OBESITY SOCIETY

Childhood Obesity Resource



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Introduction

Project Background

This project was made possible through a grant from Covidien. The Obesity Society partnered with the National Association of Community Health Centers (NACHC) to develop a resource that would provide the basis for a toolkit for Community Health Centers (CHCs) with information on childhood obesity treatment and prevention for providers, patients, families, and community stakeholders. This is the Beta version of the kit that will be used to evaluate its effectiveness in the community and in selected Community Health Centers.

About Childhood Obesity

In the past 30 years, the occurrence of overweight in children has doubled and it is now estimated that one in five children in the US is overweight. Increases in the prevalence of overweight are also being seen in younger children, including preschoolers. Prevalence of overweight is especially higher among certain populations such as Hispanic, African American and Native Americans where some studies indicate prevalence of >85th percentile of 35-40%. Also, while more children are becoming overweight, the heaviest children are getting even heavier. As a result, childhood overweight is regarded as the most common prevalent nutritional disorder of US children and adolescents, and one of the most common problems seen by pediatricians.

About Community Health Centers

The National Association of Community Health Centers was formed by and for community-based health center programs. NACHC programs and services are designed to assist health centers in navigating today's complex and constantly changing health care environment.

Spread across 50 states and all U.S. territories, there are 1,250 Community Health Centers that provide vital primary care to 20 million Americans with limited financial resources.

Directed by boards with majority consumer membership, health centers focus on meeting the basic health care needs of their individual communities. Health centers maintain an open-door policy, providing treatment regardless of an individual's income or insurance coverage.

Health centers serve the homeless, residents of public housing, migrant farm workers and others with emergent and chronic health care needs, but limited resources to secure treatment through traditional channels.

Health centers provide substantial benefits to their communities:

- They serve 20% of low-income, uninsured people.
- 70% of their patients live in poverty.
- They provide comprehensive care, including physical, mental and dental care.
- They save the national health care system between $9.9 billion and $17.6 billion a year by helping patients avoid emergency rooms and making better use of preventive services.

Table of Contents

Table of Contents (continued)

Section 1

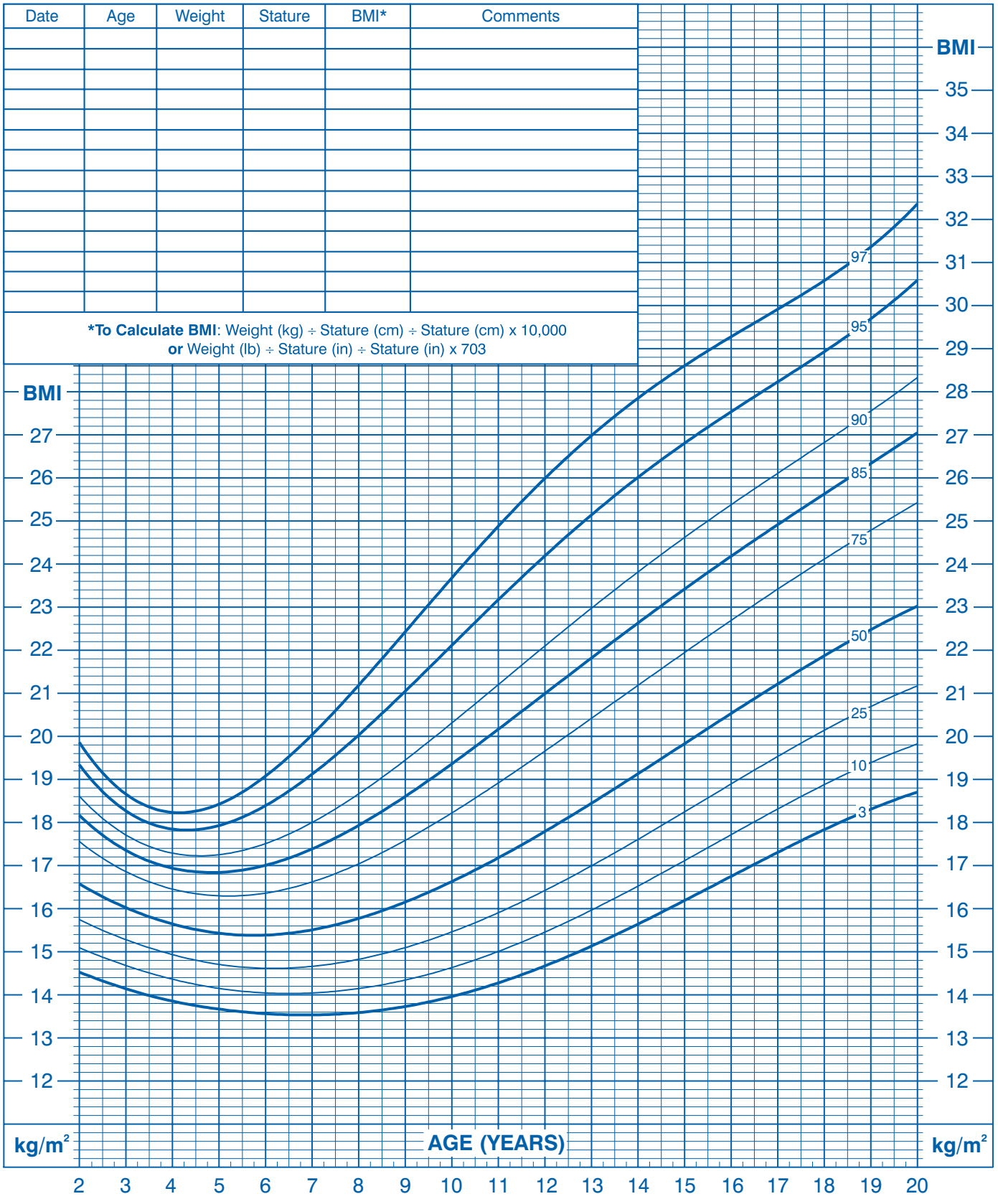
Clinical Assessment, Evaluation, and Diagnosis

