bladder disease</td>
<td>Abdominal pain</td>
</tr>
<tr>
<td>SCFE</td>
<td>Hip or knee pain</td>
</tr>
<tr>
<td>Polycystic Ovaries</td>
<td>Oligo or amenorrhea</td>
</tr>
</tbody>
</table>
### Focused Physical Exam

#### Associated conditions
- Hypertension
- Endocrine disorder
- Genetic disorder
- Insulin resistance
- PCOS
- Cushings syndrome
- Pseudotumor cerebri
- Sleep apnea
- Gall bladder disease
- NAFLD
- SCFE
- Blounts disease

#### Physical signs
- Elevated BP for age
- Poor linear growth, goiter
- Dysmorphic features, hypogonadism
- Acanthosis nigricans
- Hirsutism, acne
- Violaceous striae
- Papilledema
- Tonsillar hypertrophy
- Abdominal tendernessness
- Hepatomegaly
- Limited hip range of motion
- Lower leg bowing
Medical Cause is Rare

- Evaluate for medical cause if:
  - Poor linear growth
    - Hypothyroidism
  - Abnormal physical findings and/or developmental delay
    - Hypogonadism: Genetic syndromes
    - Striae, HTN, hirsutism: Cushing’s, PCOS
  - Consider medication side effects
    - Steroids
    - Atypical antipsychotics, SSRIs, Anticonvulsants, mood stabilizers
    - OCP
Insulin resistance

• Acanthosis nigricans
  • Associated with insulin resistance
  • Velvety, thickened skin neck, axilla
  • More common in African-Americans
  • Resolves with weight loss
Type 2 Diabetes

- 45% of new diabetics are Type 2
- **Type 2 DM in children increased 10 X in 13 yrs**
- Less symptomatic therefore screening is important
- Screen if overweight (BMI > 85%) plus 2 risk factors
  - Positive FH or patient is IDM
  - Ethnicity
  - Related conditions: acanthosis nigricans, PCOS, elevated lipids
- Screening method
  - Fasting glucose preferred
  - HbA1C
  - Serum insulin level
Cardiovascular sequellae

- Hypertension: Measure BP in all children
  - Elevated BP in 10% of obese children
  - Norms vary with age
  - Follow nhlbi recommendations: [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

- Lipid level abnormalities: common
  - Atherosclerotic process begins in childhood
  - Typical pattern seen in adults

- Management
  - Recommend lifestyle changes
  - If no improvement in 3-6 mo consider referral to cardiologist or treatment with lipid lowering drugs
NAFLD: Non-alcoholic fatty liver disease

- Hepatic steatosis = increased fat stored in liver

- Steatohepatitis = excess fat plus liver inflammation
  - 20-25% of obese children
  - Associated with abdominal pain, hepatomegaly
  - Can progress to fibrosis or frank cirrhosis

- Recommendation (expert opinion)
  - Check LFT per guidelines
  - If AST > 2X normal institute lifestyle change
  - Treatment: wt loss, consider metformin
  - If no improvement in 3 mo consider liver biopsy (GI referral)
Sleep disordered breathing and OSAS

- 4-5 x increased incidence in obese children
- Disrupted sleep contributes to obesity
  - Obesity can cause OSAS
- BEARS screening
- Sequellae: behavior problems, ADHD, enuresis
  - RVH and pulmonary hypertension long-term
- Polysomnogram is definitive dx
- Treatment: improves with weight loss
  - Remove tonsils if enlarged
  - CPAP or BIPAP
Other associated conditions

- Pseudotumor cerebri
- Polycystic ovary syndrome
- Orthopedic disorders
  - Slipped capital femoral epiphysis
  - Blounts disease
Psychosocial conditions

- Significant effect on quality of life
- Depression
- Eating disorder
- Consider sexual abuse
Assess behavioral risk factors for all children at WC visits

• Dietary patterns
  • Regular breakfast
  • Fast food
  • Family meals
  • Consumption of sweetened beverages and juice
  • High energy density foods
  • Low consumption of fruits and vegetables
  • Snacking
  • Portion size

• Physical activity patterns
  • Screen time
  • Physical activity level
  • Family activities-role modeling

• Environmental and social barriers and supports
Impact of television

• 50% of children have TV in bedroom
  • 30% of toddlers!

