

# CLINICAL RECOMMENDATIONS AND PRACTICE TOOLS

CLINICAL COMMITTEE - NCIOM TASK FORCE  
ON EARLY CHILDHOOD OBESITY PREVENTION

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# Sources of Recommendations

- 2007 “*Expert Committee Recommendations on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity*” (Convened by CDC, AMA, HRSA)
- 2007 NICHQ *Implementation Guide from the Childhood Obesity Action Network*
- 2010 U.S. Preventive Services Task Force *Recommendation on Pediatric Obesity Screening*

# Source of Clinical Tools

- Partnership of NC Eat Smart Move More, NC DPH, Academic Institutions, CCNC, NC Office of Disability and Health
- CCNC Childhood Obesity Initiative - KBR funded prevention grant

# Overview

## ■ Recommendations

- Prevention
- Assessment of the overweight / obese child
- Treatment of the overweight/obese child
- Within practice setting
- Outside of practice setting

## ■ Implementation

- Putting all the recommendations together with facilitating tools

**Within the practice**

# Prevention

- Universal weight status screening and counseling, starting at birth
- Consistent prevention messages for target behaviors
- Focus on family
- Use of patient-centered communication

# Universal Weight Status Screening

- Screen BMI annually for children 2-19y
  - Plot on gender specific BMI growth charts
- Use recumbent length-weight for children  $\leq 2$  years

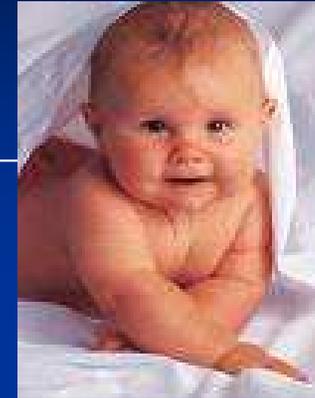
# Consistent Prevention Message

- Limit sugar-sweetened beverages
- Eat at least 5 servings of fruits and vegetables/day
- Eat breakfast every day
- Have regular family meals
- Limit eating out, especially at fast food
- Limit portion sizes
- Limit screen time to 2 hours or less
- Engage in moderate to vigorous activity for  $\geq 60$  mins/day

# Age-Appropriate Family Focus



Breastfeeding



Rules and structure  
“Feeding responsibility”

Rules and structure  
Role modeling



Role modeling  
Support of teen

# Family Focus - Parenting Style

	Parenting Style	
	High Acceptance	Low Acceptance
High Control	<b>Authoritative</b>	Authoritarian
Low Control	Indulgent	Disengaged

Adapted from Chassin et al, *J Pediatric Psychology* 2005

# Use of patient-centered communication

- Assessment of readiness to change
- Motivational interviewing

# Assessment of the Overweight or Obese Child

- Behavioral assessment
  - Dietary and physical activity patterns
  - Practical resources and barriers
  - Readiness to change
- Medical risk screening
  - BMI
  - Genetic and family history risks
  - Co-morbidities

# Diet and physical activity patterns

- Amount of sugar sweetened beverages and juice
- Number of fruits and vegetables daily
- Frequency and quality of breakfast, meals, snacks
- Frequency of eating restaurant-prepared foods
- Portion size
- Time spent in moderate physical activity
- Amount of sedentary behaviors (i.e. screen time)

# Practical resources and barriers

- Community – neighborhood parks, grocery stores, recreation centers, friends, safety
- Household – finances, time, transportation, caregivers other than parents
- Cultural – customary food, eating practices, norms for level of physical activity, perception of weight status

# Readiness to Change

- Stages of Change
  - Pre-contemplation
  - Contemplation
  - Preparation
  - Action
  - Maintenance

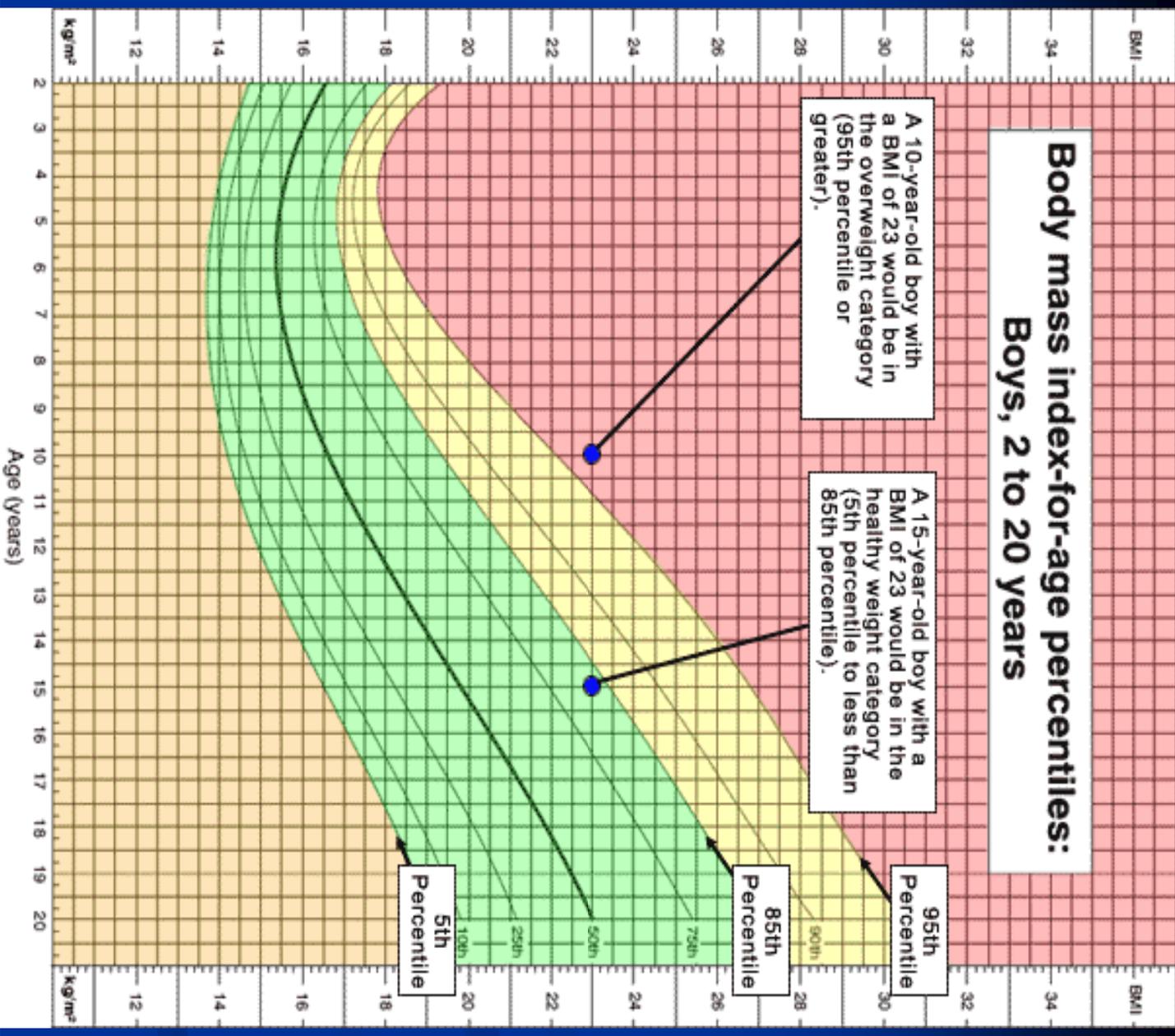
# Medical Risk: BMI Percentile for age and gender