1 to 20 Years: Boys – Body Mass Index-for-Age-Percentiles

Name _____ Record Number _____

Date	Age	Weight	Stature	BMI*	Comments

***To Calculate BMI**: Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703



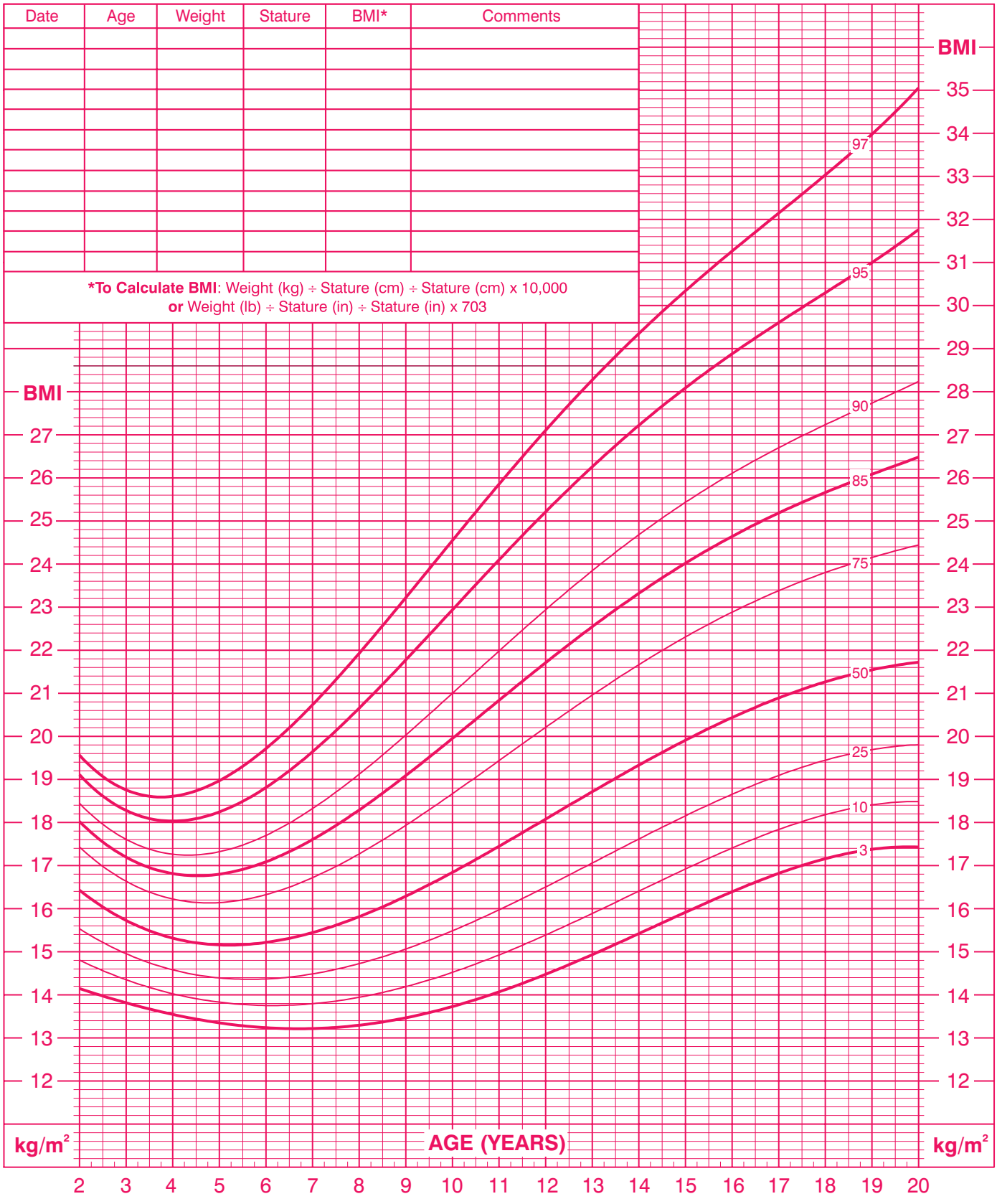
Source: Centers for Disease Control (CDC)

1 to 20 Years: Girls – Body Mass Index-for-Age Percentiles

Name _____ Record Number _____

Date	Age	Weight	Stature	BMI*	Comments

***To Calculate BMI**: Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703



Source: Centers for Disease Control (CDC)

The Preventive Health Visit—How to Calculate, Plot, and Track BMI and BMI Percentile for Pediatric Patients

The well-child visit is the ideal time to address issues of healthy eating and physical activity as well as provide counseling on issues of healthy weight, physical activity and ways the family can strengthen their support for their child's healthy weight.

The first step in this process is the calculation of the Body Mass Index (BMI). The American Academy of Pediatrics recommends the BMI be calculated on a yearly basis for children 2 years and older.

BMI is calculated as follows:

Weight in kilograms (kg) divided by the square of height in meters (m^2).	Weight in pounds (lbs) divided by the square of height in inches (in^2) multiplied by 703.
$BMI = \frac{\text{Weight (kg)}}{\text{Height squared } (m^2)}$	$BMI = \frac{\text{Weight (lbs)}}{\text{Height squared } (in^2)} \times 703$

There are numerous methods available for calculating BMI:

- Mathematical formula (see above)
- BMI Wheel Calculator
  - Align weight and height values. Read BMI in the windows at the bottom of the wheel. If weight or height exceeds child limits, use the adult side of the BMI wheel. (This is a great resource for clinical staff to use. It is also great for physician offices without internet access.)
- Online BMI Calculator
  - http://apps.nccd.cdc.gov/dnpabmi/calculator.aspx
- PDA software program

Calculating, Plotting, and Tracking BMI and BMI Percentile

Four steps should be followed to ensure accurate tracking of BMI:

1. Accurately measure weight and height.
2. Calculate BMI using one of the methods listed above.
3. Plot BMI for age and sex on the CDC BMI Growth Charts (see pages 6–7) to determine the patient's BMI percentile.
4. Record BMI and BMI percentile in the patient's chart.