• Dose-response relationship

• Less time for other activities

• Increased snacking on high calorie foods
BMI > 85th%
BMI > 85th% with risks*
BMI > 95th%

Fasting lipid profile

ALT, AST, fasting glucose
(≥ age 10 every 2 years)

*Risk factors
Medical: FH of obesity or related disease, BMI trend, elevated BP, abnormalities on ROS or PE
Behavioral: diet or physical activity
# Laboratory Test Follow Up

<table>
<thead>
<tr>
<th>Lab Test</th>
<th>Borderline</th>
<th>Abnormal*</th>
<th>Follow Up Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>170-199 mg/dL</td>
<td>≥ 200 mg/dL</td>
<td>ECG, Lipoprotein (a)</td>
</tr>
<tr>
<td>Low-Density Lipoprotein</td>
<td>110-129 mg/dL</td>
<td>≥ 130 mg/dL</td>
<td>ECG, Lipoprotein (a)</td>
</tr>
<tr>
<td>Triglyceride</td>
<td></td>
<td>≥ 110 mg/dL</td>
<td>ECG, Lipoprotein (a)</td>
</tr>
<tr>
<td>High-Density Lipoprotein</td>
<td></td>
<td>≤ 40 mg/dL</td>
<td>ECG, Lipoprotein (a)</td>
</tr>
<tr>
<td>Fasting Glucose</td>
<td>100-125 mg/dL</td>
<td>≥ 126 mg/dL</td>
<td>OGTT, Urinary Microalbumin or Microalbumin/Creatinine Ratio</td>
</tr>
<tr>
<td>Serum Alanine/Aspartate Aminotransferase (ALT, AST)</td>
<td>&gt; 60 U/L or 2 times normal levels</td>
<td></td>
<td>Ultrasound, α₁-Antitrypsin, Ceruloplasmin, ANA, Hepatitis Antibodies</td>
</tr>
</tbody>
</table>

* Abnormal tests may indicate the need for Follow Up Tests and discussion with a specialist.
Dustin
Age 11 years

BMI 97^{th}\%

Risk factors
GM Type 2 DM
FH obesity
Acanthosis

Lab ?
Assessment Practice Tips

• Incorporate medical and behavioral risk assessment screening questions into WC patient history
• 75210 handouts and posters
Step 2: assess attitudes toward change

• Final component of assessment process is evaluating the patient and family attitude toward change

• Key element to promoting healthy behaviors
Talking about it

• Delicate subject
  • Parents/patients may be unaware or in denial
    • “big boned”, changing norms
    • 1/3 overweight adolescents thought weight was “about right”
  • Obesity is medical dx but better to talk about “healthier” weight, BMI, proportionality

• Who to address
  • Age < ___ talk to parents
  • Age> ____ talk to child

• Use motivational interviewing techniques
Motivational Interviewing: Making it work for your Patient and You!
Persuasion

• Explain why the patient *should* make this change

• Give 3 specific *benefits* of the change

• Tell the patient *how* to change

• Emphasize the *importance* of the change

• *Advise* the patient to do it!
Case - Cindy & Georgie

- Single mom brings in her 3 year old son
- BMI 90%tile
- Mom is obese & depressed
- Family is low-income
Debrief

• Whose problem is it?
• Who tries to fix it?
• Is Cindy ready to change?
• Does she have the
  • Desire to change?
  • Ability to change?
  • Reasons (motivators)?
  • Need (barriers)?
Change is Hard

- Readiness is variable and may be related to a crisis
- Change is nonlinear
- Important to match strategies to readiness
- Ambivalence is normal
Who is ready for Change?