- 85-95<sup>th</sup>ile - Overweight
- 95-98<sup>th</sup>ile - Obesity
- $\geq 99^{\text{th}}$ ile – Obesity
  
- Increasing risk for adult obesity and medical complications with increasing BMI percentile

# Body mass index-for-age percentiles: Boys, 2 to 20 years

A 10-year-old boy with a BMI of 23 would be in the overweight category (95th percentile or greater).

A 15-year-old boy with a BMI of 23 would be in the healthy weight category (5th percentile to less than 85th percentile).



# Genetic and Family History Risks

- Single-gene defects (e.g. Prader-Willi) account for <3%
- Family History
  - Obesity
    - 1 parent obese → 40% chance obesity
    - Both parent obese → 80% chance obesity
    - Age 1-3 yrs, parent's weight predicts obesity better than actual weight of child
  - Type 2 Diabetes
  - Cardiovascular disease
  - Ethnicity

# Screening for Co-morbidities

- Sleep disorders
- Asthma
- Menstrual irregularities
- Abdominal pain -Liver problems, reflux, gallstones, constipation
- Hypertension
- Skin changes – Acanthosis nigricans, hirsutism
- Orthopedic problems - Blount, SCFE
- Mental Health - Anxiety, depression

# Screening Laboratories

BMI category	Risk factors (HTN, abnormalities on physical exam; 1 <sup>st</sup> or 2 <sup>nd</sup> degree family history of CVD or T2DM)	Suggested labs
85 <sup>th</sup> – 94 <sup>th</sup> percentile	Absent	+/- Lipid profile
85 <sup>th</sup> – 94 <sup>th</sup> percentile	Present (1 for lipids, 2 for glucose)	Lipid profile, If age 10 or above, fasting glucose and ALT/AST
95 <sup>th</sup> – 99 <sup>th</sup> percentile	Absent or present	Lipid profile, If age 10 or above, fasting glucose and ALT/AST
≥ 99 <sup>th</sup> percentile	Absent or present	Lipid profile, If age 10 or above, fasting glucose and ALT/AST

# Treatment

Goal – improve long-term physical health through permanent healthy lifestyles

- Encourage healthy behaviors taking into account:
  - Current dietary and physical activity patterns
  - Practical resources and barriers
  - Readiness to change
- Use techniques to motivate patients and families
  - Supportive, family focused, culturally sensitive
  - Patient centered motivational interviewing
- Frequent visits, depending on severity and complication
- Implement a staged approach to intervention

# Motivational interviewing

- Takes into account readiness to change
- Uses non-judgmental questions and reflective listening to uncover concerns, beliefs and values
- Evokes rather than imposes motivation
- Helps patients formulate their own plan

## Staged Approach to Weight Management in Children and Adolescents

Stage	Components	Staff and Skills	Frequency/Duration
1 Prevention Plus	Encourage healthy diet and activity	PCP office	Monthly for 3-6 months
2 Structured weight management	Above, plus: Structured meal planning	PCP office Dietician or Trained provider (nutrition, behavioral counseling, community resources, and/or physical activity)	Monthly for 3-6 months
3 Comprehensive Multidisciplinary	Above, plus: Formal monitoring Behavioral tx Family involvement Group visits	Multi-practice group Community Program Commercial Program (MD, RD, PT, LCSW)	Weekly for 8-12 weeks Monthly follow up
4 Tertiary Care	Above, plus: Pharmacotherapy Bariatric Surgery	Established protocols Access to subspecialty care	As per protocol

# US Preventive Services Task Force

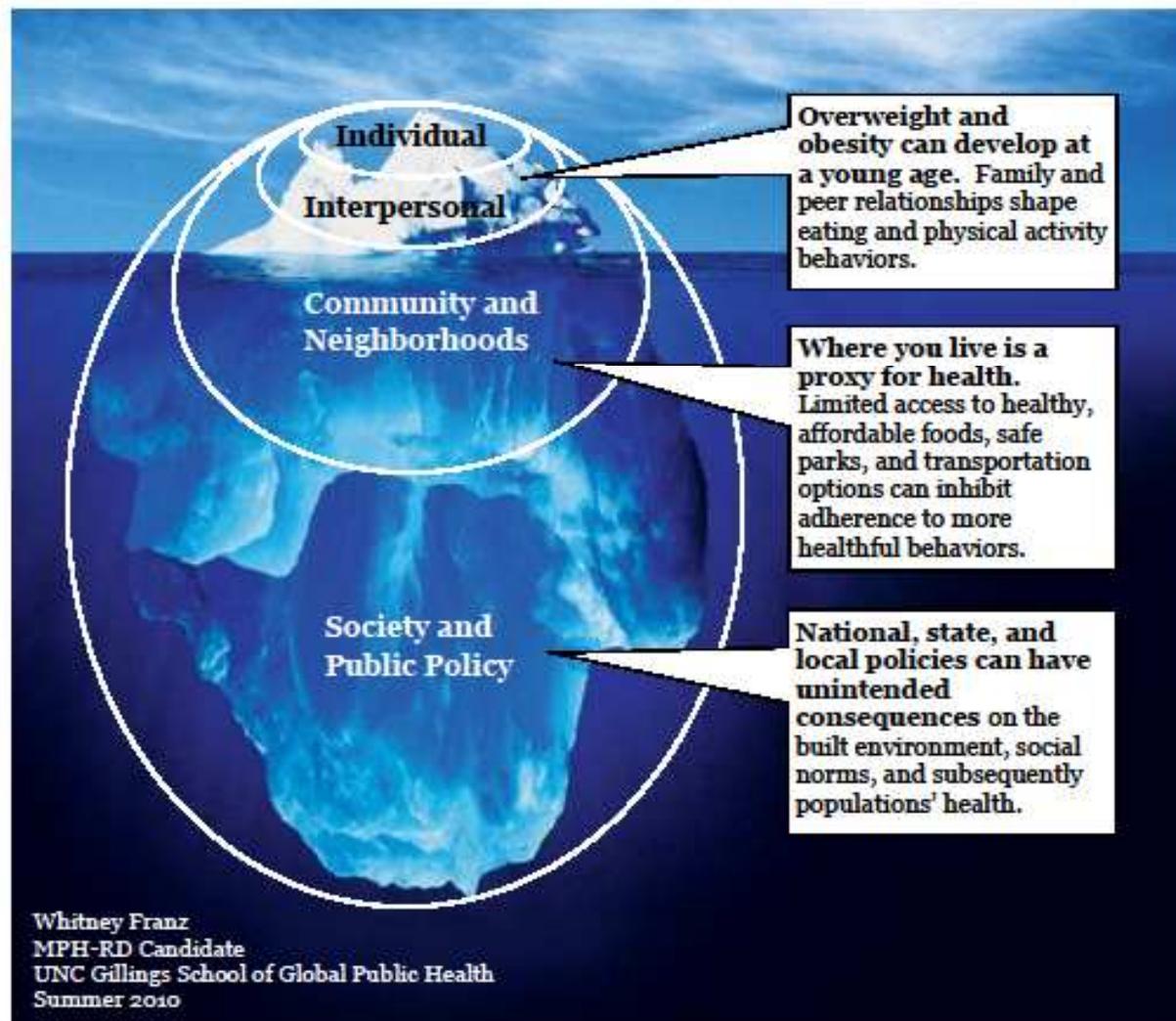
- 2010 Evidence-based Recommendation on Screening for Obesity in Children and Adolescents
- Clinicians screen children aged 6 years and older for obesity and offer them or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status.
- Grade: B recommendation (*There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial*)