Source: Child and Adolescent Obesity Provider Toolkit Revised April 2008, CMA Foundation and California Association of Health Plans (CAHP)

The Preventive Health Visit—How to Calculate, Plot, and Track BMI and BMI Percentile for Pediatric Patients (continued)

Sample Calculation

Charles is a 10-year-old boy who is 4'7" tall and weighs 100 pounds. What is Charles' BMI?

BMI = (weight [lbs]/[height (inches)]2) x 703

BMI = (100/[55]2) x 703

BMI = 23.2

What does a BMI of 23.2 for Charles represent?

According to the Centers for Disease Control and Prevention's gender and age specific charts for BMI (see pages 15 and 16), Charles' BMI is greater than the 95th percentile. Therefore, Charles is obese.

BMI Percentile	Nutritional Status
<5th	Underweight
5th–84th	Healthy Weight
85th–<95th	Overweight*
≥95th	Obese**
>99th	Classification of BMI in this percentile should be noted in the patient's chart

** Formerly classified as "at-risk for overweight"*
*** Formerly classified as "overweight"*

BMI 99th Percentile Cut-off Points

Age	Boys	Girls
5	20.1	21.5
6	21.6	23.0
7	23.6	24.6
8	25.6	26.4
9	27.6	28.2
10	29.3	29.9
11	30.7	31.5
12	31.8	33.1
13	32.6	34.6
14	33.2	36.0
15	33.6	37.5
16	33.9	39.1
17	34.4	40.8

Source: Child and Adolescent Obesity Provider Toolkit Revised April 2008, CMA Foundation and California Association of Health Plans (CAHP)

Medical Screening by BMI Category[a]

BMI Percentile	Medication Use	Review of Symptoms	Family History (1st and 2nd degree relatives)	Physical Examination	Laboratory Tests
5th–84th (healthy weight)	Medications that may affect weight gain (e.g., neuropsychiatric)		Obesity, type 2 diabetes, hypertension, lipid, heart disease	BP (correct cuff)	
85th–94th (overweight)	Medications that may affect weight gain (e.g., neuropsychiatric)	Snoring/sleep; abdominal pain; menstrual irregularities; hip, knee, or leg pain; polyuria; thirst; depression	Obesity, type 2 diabetes, hypertension, lipid, heart disease	BP (correct cuff), acanthosis nigricans, tonsils, goiter, tender abdomen, liver, bowing of legs, limited hip range of motion, optic discs if headaches, acne and hirsutism	• Fasting lipid profile • If other risk factors,[b] fasting glucose, ALT, AST every 2 years
95th–<99th (obese)	Medications that may affect weight gain (e.g., neuropsychiatric)	Snoring/sleep; abdominal pain, menstrual irregularities; hip, knee, or leg pain; urination; thirst; depression	Obesity, type 2 diabetes, hypertension, lipid, heart disease	BP (correct cuff), acanthosis nigricans, tonsils, goiter, tender abdomen, liver, bowing of legs, limited hip range of motion, optic discs if headaches, acne and hirsutism	• Fasting lipid profile • Fasting glucose, ALT, AST every 2 years
≥99th	Medications that may affect weight gain (e.g., neuropsychiatric)	Snoring/sleep; abdominal pain, menstrual irregularities; hip, knee, or leg pain; urination; thirst; depression	Obesity, type 2 diabetes, hypertension, lipid, heart disease	BP (correct cuff); acanthosis nigricans; tonsils; goiter; tender abdomen; liver; bowing of legs; limp, limited hip range of motion; optic discs if headaches; acne and hirsutism; skin inflammation	• Fasting lipid profile • Fasting glucose, ALT, AST every 2 years

Abbreviations: BMI, body mass index; BP, blood pressure; ALT, alanine transaminase; AST, aspartate transaminase; BUN, blood urea nitrogen.

[a]BMI is a screening measure. The higher the BMI, the more likely it is to be correlated with excess fat.

[b] Risk factors include family history of obesity-related diseases, including hypertension, early cardiovascular deaths, and strokes, elevated blood pressure (in the patient), hyperlipidemia, and tobacco use.

Source: Adapted from the Keep ME Healthy chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.

Blood Pressure Levels for the 90th and 95th Percentiles of Blood Pressure for Boys Ages 1 to 17 Years