- Pre-contemplation
- Preparation
- Contemplation
- Action
Ambivalence

- Occurs throughout the change process
- Reflects the cost of change from the status quo
- Infallibility bias: “It won’t happen to me”
- Is uncomfortable
- Can become chronic
- Must be resolved by the patient
Our Righting Reflex

• Comes from concern & caring

• We want to fix the problems we see

• Doesn’t consider ambivalence in the process

• Can backfire- creates resistance
How to Win Friends and Motivate People- Part 1

• Ask permission: Can we talk?
• Ask open-ended questions: How do you feel? What have you tried?
• Share information (BMI)- optional
• Negotiate the agenda & set a goal: Many ways to go to make changes...
Setting Self-Management Goals

• What - change you will make
• When - will you do it?
• How Often
• Where
• With whom
• When - will you start?
Motivating-Part 2

- Assess readiness: 1-10

- Explore ambivalence: Why are you a 6, not an 8? Or a 6, not a 4?

- Summarize: This is what I heard you say

- Close the encounter: Appreciation & encouragement

- Confirm next steps: Follow-up, referral
Case: Cindy & Georgie

Revisited
Debrief- Key Points:

• Be curious
• Complexity of parent/child dynamics
• Elicit patient’s view of situation
• Match strategies to readiness
• Goal = move one stage further in readiness
• Confrontation= resistance
• Don’t gather evidence to support your position
Your case

• Susan is a 14 year old who comes in with her mom, Sandra, for a well visit
• Susan’s BMI is at 95%tile for age
• Mom wonders if it’s Susan’s thyroid
Groups of 3

- Susan
- Sandra & Observer
- Doctor

- Take 7 minutes
- Use the tool, don’t work up medically
- Report back- readiness, ambivalence, righting reflex. How did it feel?
Role Play

• Think about:
  • Desire
  • Ability
  • Reasons (positives)
  • Need for change (negatives)
Challenges

• Limited time
• Complex behaviors & self-esteem in parents & kids
  • Parent-child dynamics
• Values- parents, children, adolescents
  • Not seen as a problem
  • Cultural differences
• Meaning of risk
Opportunities

- MI skills translate to managing other chronic conditions
- MI skills help patients adopt preventive health habits
- Try this at home!
Step 3: Prevention or Intervention

- **5th-85th% = Healthy Weight**
  - prevention counseling

- **85th-94th% = Overweight**
  - With no risks: prevention counseling
  - With risks: prevention plus

- **95th-98th% = Obese**
  - With no risk: prevention plus
  - With risks: structured weight management

- **> 99th% = obese +**
  - Structured weight management
Target behavior
Identify problem behaviors
If none, reinforce healthy habits

Patient/Family Counseling:
Review risks
Use MI techniques to encourage behavior change

Prevention

Intervention
Advance through stages based on age and BMI

Stage 1: Prevention Plus
(Primary care office)

Stage 2: Structured Weight Management
(Primary care office with support)

Stage 3: Comprehensive Multidisciplinary Program—Tertiary Care
(Pediatric weight management center)
Prevention starts before birth

• Prenatal
  • Appropriate weight gain and glycemic control

• Birth to one year
  • Encourage breastfeeding
  • No juice before 6 mo, limit juice to 4 oz/d
  • Promote healthy sleep habits

• One to two years
  • Wean from bottle
  • Limit juice to 4 oz/d, encourage water intake
  • Promote healthy sleep habits
  • Feeding autonomy
  • No television!
Prevention counseling: for everyone

- Evaluate BMI trend
- Assess and review any risk factors
- 75210 healthy lifestyle messages
- Use MI skills to promote healthy behaviors
Evidence* based lifestyle recommendations

• 7 Eat breakfast 7 days per week

• 5 Consume at least 5 servings of fruits and vegetables each day

• 2 Limit screen time to no more than 2 hours per day (B)

• 1 Be physically active at least 1 hour per day (A)

• 0 No candy or sugar sweetened drinks (B)

• Others with evidence
  • Exclusive breastfeeding to 6 mo, maintain 12 mo and >
  • Family meals (C)
  • Limit fast food (C)
  • Limit portion size
Prevention Practice Tips

• Incorporate 75210 healthy lifestyle messages into every well child visit

• Posters in exam rooms: Small Steps to Health

• Include medical and behavioral risk factor questions (FH, diet, screen time and activity) in WC patient history