# Outside the practice

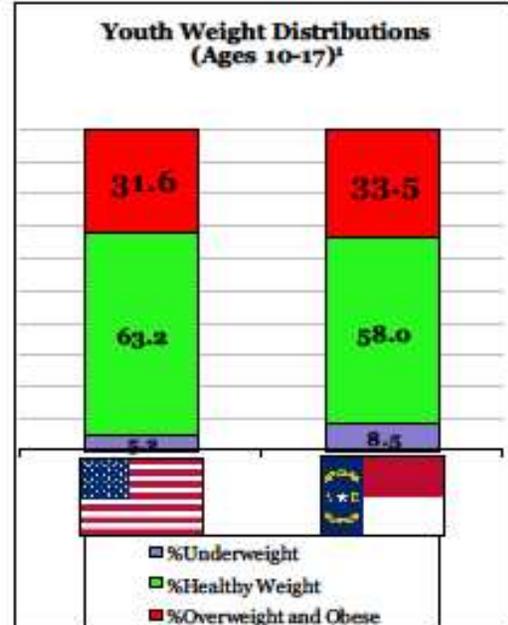
# Adolescent Obesity in Wake County

## The Tip of the Iceberg—Looking Below the Surface

Although weight management efforts are typically focused at the more obvious individual and interpersonal aspects of the Socio-Ecological Model, addressing these facets is just the 'tip of the iceberg'. By concentrating on the SOCIAL DETERMINANTS OF HEALTH 'below the surface', even greater progress can be made at reducing adolescent obesity.



Obese youth are at increased risk of multiple chronic diseases and of premature death in adulthood.



**90%** of obese youth will become obese adults<sup>2</sup>

**46.1%** of Wake County youth, ages 12-18, who rely on the health department for services are overweight or obese<sup>3</sup>

**44.1%** of Wake County 2010 Community Assessment Survey Respondents indicated that overweight and obesity is the most important health issue<sup>4</sup>

# Advocacy

- Local, state, national level
- Increased access to fresh fruits and vegetables and safe physical environment for activity
- Daycares, schools, recreation centers, places of worship, grocery stores, green spaces, etc
- Encourage families to advocate for changes

Putting it all together  
with tools

**Table 4: Signs and Symptoms of Conditions Associated with Obesity, Diagnosis and Referral Recommendations**

Symptoms or Signs	Suspected Diagnosis	Appropriate Studies	Referral
Polydipsia, polyuria, weight loss, acanthosis nigricans	Type 2 Diabetes	Random glucose, fasting glucose, 2 hour GTT, urine ketones, HbA1c	Endocrine
Small stature (decreasing height velocity), goiter	Hypothyroidism	Free T4, TSH	Endocrine
Small stature (decreasing height velocity), purple striae, Cushingoid facies	Cushing's Syndrome	Serum cortisol, 24 hour urine free cortisol	Endocrine
Hirsutism, excessive acne, menstrual irregularity	Polycystic Ovary Syndrome	Free testosterone	Adolescent medicine or Endocrine
Abdominal pain	GER Reflux, Constipation, Gall Bladder Disease	Medication trial for suspected reflux or constipation, ultrasound for GB disease	Gastroenterology
Hepatomegaly, increased LFTs (ALT or AST >60 for >6 months)	Nonalcoholic Fatty Liver Disease	ALT, AST, bilirubin, alkaline phosphatase (also see Table 5)	Gastroenterology
Snoring, daytime somnolence, tonsillar hypertrophy, enuresis, headaches, elevated BP	Sleep Apnea, Hypoventilation Syndrome	Sleep Study	ENT or Pulmonology
Hip or knee pain, limp, limited hip range of motion, pain walking	Slipped Capital Femoral Epiphysis	X-rays of hip	Orthopedics
Lower leg bowing	Blount Disease	X-ray of lower extremities and knees	Orthopedics
Severe headaches, papilledema	Pseudotumor Cerebri	Head CT Scan	Neurology or Neurosurgery
Depression, school avoidance, social isolation, sleep disturbances	Depression	Validated depression screen (PSC, MFQ)	Psychiatry or Psychology
Binge eating, vomiting	Bulimia	Validated screen for eating disorder	Psychiatry, psychology, eating disorders center
Dysmorphic features, small hands and feet, small genitalia, no testes, undescended testes	Prader-Willi Syndrome	Chromosomes for Prader-Willi Syndrome	Genetics