		Systolic BP (mm Hg), by Height Percentile from Standard Growth Curves							Diastolic BP (mm Hg), by Height Percentile from Standard Growth Curves						
Age	**BP Percentile[a]**	**5%**	**10%**	**25%**	**50%**	**75%**	**90%**	**95%**	**5%**	**10%**	**25%**	**50%**	**75%**	**90%**	**95%**
1	**90th**	94	95	97	98	100	102	102	50	51	52	53	54	54	55
	95th	98	99	101	102	104	106	106	55	55	56	57	58	59	59
2	**90th**	98	99	100	102	104	105	106	55	55	56	57	58	59	59
	95th	101	102	104	106	108	109	110	59	59	60	61	62	63	63
3	**90th**	100	101	103	105	107	108	109	59	59	60	61	62	63	63
	95th	104	105	107	109	111	112	113	63	63	64	65	66	67	67
4	**90th**	102	103	105	107	109	110	111	62	62	63	64	65	66	66
	95th	106	107	109	111	113	114	115	66	67	67	68	69	70	71
5	**90th**	104	105	106	108	110	112	112	65	65	66	67	68	69	69
	95th	108	109	110	112	114	115	116	69	70	70	71	72	73	74
6	**90th**	105	106	108	110	111	113	114	67	68	69	70	70	71	72
	95th	109	110	112	114	115	117	117	72	72	73	74	75	76	76
7	**90th**	106	107	109	111	113	114	115	69	70	71	72	72	73	74
	95th	110	111	113	115	116	118	119	74	74	75	76	77	78	78
8	**90th**	107	108	110	112	114	115	116	71	71	72	73	74	75	75
	95th	111	112	114	116	118	119	120	75	76	76	77	78	79	80
9	**90th**	109	110	112	113	115	117	117	72	73	73	74	75	76	77
	95th	113	114	116	117	119	121	121	76	77	78	79	80	80	81
10	**90th**	110	112	113	115	117	118	119	73	74	74	75	76	77	78
	95th	114	115	117	119	121	122	123	77	78	79	80	80	81	82
11	**90th**	112	113	115	117	119	120	121	74	74	75	76	77	78	78
	95th	116	117	119	121	123	124	125	78	79	79	80	81	82	83
12	**90th**	115	116	117	119	121	123	123	75	75	76	77	78	78	79
	95th	119	120	121	123	125	126	127	79	79	80	81	82	83	83
13	**90th**	117	118	120	122	124	125	126	75	76	76	77	78	79	80
	95th	121	122	124	126	128	129	130	79	80	81	82	83	83	84
14	**90th**	120	121	123	125	126	128	128	76	76	77	78	79	80	80
	95th	124	125	127	128	130	132	132	80	81	81	82	83	84	85
15	**90th**	123	124	125	127	129	131	131	77	77	78	79	80	81	81
	95th	127	128	129	131	133	134	135	81	82	83	83	84	85	86
16	**90th**	125	126	128	130	132	133	134	79	79	80	81	82	82	83
	95th	129	130	132	134	136	137	138	83	83	84	85	86	87	87
17	**90th**	128	129	131	133	134	136	136	81	81	82	83	84	85	85
	95th	132	133	135	136	138	140	140	85	85	86	87	88	89	89

[a]*Blood pressure percentile determined by a single measurement.*

Source: Reprinted from National High Blood Pressure Education Program Working Group on Hypertension Control in Children and Adolescents. Appears in *The Childhood Obesity Toolkit* developed by NICHQ, the National Initiative for Children's Healthcare Quality, and the teams from NICHQ's Learning Collaborative *Healthy Care for Healthy Kids, a Collaborative to Prevent, Identify and Manage Childhood Overweight*, sponsored by Blue Cross Blue Shield MA

Blood Pressure Levels for the 90th and 95th Percentiles of Blood Pressure Girls Ages 1 to 17 Years

		Systolic BP (mm Hg), by Height Percentile from Standard Growth Curves							Diastolic BP (mm Hg), by Height Percentile from Standard Growth Curves						
Age	**BP Percentile[a]**	**5%**	**10%**	**25%**	**50%**	**75%**	**90%**	**95%**	**5%**	**10%**	**25%**	**50%**	**75%**	**90%**	**95%**
1	**90th**	97	98	99	100	102	103	104	53	53	53	54	55	56	56
	95th	101	102	103	104	105	107	107	57	57	57	58	59	60	60
2	**90th**	99	99	100	102	103	104	105	57	57	58	58	59	60	61
	95th	102	103	104	105	107	108	109	61	61	62	62	63	64	65
3	**90th**	100	100	102	103	104	105	106	61	61	61	62	63	63	64
	95th	104	104	105	107	108	109	110	65	65	65	66	67	67	68
4	**90th**	101	102	103	104	106	107	108	63	63	64	65	65	66	67
	95th	105	106	107	108	109	111	111	67	67	68	69	69	70	71
5	**90th**	103	103	104	106	107	108	109	65	66	66	67	68	68	69
	95th	107	107	108	110	111	112	113	69	70	70	71	72	72	73
6	**90th**	104	105	106	107	109	110	111	67	67	68	69	69	70	71
	95th	108	109	110	111	112	114	114	71	71	72	73	73	74	75
7	**90th**	106	107	108	109	110	112	112	69	69	69	70	71	72	72
	95th	110	110	112	113	114	115	116	73	73	73	74	75	76	76
8	**90th**	108	109	110	111	112	113	114	70	70	71	71	72	73	74
	95th	112	112	113	115	116	117	118	74	74	75	75	76	77	78
9	**90th**	110	110	112	113	114	115	116	71	72	72	73	74	74	75
	95th	114	114	115	117	118	119	120	75	76	76	77	78	78	79
10	**90th**	112	112	114	115	116	117	118	73	73	73	74	75	76	76
	95th	116	116	117	119	120	121	122	77	77	77	78	79	80	80
11	**90th**	114	114	116	117	118	119	120	74	74	75	75	76	77	77
	95th	118	118	119	121	122	123	124	78	78	79	79	80	81	81
12	**90th**	116	116	118	119	120	121	122	75	75	76	76	77	78	78
	95th	120	120	121	123	124	125	126	79	79	80	80	81	82	82
13	**90th**	118	118	119	121	122	123	124	76	76	77	78	78	79	80
	95th	121	122	123	125	126	127	128	80	80	81	82	82	83	84
14	**90th**	119	120	121	122	124	125	126	77	77	78	79	79	80	81
	95th	123	124	125	126	128	129	130	81	81	82	83	83	84	85
15	**90th**	121	121	122	124	125	126	127	78	78	79	79	80	81	82
	95th	124	125	126	128	129	130	131	82	82	83	83	84	85	86
16	**90th**	122	122	123	125	126	127	128	79	79	79	80	81	82	82
	95th	125	126	127	128	130	131	132	83	83	83	84	85	86	86
17	**90th**	122	123	124	125	126	128	128	79	79	79	80	81	82	82
	95th	126	126	127	129	130	131	132	83	83	83	84	85	86	86

[a]*Blood pressure percentile determined by a single measurement.*

Source: Reprinted from National High Blood Pressure Education Program Working Group on Hypertension Control in Children and Adolescents. Appears in The *Childhood Obesity Toolkit* developed by NICHQ, the National Initiative for Children's Healthcare Quality, and the teams from NICHQ's Learning Collaborative *Healthy Care for Healthy Kids, a Collaborative to Prevent, Identify and Manage Childhood Overweight*, sponsored by Blue Cross Blue Shield MA

Definition of Hypertension[a] and Clinical Evaluation of Confirmed Hypertension

- Hypertension is defined as average SBP and/or DBP that is ≥95th percentile for gender, age, and height on ≥3 occasions.
- Prehypertension in children is defined as average SBP or DBP levels that are ≥90th percentile but <95th percentile.
- As with adults, adolescents with BP levels 120/80 mm Hg should be considered prehypertensive.
- A patient with BP levels >95th percentile in a physician's office or clinic, who is normotensive outside a clinical setting, has "whitecoat hypertension." ABPM is usually required to make this diagnosis.