• Practice motivational interviewing

• Plot and review BMI at every well child visit

• Diagnose nutritional status

• Recognize trends early
Intervention: General concepts

- Family v. individual focus
- Emphasize lifestyle, not weight
- Talk about activity, not exercise
- Recommend “healthier” food choices not “bad” foods
- Children have ongoing linear growth therefore slowing weight gain may be adequate
- Staged treatment recommendations have evidence base to components but overall approach is untested
Intervention Stage 1: Prevention Plus

- Consider family visits, individual or group visits
- Patient/family selects behavioral goal, develop using MI
- Weight goal depends on age and weight classification
  - Overweight: weight maintenance or decrease in BMI velocity
  - Obese: gradual to moderate weight loss
- Frequency individualized to family needs, level of motivation and risk factors
  - Minimum 3 mo
Prevention-Plus Protocol (Stage 1)

- Eat five or more servings of fruits and vegetables/day
- Limit television and computer to two hours per day
- Do not keep a television in child's bedroom
- Participate in at least 60 minutes of moderate to vigorous physical activity per day
- Do not consume sugar-sweetened beverages
- Eat breakfast daily
- Limit meals outside the home
- Family meals at least five to six times per week
- Allow child to self-regulate food intake and avoid food restriction
Prevention Plus: Practice Tips

• “Healthy Lifestyle Visit”
  • Patients identified at WC with BMI 85-94th\textsuperscript{th}% and risk factors or >95th\% return for visit focused on MI and goal setting
  • If labs are indicated can help give reason for FU
  • EMR visit template with targeted PMH, FH, ROS and PE
  • Utilize other members of the healthcare team for follow up and reinforcement of progress
Healthy lifestyle visit: behavior risks

<table>
<thead>
<tr>
<th>Eating Habits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your child's usual breakfast?</td>
<td></td>
</tr>
<tr>
<td>How many days a week does s/he eat breakfast?</td>
<td></td>
</tr>
<tr>
<td>What fruits does your child like to eat?</td>
<td></td>
</tr>
<tr>
<td>How many servings of fruit does s/he get each day?</td>
<td></td>
</tr>
<tr>
<td>What vegetables does your child like to eat?</td>
<td></td>
</tr>
<tr>
<td>How many servings of vegetables does s/he get each day?</td>
<td></td>
</tr>
<tr>
<td>How often do you eat dinner at home with family?</td>
<td></td>
</tr>
<tr>
<td>How many times a week do you eat fast food?</td>
<td></td>
</tr>
<tr>
<td>What kinds of soda does your child drink?</td>
<td></td>
</tr>
<tr>
<td>How often does your child drink soda?</td>
<td></td>
</tr>
<tr>
<td>How much juice does your child drink in a day?</td>
<td></td>
</tr>
<tr>
<td>How much water does your child drink each day?</td>
<td></td>
</tr>
<tr>
<td>What kind of candy does your child like?</td>
<td></td>
</tr>
<tr>
<td>How often does your child eat candy?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screen Time/Activity/Habits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How many hours of combined screen time does your child watch daily, including TV, computer and video games?</td>
<td></td>
</tr>
<tr>
<td>What physical activities does your child enjoy?</td>
<td></td>
</tr>
<tr>
<td>How many hours of physical activity does s/he do each day?</td>
<td></td>
</tr>
<tr>
<td>Have you tried smoking?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Healthy lifestyle visit: FH and ROS medical risks

Family History:
- Diabetes
- Hypertension
- Hypercholesterolemia
- Heart Disease
- Obesity or Overweight
- Thyroid Conditions
- Smoking

Review of Systems:
- Snoring
- Cough or wheeze
- Depression
- Irregular menses
- Headaches
- Exercise intolerance
- Hip or knee pain

Additional ROS Comments: [text field]
Healthy lifestyle visit

Pediatric Healthy Lifestyle Assessment and Plan

- BMI Class:
  - Underweight (< 5%ile)
  - Healthy (5-84%ile)
  - Overweight (85-94%ile)
  - Obese (95-98%ile)
  - >99%ile

Comments:

Diagnosis:

- Underweight (783.22)
- Obesity (278.82)
- Morbid obesity (278.01)

Co-morbidity:

- Depression
- Hypertension
- Hyperlipidemia
- Impaired FBG
- FH of Diabetes
- Hypothyroidism

Problem List:

- ASTHMA UNSPECIFIED WITH EXACERBATION (ICD-493.92)
- INSULIN RESISTANCE SYNDROME (ICD-259.8)
- EXERCISE INDUCED ASTHMA (ICD-493.81)
- ADHD (ICD-314.01)

Update Problems | Update Orders | Go to Handouts | Go to SMG

Prev Form (Ctrl+PgUp) | Next Form (Ctrl+PgDn) | Close
Intervention Stage 2
Structured Weight Management

• If no progress with “Prevention Plus” after 3-6 months
• Targeted weight management visit
  • Motivational interviewing “plus”
  • Specific weight goals established according to age, BMI and risks
  • Frequent follow up (clinic visit, phone call, text message)
• Referral for
  • Nutrition counseling (if co-morbidities)
  • Physical activity program
  • Behavior specialist
Dustin

BMI 97th%
Risk factors
  FH Type 2 DM
  FH Obesity
  acanthosis nigricans
  sleep apnea
  asthma
  behavioral

Lab
  chol: 177
  (HDL 22, LDL 120)
  trig: 176
  ALT 89, AST 48
Structured Weight-Management Protocol for the Treatment of Childhood Obesity (Stage 2)

- Develop a low-energy-dense, balanced-macronutrient diet plan
- Increase structured daily meals and snacks
- Schedule supervised physical activity for at least 60 minutes per day
- Limit television and computer use to less than one hour per day
- Increase monitoring of screen time, physical activity, dietary intake, and dining habits by physician, patient, and/or family; use logs if necessary
### Treatment Goals - Weight Loss Targets

<table>
<thead>
<tr>
<th>Age</th>
<th>BMI 85 -94% ile No Risks</th>
<th>BMI 85 -94% ile With Risks</th>
<th>BMI 95 -98% ile</th>
<th>BMI &gt;= 99% ile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 2 -5 Years</td>
<td>Maintain weight velocity</td>
<td>Decrease weight velocity or weight maintenance</td>
<td>Weight maintenance</td>
<td>Gradual weight loss of up to 1 pound a month if BMI is very high (&gt;21 or 22 kg/m²)</td>
</tr>
<tr>
<td>Age 6 -11 Years</td>
<td>Maintain weight velocity</td>
<td>Decrease weight velocity or weight maintenance</td>
<td>Weight maintenance or gradual loss (1 lb per month)</td>
<td>Weight loss not to exceed an average of 2 pounds per week*</td>
</tr>
<tr>
<td>Age 12 -18 Years</td>
<td>Maintain weight velocity. After linear growth is complete, maintain weight</td>
<td>Decrease weight velocity or weight maintenance</td>
<td>Weight loss not to exceed an average of 2 pounds per week*</td>
<td>Weight loss not to exceed an average of 2 pounds per week*</td>
</tr>
</tbody>
</table>
“ACT!” Actively Changing Together
Teaching children, teens and families
to take charge of healthy eating and being active.

Childhood Obesity
To address this issue, the South Sound YMCA is participating in ACT! (formerly called Strong Kids Strong Teens), a unique program created by the YMCA of Greater Seattle and the Seattle Children’s Hospital and Regional Medical Center. ACT! is a 12-week program that combines nutrition guidance and physical activity to help overweight youth develop healthy lifestyles.

The Solution
• Youth (8-11) or Teens (12-14) and with a BMI ≥85th percentile are eligible for this program.
• Parents participate with their children.
• One 90-minute session per week for twelve weeks with the option for families to attend an additional 12-week session.

Join ACT! Beginning Winter 2011

It’s Easy for Parents to Enroll!
• Fill out the parent’s portion of the referral form available at both the Briggs Community YMCA and the Downtown Olympia YMCA.
• Take or fax the form to a doctor, nurse practitioner or a school nurse to complete.
• Request that a doctor or nurse fax the completed form to the South Sound YMCA at (360) 754-9723.
• Get started with ACT! after a YMCA staff member contacts the family.

Cost:
• YMCA Full Members: $90;
• Basic/Non-Members: $150.