**Table 5: Results Guide for Overweight and Obese Pediatric Patients**

Test	Result	Action Plan
Fasting Glucose	<100	Recheck every 2 years.
	≥100, <126	Pre-diabetes. Provide counseling. Consider oral glucose tolerance test, HbA1c. Recheck yearly.
	≥126	Diabetes. Refer to endocrine.
Oral GTT (2-hour)	<140	Recheck every 2 years, more frequently if weight gain continues/accelerates.
	≥140, <200	Pre-diabetes. Provide counseling. Consider referral to endocrine if risks present. Recheck every 2 years, more frequently if weight gain continues/accelerates.
	≥200	Diabetes. Refer to endocrine.
Random Glucose	≥200	Diabetes. Refer to endocrine.
Hemoglobin A1c	≥7	Refer to endocrine. Note that this test is not routinely recommended.
Fasting LDL	<110	Repeat every 5 years.
	≥110, <130	Repeat in 1 year.
	≥130, <160	Obtain complete family history. Provide low cholesterol diet (AHA "Step 1" Diet). Recheck 1 year.
	≥160 w/risk, or any LDL ≥190	Refer to cardiology.
	Fasting HDL	≥40
<40		Increase activity and omega-3 fats (flax/fish oil). Stop smoking. Decrease sugar intake. Recheck 1 year.
Fasting Triglycerides	<200	Routine care. Recheck every 2 years, more frequently if weight gain continues/accelerates.
	≥200, <500	Increase omega-3 intake. Decrease saturated fat, sugar. Recheck 1 year.
	≥500	Refer to cardiology.
BP, ages 3-19 • Plot percentile from BP table • Must confirm with 3 separate measures	<90th %ile	Routine care. Recheck annually.
	≥90th, <95th %ile, ≥120/80 any age (pre-HTN)	Increase physical activity. Smoking cessation. DASH diet. If other risks or symptoms, consider BUN/Cr, UA and culture, renal u/s, ECG, fundoscopic exam. Recheck every 6 months.
	≥95th %ile, <99th %ile + 5 mm Hg (Stage 1 HTN)	As above, + CBC, electrolytes (include BUN/Cr), UA and culture, ECG. Consider renal u/s, fundoscopic exam, renin. Refer to cardiology or nephrology (esp. if pre-pubertal). Consider pharmacotherapy. Recheck 1 month.
	≥99th %ile + 5 mm Hg (Stage 2 HTN)	As above. Refer to cardiology or nephrology. Recheck within 1 week.
***Always elicit sleep history and consider sleep study to r/o OSA as cause of HTN***		
Liver function tests	ALT or AST ≥60, <200	Lifestyle modification. Recheck every 3 months.
	ALT or AST ≥60 x 6 months or ≥200 at any time	Refer to GI.



## Pediatric Obesity

1. Assess Body Mass Index (BMI) in children ages 2-18 annually.
2. Plot BMI on gender-specific BMI-for-age chart to determine percentile.
3. Diagnose weight category (Table 1).
4. Identify risk (Table 2) and comorbidities (Table 4).
5. History and physical exam, blood pressure, appropriate laboratory tests and referrals (Tables 3, 5).
6. Share prevention messages (5-3-2-1-Almost None).

### Assessment and Counseling Tips

Assess current behaviors (consider using questionnaires).

#### — Eating behaviors

- Fruit and vegetable consumption
- Breakfast consumption (frequency and quality)
- Frequency of family meals prepared at home
- Sugar-sweetened beverage consumption (soda, tea, energy drinks)
- Excess juice consumption (>4-6 oz/day for age 1-6 yrs, >8-12 oz/day for age 7+ yrs)
- Frequency of eating food bought away from home (esp. fast food)
- Portion sizes of meals and snacks
- Atypical eating/nutrition behaviors

#### — Physical activity behaviors

- Amount of TV and other screen time and sedentary activities
- Amount of daily physical activity
- Role of environmental barriers and accessibility

Assess motivation and attitudes.

- Are you concerned about your/your child's weight?
- On a scale of 0 to 10, how important is it for you/child/family to change [specific behavior] or to lose weight?
- On a scale of 0 to 10, how confident are you that you/he/she could succeed?

Summarize and probe possible changes.

### Prevention Messages: 5-3-2-1-Almost None

- 5** or more servings of fruits and vegetables daily
- 3** structured meals daily—eat breakfast, less fast food, and more meals prepared at home
- 2** hours or less of TV or video games daily
- 1** hour or more of moderate to vigorous physical activity daily
- Almost None:** Limit sugar-sweetened beverages to "almost none"

Adapted from the 5-3-2-1-0 message promoted by the National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))

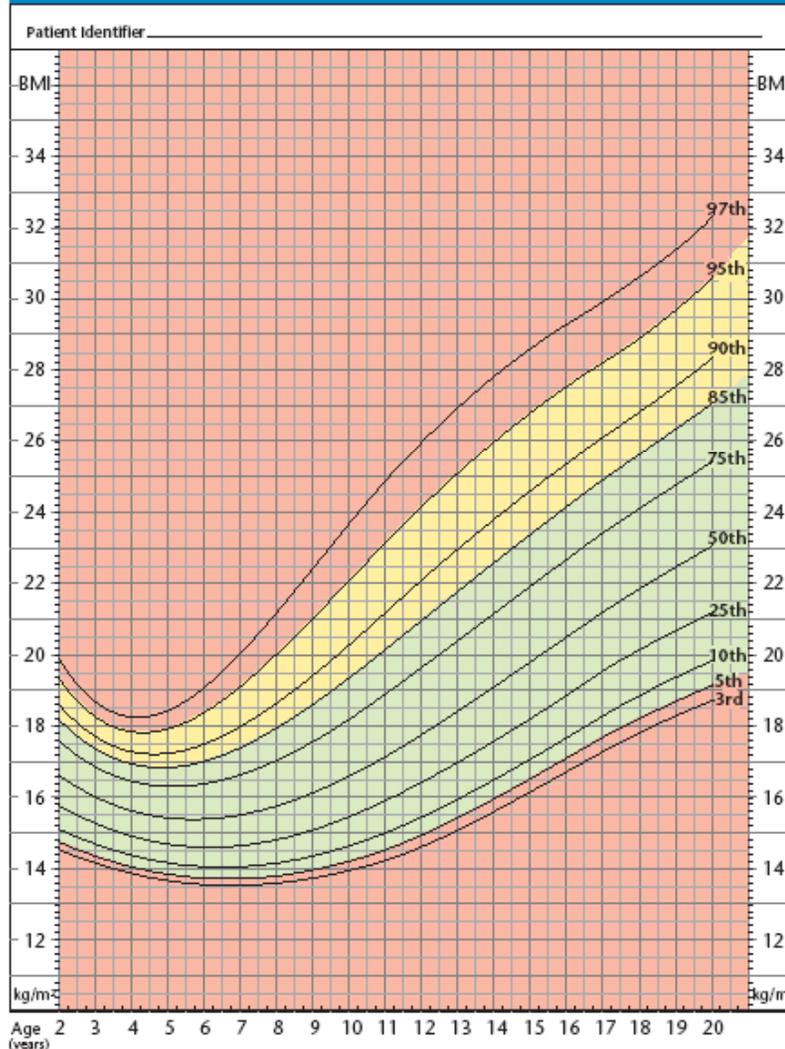
## Putting it all together

- Assess weight status of all children at all well care visits
  - Recumbent length-weight 0-2 years
  - BMI 2-18 years
- Make a weight category diagnosis based on BMI



# Body Mass Index 2 to 20 years

# BOYS



**To calculate BMI:**  
 Kilograms and meters:  
 $\text{weight (kg)} / [\text{height (m)}]^2$   
 Pounds and inches:  
 $\text{weight (lb)} / [\text{height (in)}]^2 \times 703$