Clinical Evaluation of Confirmed Hypertension

Study or Procedure	Purpose	Target Population
Evaluation for identifiable causes		
History, including sleep history, family history, risk factors, diet, and habits such as smoking and drinking alcohol; physical examination	History and physical examination help focus subsequent evaluation	All children with persistent BP ≥95th percentile
BUN, creatinine, electrolytes, urinalysis, and urine culture	R/O renal disease and chronic pyelonephritis	All children with persistent BP ≥95th percentile
CBC	R/O anemia, consistent with chronic renal disease	All children with persistent BP ≥95th percentile
Renal U/S	Renal U/S R/O renal scar, congenital anomaly, or disparate renal size	All children with persistent BP ≥95th percentile
Evaluation for comorbidity		
Fasting lipid panel, fasting glucose	Identify hyperlipidemia, identify metabolic abnormalities	Overweight patients with BP at 90th–94th percentile; all patients with BP ≥95th percentile; family history of hypertension or CVD; child with chronic renal disease
Drug screen	Identify substances that might cause hypertension	History suggestive of possible contribution by substances or drugs
Polysomnography	Identify sleep disorder in association with hypertension	History of loud, frequent snoring
Evaluation for target-organ damage		
Echocardiogram	Identify LVH and other indications of cardiac involvement	Patients with comorbid risk factors[b] and BP 90th–94th percentile; all patients with BP ≥95th percentile
Retinal exam	Identify retinal vascular changes	Patients with comorbid risk factors and BP 90th–94th percentile; all patients with BP ≥95th percentile

Continued on Page 9.

Source: Adapted from the *Keep ME Healthy* chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.

Definition of Hypertension[a] and Clinical Evaluation of Confirmed Hypertension (continued)

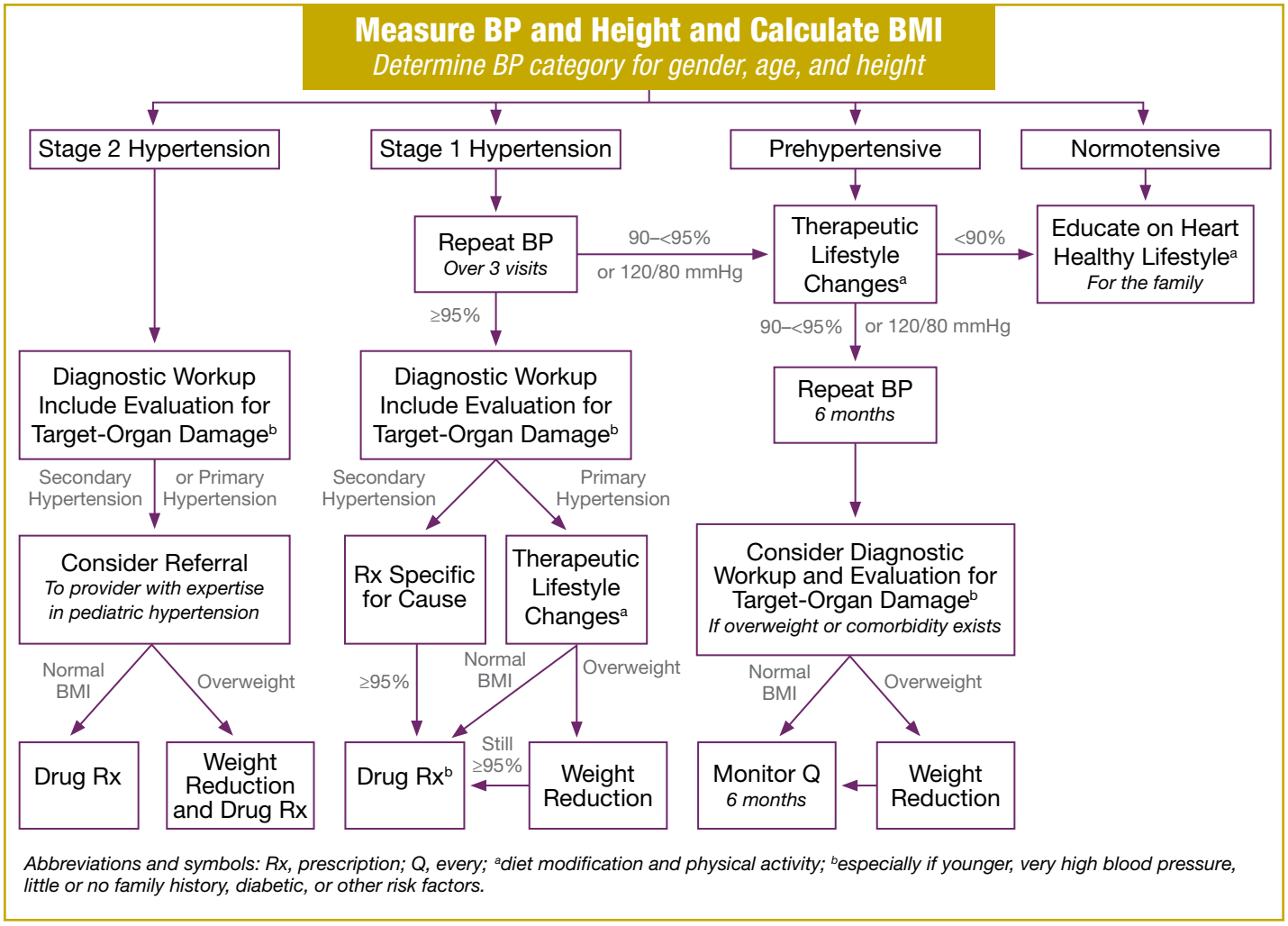
Additional evaluation as indicated		
ABPM	Identify white-coat hypertension, abnormal diurnal BP pattern, BP load	Patients in whom white-coat hypertension is suspected, and when other information on BP pattern is needed
Plasma renin determination	Identify low renin, suggesting mineralocorticoid-related disease	Young children with stage 1 hypertension and any child or adolescent with stage 2 hypertension Positive family history of severe hypertension
Renovascular imaging - Isotopic scintigraphy (renal scan) - MRA - Duplex Doppler flow studies - 3-Dimensional CT - Arteriography: DSA or classic	Identify renovascular disease	Young children with stage 1 hypertension and any child or adolescent with stage 2 hypertension
Plasma and urine steroid levels	Identify steroid-mediated hypertension	Young children with stage 1 hypertension and any child or adolescent with stage 2 hypertension
Plasma and urine catecholamines	Identify catecholamine-mediated hypertension	Young children with stage 1 hypertension and any child or adolescent with stage 2 hypertension