Financial Assistance is available.

Winter Program Dates:
Downtown Olympia YMCA:
January 27 - April 14, 2011
Thursdays Youth 5:30-7 pm &
Thursdays Teens 6:30-8 pm
Briggs Community YMCA:
January 24 - April 11, 2011
Mondays Youth 5:30-7 pm
For more information call (360) 918-0257.
www.southsoundymca.org
The Portion Plate™

1/2 of your plate should be fruits and veggies

A serving of veggies EQUALS the size of a tennis ball.

A serving of fruit EQUALS the size of a yo-yo.

A serving of meat EQUALS the size of a box of 8 crayons.

A serving of whole grains EQUALS the size of a CD.

HEY KIDS! Take a good look at your portions!

1/4 or less should be lean meat or protein

1/4 should be whole grains

better 2 learn better 2 do better

eat better 2
Stage 3 and 4: Comprehensive Multidisciplinary Intervention and Tertiary Care

- If no improvement after 3-6 mo of “Structured Weight Management”, BMI > 99th%, co-morbidities
- Referral for
  - Medications: always with program, >16 years
    - Orlistat - lipase inhibitor
    - Sibutramine - serotonin and norepinephrine reuptake inhibitor
  - Intensive weight management program
  - Weight control surgery: Tanner IV, BMI >40
Dustin
Age 13 years
BMI >99th %

Risk factors
FH Type 2 DM
FH Obesity
acanthosis nigricans
asthma
s/p T & A
behavioral

Lab
chol: 177
(HDL 22, LDL 120)
trig: 176
ALT 89, AST 48
Reimbursement

• DSHS and Molina don’t cover obesity code 278.0
  • Lobbying efforts
  • Many third party carriers do cover
• Well child visits
• Healthy lifestyle visit
  • Can use time based CPT if patient has a pathology based ICD code ( HTN 401.9, hyperlipidemia 272.4, type 2 DM 250, NAFLD 571.8, sleep apnea 780.51)
• Preventive or counseling visits
  • Use V code but may not be covered without pathology based ICD code
What else can we do about it?

• Advocacy
  • Be our Voice NICHQ [http://www.nichq.org/advocacy/](http://www.nichq.org/advocacy/)
  • School lunch and PE programs
  • Neighborhood play spaces and activity programs
  • “Last Child in the Woods”
    [www.childrenandnature.org](http://www.childrenandnature.org)
  • Letsmove.gov

• Public policy
  • Insurance coverage for related services
  • Marketing to children
  • Public health campaign
  • Food industry regulations
  • Urban planning
The Health Pyramid: A Child-Obesity Prevention Model

Individual

Family

Peers

Positive Policy Environment

Media, educators

Healthcare agents

Healthcare organizations

Primary Care Practice

Med Schools

Non-profits

Local community

Schools

Community Advocates

NICHQ

National Initiative for Children’s Healthcare Quality
Primary care role

• Prevention is key

• Early diagnosis of overweight children
  • Routine monitoring of BMI
  • Recognize risk factors
  • Appropriate screening for associated conditions

• Medical home interventions
  • Involve the whole family
  • Motivational interviewing to promote change
  • Help patient set self management goals
  • Team care to reinforce positive messages
  • Small changes make big differences over time
  • Referral to community resources

• Advocacy
Resources

• For families
  • www.Letsmove.gov
  • Active bodies Active minds http://depts.washington.edu/tvhealth/
  • ACT YMCA program
  • Childhood Obesity Action Team- www.seattlechildrens.org
  • www.smallstep.gov/kids
  • www.EllynSatter.com
  • www.theportionplate.com

• For providers
  • www.letsmove.gov  (BMI and PDSA tools)
  • Childhood Obesity Action Network (NICHQ)
  • www.AAP.org/obesity
  • Childhood Obesity Action Team resources www.seattlechildrens.org
  • http://www.kphealtheducation.org/pwm/  MI training
References

• AAP Policy Statement: Prevention of Pediatric Overweight and Obesity


• USPSTF. Screening Recommendations for Childhood, Adolescent Obesity 2010.
References, cont’d.


Thank You very much!