**BOYS:  
99th percentile cut-points**

AGE	BMI
5	20.1
6	21.6
7	23.6
8	25.6
9	27.6
10	29.3
11	30.7
12	31.8
13	32.6
14	33.2
15	33.6
16	33.9
17	34.4

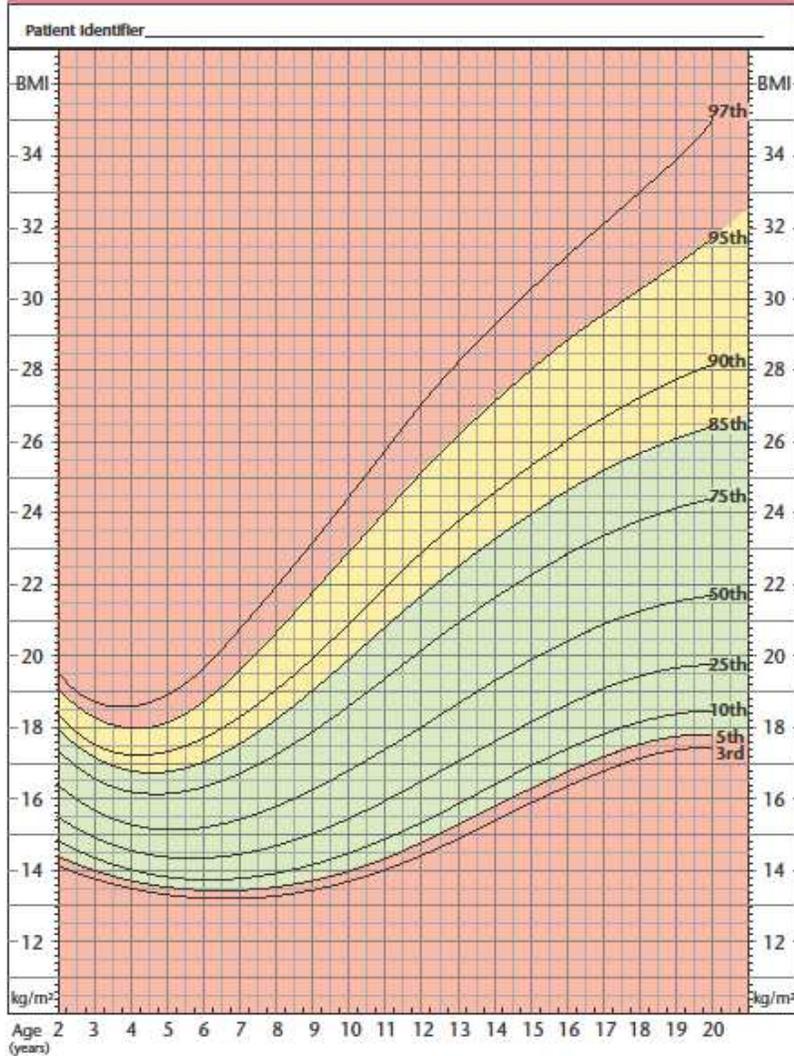
From National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))

Color coding of the 2000 CDC BMI charts by UNC's Department of Pediatrics and Center for Health Promotion and Disease Prevention (CDC Cooperative agreement U48-DP-000059) for research and clinical purposes



# Body Mass Index 2 to 20 years

# GIRLS



**To calculate BMI:**  
 Kilograms and meters:  
 $\text{weight (kg)} / [\text{height (m)}]^2$   
 Pounds and inches:  
 $\text{weight (lb)} / [\text{height (in)}]^2 \times 703$

**GIRLS:  
99th percentile cut-points**

AGE	BMI
5	21.5
6	23.0
7	24.6
8	26.4
9	28.2
10	29.9
11	31.5
12	33.1
13	34.6
14	36.0
15	37.5
16	39.1
17	40.8

From National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))

# Putting it all together

- Measure blood pressure
- Assess for hypertension based on age, gender, and height

## Blood Pressure Levels by Age and Height Percentile

# GIRLS

Age (Year)	BP Percentile	SYSTOLIC BP (mmHg) Percentile of Height							DIASTOLIC BP (mmHg) Percentile of Height						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
1	50th	83	84	85	86	88	89	90	38	39	39	40	41	41	42
	90th	97	97	98	100	101	102	103	52	53	53	54	55	55	56
	95th	100	101	102	104	105	106	107	56	57	57	58	59	59	60
	99th	108	108	109	111	112	113	114	64	64	65	65	66	67	67
2	50th	85	85	87	88	89	91	91	43	44	44	45	46	46	47
	90th	98	99	100	101	103	104	105	57	58	58	59	60	61	61
	95th	102	103	104	105	107	108	109	61	62	62	63	64	65	65
	99th	109	110	111	112	114	115	116	69	69	70	70	71	72	72
3	50th	86	87	88	89	91	92	93	47	48	48	49	50	50	51
	90th	100	100	102	103	104	106	106	61	62	62	63	64	64	65
	95th	104	104	105	107	108	109	110	65	66	66	67	68	68	69
	99th	111	111	113	114	115	116	117	73	73	74	74	75	76	76
4	50th	88	88	90	91	92	94	94	50	50	51	52	52	53	54
	90th	101	102	103	104	106	107	108	64	64	65	66	67	67	68
	95th	105	106	107	108	110	111	112	68	68	69	70	71	71	72
	99th	112	113	114	115	117	118	119	76	76	76	77	78	79	79
5	50th	89	90	91	93	94	95	96	52	53	53	54	55	55	56
	90th	103	103	105	106	107	109	109	66	67	67	68	69	69	70
	95th	107	107	108	110	111	112	113	70	71	71	72	73	73	74
	99th	114	114	116	117	118	120	120	78	78	79	79	80	81	81
6	50th	91	92	93	94	96	97	98	54	54	55	56	56	57	58
	90th	104	105	106	108	109	110	111	68	68	69	70	70	71	72
	95th	108	109	110	111	113	114	115	72	72	73	74	74	75	76
	99th	115	116	117	119	120	121	122	80	80	80	81	82	83	83
7	50th	93	93	95	96	97	99	99	55	56	56	57	58	58	59
	90th	106	107	108	109	111	112	113	69	70	70	71	72	72	73
	95th	110	111	112	113	115	116	116	73	74	74	75	76	76	77
	99th	117	118	119	120	122	123	124	81	81	82	82	83	84	84
8	50th	95	95	96	98	99	100	101	57	57	57	58	59	60	60
	90th	108	109	110	111	113	114	114	71	71	71	72	73	74	74
	95th	112	112	114	115	116	118	118	75	75	75	76	77	78	78
	99th	119	120	121	122	123	125	125	82	82	83	83	84	85	86
9	50th	96	97	98	100	101	102	103	58	58	58	59	60	61	61
	90th	110	110	112	113	114	116	116	72	72	72	73	74	75	75
	95th	114	114	115	117	118	119	120	76	76	76	77	78	79	79
	99th	121	121	123	124	125	127	127	83	83	84	84	85	86	87
10	50th	98	99	100	102	103	104	105	59	59	59	60	61	62	62
	90th	112	112	114	115	116	118	118	73	73	73	74	75	76	76
	95th	116	116	117	119	120	121	122	77	77	77	78	79	80	80
	99th	123	123	125	126	127	129	129	84	84	85	86	86	87	88