Abbreviations: SBP, systolic blood pressure; DBP, diastolic blood pressure; BP, blood pressure; ABPM, ambulatory blood pressure monitoring; BUN, blood urea nitrogen; R/O, rule out; CBC, complete blood count; U/S, ultrasound; CVD, cardiovascular disease; LVH, left ventricular hypertrophy; MRA, magnetic resonance angiography; CT, computed tomography; DSA, digital-subtraction angiography.

[a]*Selected excerpts from The fourth report on the diagnosis, evaluation, and treatment and high blood pressure in children and adolescents. Pediatrics. 2004;114:555–576.*

[b]*Comorbid risk factors also include diabetes mellitus and kidney disease.*

Hypertension Management Algorithm



Abbreviations and symbols: Rx, prescription; Q, every; [a]diet modification and physical activity; [b]especially if younger, very high blood pressure, little or no family history, diabetic, or other risk factors.

Therapeutic Lifestyle Changes

- Weight reduction is the primary therapy for obesity-related hypertension. Prevention of excess or abnormal weight gain will limit future increases in blood pressure.
- Regular physical activity and restriction of sedentary activity will improve efforts at weight management and may prevent an excess increase in blood pressure over time.
- Dietary modification should be strongly encouraged in children and adolescents who have blood pressure levels in the prehypertensive range as well as those with hypertension.
- Family-based intervention improves success.

Indications for Antihypertensive Drug Therapy in Children

- Symptomatic hypertension
- Secondary hypertension
- Hypertensive target-organ damage
- Diabetes (types 1 and 2)
- Persistent hypertension despite nonpharmacologic measures

Source: Adapted from the *Keep ME Healthy* chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.;114:555–576.

Survey for All Patients (Ages 2–8) at Well-Child Visits

In our office, we are interested in providing the best care to our patients. This includes discussing with all our patients, steps that you can take to improve your family's health. While you are waiting to see your provider, it would be helpful if you would please take a few moments with your child to answer the following questions. Your healthcare provider will go over your answers during your visit. We understand how difficult it is to follow healthy lifestyle recommendations. The questions below will help us discuss how you might best start to make small changes to improve your family's health.

Name _____ Age _____ Date _____

		Yes	No
5	My child eats fruits and vegetables 5 or more times on most days.	☐	☐
	My child eats breakfast every day.	☐	☐
	My child eats dinner at the table with the family at least 2 times per week.	☐	☐
	My child eats take-out (takeout, fast food places, restaurants) less than 2 times per week.	☐	☐
2	My child watches TV, videos or plays computer games less than 2 hours per day.	☐	☐
	My child does not have a TV in the bedroom.	☐	☐
1	My child participates in some type of moderate physical activity for at least 1 hour every day.	☐	☐
0	My child does not regularly drink fruit-drinks, sports drinks, soda or punch.	☐	☐
	My child drinks fat-free/skim or 1% rather than 2% or whole milk.	☐	☐

FOR PHYSICIAN USE ONLY:

Physician Initials _____ Date _____

FH Risk Factors: Y N BMI _____ BMI% _____

BMI Classification

☐ Underweight <5th
☐ Healthy Weight 5th–84th
☐ At-Risk Overweight 85th–94th
☐ Overweight ≥95th

	5	2	1	0
Achieved	☐	☐	☐	☐
Discussed	☐	☐	☐	☐
Goal	☐	☐	☐	☐

Source: Adapted from the *Keep ME Healthy* chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.

Survey for All Patients (Ages 9–18) at Well-Child Visits

In our office, we are interested in providing the best care to our patients. This includes discussing with all our patients, steps that you can take to improve your health. While you are waiting to see your provider, it would be helpful if you would please take a few moments to answer the following questions. Your healthcare provider will go over your answers during your visit. We understand how difficult it is to follow healthy lifestyle recommendations. The questions below will help us discuss how you might best start to make small changes to improve your health.

Name _____ Age _____ Date _____

		Yes	No
5	I eat fruits and vegetables 5 or more times on most days.	☐	☐
	I eat breakfast every day.	☐	☐
	I eat dinner at the table with the family at least 2 times per week.	☐	☐
	I eat take-out (takeout, fast food places, restaurants) less than 2 times per week.	☐	☐
2	I watch TV, videos or play computer games less than 2 hours per day.	☐	☐
	I do not have a TV in the bedroom.	☐	☐
1	I participate in some type of moderate physical activity for at least 1 hour every day.	☐	☐
0	I do not regularly drink fruit-drinks, sports drinks, soda or punch.	☐	☐
	I drink fat-free/skim or 1% rather than 2% or whole milk.	☐	☐

FOR PHYSICIAN USE ONLY:

Physician Initials _____ Date _____

FH Risk Factors: Y N BMI _____ BMI% _____

BMI Classification

☐ Underweight <5th
☐ Healthy Weight 5th–84th
☐ At-Risk Overweight 85th–94th
☐ Overweight ≥95th

	5	2	1	0
Achieved	☐	☐	☐	☐
Discussed	☐	☐	☐	☐
Goal	☐	☐	☐	☐

Source: Adapted from the *Keep ME Healthy* chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.