## Blood Pressure Levels by Age and Height Percentile

# BOYS

Age (Year)	BP Percentile	SYSTOLIC BP (mmHg) Percentile of Height							DIASTOLIC BP (mmHg) Percentile of Height						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
1	50th	80	81	83	85	87	88	89	34	35	36	37	38	39	39
	90th	94	95	97	99	100	102	103	49	50	51	52	53	53	54
	95th	98	99	101	103	104	106	106	54	54	55	56	57	58	58
	99th	105	106	108	110	112	113	114	61	62	63	64	65	66	66
2	50th	84	85	87	88	90	92	92	39	40	41	42	43	44	44
	90th	97	99	100	102	104	105	106	54	55	56	57	58	58	59
	95th	101	102	104	106	108	109	110	59	59	60	61	62	63	63
	99th	109	110	111	113	115	117	117	66	67	68	69	70	71	71
3	50th	86	87	89	91	93	94	95	44	44	45	46	47	48	48
	90th	100	101	103	105	107	108	109	59	59	60	61	62	63	63
	95th	104	105	107	109	110	112	113	63	63	64	65	66	67	67
	99th	111	112	114	116	118	119	120	71	71	72	73	74	75	75
4	50th	88	89	91	93	95	96	97	47	48	49	50	51	51	52
	90th	102	103	105	107	109	110	111	62	63	64	65	66	66	67
	95th	106	107	109	111	112	114	115	66	67	68	69	70	71	71
	99th	113	114	116	118	120	121	122	74	75	76	77	78	78	79
5	50th	90	91	93	95	96	98	98	50	51	52	53	54	55	55
	90th	104	105	106	108	110	111	112	65	66	67	68	69	69	70
	95th	108	109	110	112	114	115	116	69	70	71	72	73	74	74
	99th	115	116	118	120	121	123	123	77	78	79	80	81	81	82
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	99th	119	120	122	123	125	127	127	83	84	85	86	87	87	88
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	95th	113	114	116	118	119	121	121	76	77	78	79	80	81	81
	99th	120	121	123	125	127	128	129	84	85	86	87	88	88	89
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	95th	115	116	117	119	121	122	123	77	78	79	80	81	81	82
	99th	122	123	125	127	128	130	130	85	86	86	88	88	89	90

# Putting it all together

- Take a focused family history and review of systems
- Assess behaviors and attitudes
- Perform a thorough physical examination
- Order appropriate laboratory tests



## Tell Us about Your Child's Eating Habits and Physical Activity

1. What kind of milk does your child drink?  
 Skim or 1%       2%       Whole       None  
 Other: \_\_\_\_\_
2. How much soda or other sugar-sweetened drinks (like sweet tea, punch, Kool-Aid®) does your child drink each day?  
 None       Less than 6 ounces (a half can of soda)       More than 6 ounces
3. How much fruit juice does your child drink each day?  
 Less than 6 ounces (a small juice glass)       6-12 ounces       More than 12 ounces
4. How many days a week does your child eat breakfast?  
 Every day       Some days       Rarely/Never
5. How often do you help your child decide if s/he is really hungry before eating a snack or a second helping of a meal?  
 Most of the time       Some of the time       Rarely/Never
6. How many snacks like cookies, ice cream, chips or fast foods (like french fries) does your child get each day?  
 0       1       2 or more
7. How many servings of fruit and/or vegetables does your child eat each day?  
 5 or more       3-4       2 or less
8. How many family meals (cooked and eaten at home) do you have each week?  
 5 or more       2-4       0-1
9. How many times a week does your child eat food bought away from home (like fast food, restaurants, convenience stores, cafeterias, "take out", or vending machines)?  
 0-1       2-3       4 or more
10. How many hours of active play does your child get each day?  
 2 or more       1       0
11. How many hours a day does your child sit in front of the TV, videos, DVDs, or computer?  
 0       1-2       3 or more
12. How many days a week does your child play outdoors?  
 5 or more       3-4       2 or less
13. How do you feel about making some changes to help your child eat healthy or be active?  
 I am *not* interested in making changes at this time.  
 I am *not* ready to make changes yet, but want to talk more.  
 I am ready to make some changes now and would like help.  
 I am already working to eat healthy and be active, and I don't feel there is much more to do.



# Putting it all together

- Give consistent messages on healthy behaviors



## Strategies to Help You & Your Child Be Healthy

### 1. DRINK SKIM OR LOW-FAT MILK.

- Choose skim or low-fat milk (except for children under 2).
- Change slowly from whole milk to 1% or skim.

### 2. LIMIT SUGAR-SWEETENED DRINKS.

- Choose water as your #1 beverage for the whole family.
- Buy less soft drinks like soda, fruit drinks, or sweet tea.

### 3. LIMIT FRUIT JUICE—JUICE IS HIGH IN CALORIES.

- Offer juice in small quantities and only once a day.
- Mix juice with an equal amount of water.
- Choose 100% juice instead of fruit punch, juice cocktail, or juice blends.

### 4. EAT A HEALTHY BREAKFAST EVERY DAY.

- Choose one of each:
- GRAIN, like low-sugar cereal or toast
  - FRUIT, like bananas or raisins
  - PROTEIN, like low-fat milk, cheese, yogurt, or peanut butter

### 5. ENCOURAGE YOUR CHILD TO EAT JUST ENOUGH TO SATISFY HUNGER.

- Serve smaller portions and allow seconds of healthier foods.
- Don't insist that your child clean his/her plate.
- Think about whether your child is really hungry or eating for other reasons.

### 6. LIMIT "JUNK FOOD" SNACKS.

- Keep healthy foods available for snacks, instead of cookies, candy, and chips.
- Bring healthy snacks with you when you go out.

### 7. ENJOY MORE FRUITS AND VEGETABLES.

- Choose frozen and canned fruits and vegetables if fresh costs too much.
- Cut them up and make them easily available on the table or in the fridge.
- Keep trying new fruits and vegetables and let your child choose—sometimes you have to try up to 10 times for success.

### 8. EAT TOGETHER AS A FAMILY AT LEAST ONCE A DAY.

- Serve healthy food at this meal and make it a happy family time.
- Eat away from the television.

### 9. EAT OUT LESS.

- Limit eating out to once per week.
- Choose restaurants with healthier options, and avoid all-you-can-eat places.

### 10. MOVE MORE—AIM FOR AT LEAST 1 HOUR OF ACTIVE PLAY A DAY.

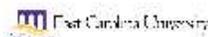
- Choose active toys.
- Play active games with your child inside and outside.
- Make helping with household chores a fun activity for your child.

### 11. LIMIT TV AND OTHER SCREEN TIME (COMPUTERS, ETC.) TO NO MORE THAN 2 HOURS PER DAY.

- Exercise during commercials when you do watch.
- Keep the TV out of your child's bedroom.
- Limit eating in front of the TV and don't let the ads tempt you to eat.

### 12. MOVE MORE—GO OUTSIDE AND PLAY AT LEAST 5 DAYS A WEEK.

- Plan outside play time.
- Work and play outside on the weekends—include neighborhood children.
- Start your own outdoor family fun day—play basketball, soccer, or catch.



# Consistent Prevention Message

5-3-2-1-0

- 5 fresh fruits/veggies a day
- 3 structured family meals
- 2 hours or less of screen time
- 1 hour of physical activity a day
- “Almost none” sugar-sweetened beverages





## Prescription for Health

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### 5-3-2-1-Almost None

- 5** 5 or more servings of fruits and vegetables daily

---

- 3** 3 structured meals daily—eat breakfast, less fast food, and more meals prepared at home

---

- 2** 2 hours or less of TV or video games daily

---

- 1** 1 hour or more of moderate to vigorous physical activity daily

**Almost None** Limit sugar-sweetened drinks to “almost none”

Adapted from the 5-2-1-0 message promoted by the National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))



## Prescription for Health

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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**Almost None** Limit sugar-sweetened drinks to “almost none”

Adapted from the 5-2-1-0 message promoted by the National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))



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Date: \_\_\_\_\_

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## Prescription for Health

Name: \_\_\_\_\_

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### 5-3-2-1-Almost None

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**Almost None** Limit sugar-sweetened drinks to “almost none”

Adapted from the 5-2-1-0 message promoted by the National Initiative for Children's Healthcare Quality ([www.nichq.org](http://www.nichq.org))

# Putting it all together

- Use counseling techniques to motivate families – Motivational Interviewing Training
- Establish office based approach for follow up of overweight/obese children
- Identify or develop more intensive weight management interventions for children who do not respond to Stage 1

**Wake and Johnston Counties Childhood Obesity Resources**

(To access links, CTRL+click)

<b>Resource</b>	<b>Services Provided</b>	<b>Contact</b>	<b>Websites and Forms</b>
<b>WakeMed Energize</b>	Intensive family based nutrition and exercise program for children with metabolic syndrome; Get on Track nutritional program for children who do not qualify.	919-350-7584	<a href="http://energize.wakemed.org">energize.wakemed.org</a> <a href="#">WakeMed Energize Referral Form</a> <a href="#">WakeMed Energize Lab Referral Form</a>
<b>Duke Children's Healthy Lifestyles</b>	Multi-disciplinary referral clinic for pediatric weight management.	919-620-5356 866-520-5356 919-471-6930(f)	<a href="http://cendo.pediatrics.duke.edu">cendo.pediatrics.duke.edu</a>
<b>UNC Pediatric Cardiology</b>	Evaluation of pediatric patients for cardiovascular disease. Patients referred with base diagnosis of overweight or obese presenting with hypercholestermia, hypertension, and hyperlipidemia.	919-966-4601	<a href="http://www.med.unc.edu/pediatrics/pediatric-specialties/cardiology">www.med.unc.edu/pediatrics/pediatric-specialties/cardiology</a>
<b>Wake County WIC</b>	Nutritional education and counseling for families and their children <5 years of age, food assistance, Farmers Market Nutrition Program, breast-feeding supplies.	919-250-4724	<a href="#">Wake County WIC Referral Form</a>
<b>Wake County WIC's "Ready to Change" Program</b>	Nutrition and exercise classes for all WIC participants and also available to non-income eligible children between 1 and 5 years.	919-250-4724	<a href="#">Wake County WIC Ready to Change Referral Form</a>
<b>Johnston County WIC</b>	Nutritional education and counseling for families and their children <5 years of age, food assistance, breast-feeding support.	919-989-5255	<a href="#">Johnston County WIC Exchange of Information Forms</a>
<b>Parks &amp; Recreation</b>	Public greenways, community centers with fitness facilities, specialized recreation, athletics, teams and leagues, aquatics, tennis.		<a href="#">Wake and Johnston County Parks and Recreation Facilities</a>
<b>YMCA of the Triangle</b>	Exercise and classes for the entire family. Sports leagues, camp programs for youth, nutritionist and personal training programs, swim teams and swimming lessons		<a href="#">Wake and Johnston County YMCA</a> <a href="http://ymcatriangle.org">ymcatriangle.org</a>
<b>Boys &amp; Girls Clubs</b>	Sports, fitness, recreation, arts, education, career, health & life skills programs.		<a href="#">Wake and Johnston County Boys &amp; Girls Clubs</a>
<b>Wake Teen "Be Fit Get Moving" Program</b>	Nutrition and exercise counseling for Wake Teen patients; group sessions for ages 10-23 years.	919-828-0035	<a href="http://waketeen.org">waketeen.org</a> <a href="mailto:krichards@waketeen.org">krichards@waketeen.org</a>
<b>American Dietetic Association</b>	Can search for nutritionists in your area. No independent nutritionist can bill Medicaid.		<a href="http://www.eatright.org">www.eatright.org</a> (Top right, click on "Find A Nutrition Professional")
<b>CCWJC</b>	Provider tools, Clinicians Reference Guide	919-792-3628	<a href="http://www.ccwjc.com">www.ccwjc.com</a>
<b>My Eat Smart Move More</b>	Consumer website offering the tips for healthier eating and increasing physical activity.		<a href="http://myeatSMARTmoveMore.com">myeatSMARTmoveMore.com</a>
<b>EFNEP Families Eating Smart and Moving More</b>	Offers free nutrition classes for low income families with children.	919-250-1114	<a href="mailto:Suzanne.vanRijn@co.wake.nc.us">Suzanne.vanRijn@co.wake.nc.us</a> <a href="#">EFNEP Referral Form</a>
<b>AHA Advocates</b>	Advocates for health in action provides information on where to access healthful food and physical activities in Wake County		<a href="http://www.advocatesforhealthinaction.org">www.advocatesforhealthinaction.org</a>

### Pediatric Registered Dietitians WAKE County

<b>Sarah Carnathan, MS, RD, LDN</b> Nutrition That Works	<a href="mailto:sarah@carnathan.com">sarah@carnathan.com</a>	(919)308-8175	Wake
<b>Karen Factor, MBA, RD, LDN</b> Durham Nutrition Consults	<a href="mailto:karenfactor@nc.rr.com">karenfactor@nc.rr.com</a>	(919)599-6467	Wake
<b>Abbe Gorberg, MA, RD, LDN</b> Nutrition Counseling Services	<a href="mailto:abbegorberg@hotmail.com">abbegorberg@hotmail.com</a>	(919)345-4175	Wake
<b>Rebecca Houseal, MS, RD, LDN</b>	<a href="mailto:rebecca.houseal@gmail.com">rebecca.houseal@gmail.com</a>	(919)741-9313	Wake
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<b>Anna Lutz, MPH, RD, LDN</b> Carolyn M. Felton & Assoc.	<a href="mailto:annamlutz@gmail.com">annamlutz@gmail.com</a>	(919) 538-1221	Wake
<b>Cathie Ostrowski, MS, RD, LDN</b> Personalized Nutrition	<a href="mailto:cathie@nutritioncoach.biz">cathie@nutritioncoach.biz</a> <a href="http://www.nutritioncoach.biz">www.nutritioncoach.biz</a>	(919)-367-0677	Wake
<b>Mary Elizabeth Smith, RD, LDN</b> Nutrition Management Svc, LLC	<a href="mailto:palsmt94@aol.com">palsmt94@aol.com</a>	(919)550-0757	Johnston County
<b>Ryan Sobus, MPH, RD, LDN</b> Healthy Diets, Inc	<a href="mailto:rvansobus@healthydietsinc.com">rvansobus@healthydietsinc.com</a> <a href="http://www.healthydietsinc.com">www.healthydietsinc.com</a>	(919)870-1001	Wake
<b>Sally Ullman, MS, RD, LDN, CDE</b>	<a href="mailto:smu@mindspring.com">smu@mindspring.com</a>	(919)848-7778	Wake