Healthy Habits Survey (Ages 2–9)

We are interested in the health and well-being of all our patients.
Please take a moment to answer the following questions.

Name _____ Age _____ Date _____

How many servings of fruits or vegetables does your child eat a day?
One serving is most easily identified as the size of your child's palm. _____

How many times a week does your child eat dinner at the table with the family? _____

How many times a week does your child eat breakfast? _____

How many times a week does your child eat takeout or fast food? _____

How many hours a day does your child watch TV, movies, DVD's or sit and play video/computer games? _____

Does your child have a TV in the room where he/she sleeps? ☐ Yes ☐ No

Does your child have a computer in the room where he/she sleeps? ☐ Yes ☐ No

How many hours a day does your child spend in active play?
(*Faster breathing/heart rate or sweating)* _____

How many 8 ounce servings of the following does your child drink a day?

100% Juice _____ Fruit drinks or sports drink _____ Water _____
Whole milk _____ Soda or punch _____ Fat-free or reduced fat milk _____

Based on your answers, is there ONE thing you would like to help your child change now?

☐ Spend less time watching TV, sitting & playing video/computer games.
☐ Eat more fruits & vegetables.
☐ Drink less soda, juice, or punch.
☐ Switch to skim or low-fat milk.
☐ Take the TV and or computer out of the bedroom.
☐ Drink more water.
☐ Play outside more often.
☐ Eat less fast food/takeout.
☐ Eat breakfast everyday.

Please give the completed form to your clinician. Thank you.

Healthy Habits Survey (Ages 10 and Older)

We are interested in the health and well-being of all our patients.
Please take a moment to answer the following questions.

Name _____ Age _____ Date _____

How many servings of fruits or vegetables do you eat a day?
One serving is most easily identified as the size of your palm. _____

How many times a week do you eat dinner at the table with the family? _____

How many times a week do you eat breakfast? _____

How many times a week do you eat takeout or fast food? _____

How many hours a day do you watch TV, movies, DVD's or sit and play video/computer games? _____

Do you have a TV in the room where you sleep? ☐ Yes ☐ No

Do you have a computer in the room where you sleep? ☐ Yes ☐ No

How many hours a day do you spend being physically active?
(*Faster breathing/heart rate or sweating)* _____

How many 8 ounce servings of the following does your child drink a day?

100% Juice _____ Fruit drinks or sports drink _____ Water _____
Whole milk _____ Soda or punch _____ Fat-free or reduced fat milk _____

Based on your answers, is there ONE thing you would like to change now?

☐ Spend less time watching TV, sitting & playing video/computer games.
☐ Eat more fruits & vegetables.
☐ Switch to skim or low-fat milk.
☐ Drink more water.
☐ Eat less fast food/takeout.
☐ Drink less soda, juice, or punch.
☐ Take the TV and or computer out of the bedroom.
☐ Be physically active more often.
☐ Eat breakfast everyday.

Please give the completed form to your clinician. Thank you.

In-Depth Nutrition Survey

Name _____ Age _____ Date _____

How often do you (or does your child) eat the following foods?

Milk	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Whole milk	☐	☐	☐	☐	☐	☐
2% milk	☐	☐	☐	☐	☐	☐
1½% milk	☐	☐	☐	☐	☐	☐
1% milk	☐	☐	☐	☐	☐	☐
Skim milk (non-fat)	☐	☐	☐	☐	☐	☐
Flavored milk (chocolate)	☐	☐	☐	☐	☐	☐

Cheese	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Cheese	☐	☐	☐	☐	☐	☐
Low-fat cheese	☐	☐	☐	☐	☐	☐

Yogurt	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Whole milk yogurt	☐	☐	☐	☐	☐	☐
Fat-free yogurt	☐	☐	☐	☐	☐	☐
Light yogurt	☐	☐	☐	☐	☐	☐
Yogurt drinks	☐	☐	☐	☐	☐	☐

Fruit	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Fresh fruit	☐	☐	☐	☐	☐	☐
Canned fruit	☐	☐	☐	☐	☐	☐
Dried fruit (like raisins)	☐	☐	☐	☐	☐	☐

Fruit juices/drinks	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
100% juice	☐	☐	☐	☐	☐	☐
Juice drinks (like SunnyD)	☐	☐	☐	☐	☐	☐
Sweetened fruit	☐	☐	☐	☐	☐	☐
Flavored drinks (Kool-Aid)	☐	☐	☐	☐	☐	☐
Sports drinks (Gatorade)	☐	☐	☐	☐	☐	☐

Vegetables	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Fresh	☐	☐	☐	☐	☐	☐
Frozen	☐	☐	☐	☐	☐	☐
Canned	☐	☐	☐	☐	☐	☐

Breads/Cereals	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
White bread	☐	☐	☐	☐	☐	☐
Wheat bread	☐	☐	☐	☐	☐	☐
100% whole wheat bread	☐	☐	☐	☐	☐	☐
High fiber cereal (bran)	☐	☐	☐	☐	☐	☐
Sugar-coated cereal	☐	☐	☐	☐	☐	☐
Plain cereal (cornflakes)	☐	☐	☐	☐	☐	☐
Muffins	☐	☐	☐	☐	☐	☐
Pancakes, waffles	☐	☐	☐	☐	☐	☐

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In-Depth Nutrition Survey (continued)

Pasta & Rice	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Pasta	☐	☐	☐	☐	☐	☐
Whole wheat pasta	☐	☐	☐	☐	☐	☐
Rice	☐	☐	☐	☐	☐	☐
Brown rice	☐	☐	☐	☐	☐	☐
Boxed flavored rice dishes	☐	☐	☐	☐	☐	☐
Macaroni and cheese	☐	☐	☐	☐	☐	☐