# Pilot Co-located nutritionist

- To take advantage of Medicaid re-imburement for Medical Nutritional Therapy (MNT), a dietitian must bill within context of Medicaid provider.

# Putting it all together

- Advocate for environmental and policy changes on all levels
  - “A”dvocate or “a”dvocate
- Partner with Advocacy Agencies



[www.advocatesforhealthinaction.org](http://www.advocatesforhealthinaction.org) | 919-350-8366

August 1, 2011

As physicians serving your community, we are committed to supporting and encouraging healthy behaviors for children. Sports programs, like CASL soccer, are wonderful opportunities to increase the fitness level of your child. Additionally, choosing a healthy snack or pre-/post-game meal is a natural and important complement to exercise to promote health and athletic performance.

We would like you to consider using the following handout to guide your decisions when purchasing snacks for your team. The information has been developed by dietitians and physicians who agree that fruit, vegetables and water are the best way to refuel a child's body after a game or practice. Additionally, ideas for more substantial snacks for tournaments, pre-/post-game meals, and lunches for camps can be found at [www.advocatesforhealthinaction.org](http://www.advocatesforhealthinaction.org). This website will be updated to keep the ideas fresh – so visit it often.

We hope that you will consider making this investment in the health of the children participating on your team. We have seen that children easily adjust to the change when they recognize that healthy foods contribute to more energy and better athletic performance. In addition, a recent survey conducted by Advocates for Health in Action revealed that 80 percent of responding parents support providing only fruits and vegetables as snacks for their children's sports leagues. We are all ready for a healthy change!

If you have any questions or comments, please feel free to contact Advocates for Health in Action at (919) 350-8366 or send emails to [laiken@wakemed.org](mailto:laiken@wakemed.org). We thank you in advance for making the healthy choice the easy choice for your team!

#### Supporting Physicians & Practices

Murthy Manne, MD  
Alan Mask, MD  
Anno McLaurin, MD

**Blue Ridge Pediatrics**  
Louis Allen, MD  
Nicholas D'Avanzo, MD  
Elian DeFlora, MD  
Komal Parokh, MD  
Doepra Vijay, MD

**Burlington Pediatrics**  
Hillary Carroll, MD

**Capitol Pediatrics and Adolescent Center**  
Karen Evans, Practice Manager  
Ruffin Franklin, MD

**Carolina Kids Pediatrics**  
Robert Floor, MD  
Christian Nychyba, MD  
Jennifer Staglo, PA-C  
Jeff Tanaka, MD  
Leanna Willey, MD

**Cary Pediatric Center/ Apex Pediatrics**  
Brian P. Bowman, MD  
Renae Johnson, MD  
Mark Stimpson, MD  
Virgil Steele, MD

**Community Care of Wake & Johnston Counties**  
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**Conwestone Pediatrics**  
Sherill Steen, PA

**Duke Healthy Lifestyles Program**  
Sarah Armstrong, MD

**Duke Primary Care**  
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**Faith Pediatrics**  
Connell Covington, MD  
Lynne Wirth, MD

**Growing Child Pediatrics**  
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**Holly Springs Pediatrics**  
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**Jaffers, Mann & Artman Pediatrics**  
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Larry Mann, MD

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**Jonas Health System**  
Larry T. Jones, MD

**Kids First Pediatrics**  
Chris Bullock

**Maruthi Pediatrics**  
Badri Donthi, MD

**New Barn Ridge Pediatrics**  
Jill Wright, MD

**North Raleigh Pediatrics**  
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Michelle McMillan, MD

**Obarlin Road Pediatrics**  
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Mary Cassie Shaw, MD  
Tina Stewart, MD  
Brad Wasserman, MD

**Pediatric Partners**  
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Melanie Walker, MD

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Leigh Lohan, MD  
Thomas Sena, MD

**Raleigh Pediatric Associates, PA**  
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Sharon Foster, MD  
J. Randy Hodgepeth, MD  
John W. Rusher, MD

**Sunrise Pediatrics**  
Patrick Fennell, MD  
Beth Murnane, MD

**Toys and Tees Pediatrics**  
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April Connell, MD  
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Connie Mullins, FNP  
Andrea Newman, MD  
Janeth Pearl, FNP  
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**WakeMed Children's Diabetes & Endocrinology & ENERGIZE!**  
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Mark Pohl, MD

**WakeMed Faculty Physicians**  
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Mythili Rajan, MD

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Barbara Matthews, CPNP  
Allison Nagle, CPNP  
Monica Shelton, MD  
Michael Smith, MD  
Sara Tabrizi, MD

**White Oak Pediatric Associates**  
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J. Rebecca Daumen, MD  
Laura H. Kelly, MD  
Robert L. Munt Jr., MD  
Allison Hart Schmitt, MD

# Sport Snack Duty

When it's your turn to bring snacks for the team, it's tough to decide which options are the best and healthiest. Here are a few tips to help you find tasty and healthy snacks the whole team can enjoy.

## SNACK & DRINK SUGGESTIONS

Fruit and water are always the best snack choices for kids on the move. Try these popular options:

- >> Orange & apple wedges
- >> Fresh peaches & pears
- >> Dried fruit and Raisins
- >> Bananas, grapes & strawberries
- >> Fruit cups (packed in juice) or applesauce
- >> Ice cold water - no need for sugar packed sport drinks

## THE PRICE IS RIGHT

- >> Not only is grabbing fresh fruit and water fast and easy, it's cost effective too. Check out this price comparison for a team of 12.

### Healthy Snack -

- > Fresh bananas/oranges/apples - \$3 to \$4 a bag
- > 16 oz. natural spring water bottles (15 pack) - \$3.29

**Total = \$6.47**

### Typical Snack -

- > Mini bags of cookies (12 pack) - \$6
- > 7 oz. Capri Sun drink pouches (10 pack) - \$6.50

**Total = \$12.50**





**EAT  
SMART  
NORTH CAROLINA:**

*Guidelines for  
Healthy Foods and Beverages  
at Meetings, Gatherings  
and Events*





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