Meat	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Beef	☐	☐	☐	☐	☐	☐
Pork	☐	☐	☐	☐	☐	☐
Chicken	☐	☐	☐	☐	☐	☐
Fish	☐	☐	☐	☐	☐	☐
Processed meats (hotdogs)	☐	☐	☐	☐	☐	☐
Bacon, sausage	☐	☐	☐	☐	☐	☐
Eggs	☐	☐	☐	☐	☐	☐

Butter/margarine	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Butter	☐	☐	☐	☐	☐	☐
Stick margarine	☐	☐	☐	☐	☐	☐
Tub margarine	☐	☐	☐	☐	☐	☐
Light tub margarine	☐	☐	☐	☐	☐	☐
Light tub margarine	☐	☐	☐	☐	☐	☐
Trans fat-free margarine	☐	☐	☐	☐	☐	☐

Oils and nuts	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Vegetable oil	☐	☐	☐	☐	☐	☐
Canola oil	☐	☐	☐	☐	☐	☐
Olive oil	☐	☐	☐	☐	☐	☐
Any type of nut	☐	☐	☐	☐	☐	☐
Peanut butter	☐	☐	☐	☐	☐	☐

Soda	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Regular	☐	☐	☐	☐	☐	☐
Diet Soda	☐	☐	☐	☐	☐	☐

Desserts	☐	☐	☐	☐	☐	☐
Candy and Chocolates	☐	☐	☐	☐	☐	☐

Salty snacks	3–4 times daily	1–2 times daily	every other day	weekly	monthly	never
Chips	☐	☐	☐	☐	☐	☐
Pretzels	☐	☐	☐	☐	☐	☐
Baked chips	☐	☐	☐	☐	☐	☐

Fast food	☐	☐	☐	☐	☐	☐
Restaurant meals	☐	☐	☐	☐	☐	☐
Any Take out	☐	☐	☐	☐	☐	☐
Pizza	☐	☐	☐	☐	☐	☐

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In-Depth Nutrition Survey (continued)

Parent Questions:

Are meals eaten at the table as a family?	☐ Yes	☐ No
Are children expected to prepare some of their own meals?	☐ Yes	☐ No
Are fruits and vegetables easily accessible to kids?	☐ Yes	☐ No
Do you eat fruits and vegetables?	☐ Yes	☐ No
Do you dish out your child's portions?	☐ Yes	☐ No
Are you concerned about your child's weight?	☐ Yes	☐ No
Do you always have enough money to buy food?	☐ Yes	☐ No

Are there any issues related to your child's food habits or diet that you'd like to talk about?

_____

_____

_____

Patient Questions:

Do you try to be the first one done with your meal?	☐ Yes	☐ No
Do you try to eat more than your siblings?	☐ Yes	☐ No
Do you get up at night to eat?	☐ Yes	☐ No
Do you eat when you are upset?	☐ Yes	☐ No
Do you keep food in your room?	☐ Yes	☐ No
Do you trade foods at school from your lunch?	☐ Yes	☐ No

List all fruits and vegetables that you like to eat.

_____

_____

What are your favorite foods?

_____

_____

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In-Depth Physical Activity Survey

Name _____ Age _____ Date _____

How many hours per day do you usually watch TV and/or play video/computer games?

Weekdays _____ Weekend _____

How often outside of gym class are you so active playing, exercising, or in sports, that your heart beats fast and you breathe hard for 20 minutes or more at a time? (Check the one that applies)

- ☐ Every day
- ☐ 5–6 days each week
- ☐ 3–4 days each week
- ☐ 1–2 days each week
- ☐ Less than 2 days per week

What activities do you generally participate in at school and outside of school?
(i.e. sports teams, classes, lessons)

Activity	At School	Outside of School
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐
_____	☐	☐

Which of the following items do you have in your home, yard, or apartment complex?
(Please check all those that apply)

- ☐ Stationary exercise equipment (treadmill, cycle, etc.)
- ☐ Step or slide aerobic
- ☐ Ice skates
- ☐ Rollerblades and/or roller-skates
- ☐ Sports equipment (racquets, balls, etc.)
- ☐ Canoe, row boat, kayak
- ☐ Skis (snow or water)
- ☐ Swimming or scuba equipment
- ☐ Bike
- ☐ Dog
- ☐ Trampoline
- ☐ Running shoes/sneakers
- ☐ Swimming pool
- ☐ Weight lifting equipment
- ☐ Aerobic workout videos or audio tapes

In-Depth Physical Activity Survey (continued)

Do any of the following prevent you from exercising? (Please check all those that apply)

- ☐ Self conscious about my looks when I do activities
- ☐ Lack of interest in physical activity
- ☐ Lack of self discipline (will power)
- ☐ Lack of time
- ☐ Lack of energy
- ☐ My friends don't like to exercise
- ☐ I do not enjoy physical activity
- ☐ Lack of equipment
- ☐ The weather is too bad
- ☐ Lack of skills
- ☐ I am too tired to exercise
- ☐ I do not have anyone to do physical activities with me
- ☐ Lack of a convenient place to do physical activity
- ☐ I am too heavy
- ☐ Physical activity is boring
- ☐ My friends tease me during exercise or sports
- ☐ Lack of knowledge on how to do physical activities
- ☐ I am chosen last for teams
- ☐ I don't like to sweat
- ☐ Physical activity messes up my appearance
- ☐ I don't want to get too strong or muscular
- ☐ Homework

Please check off any of the following that get in the way of you being physically active:

- ☐ At home there aren't enough supplies and pieces of sports equipment (like balls, bicycles, & skates) to use for physical activity.
- ☐ There are no playgrounds, parks, or gyms close to my home or that I can easily get to.
- ☐ It is not safe to walk or jog alone in my neighborhood during the day.
- ☐ It is difficult to walk or jog in my neighborhood because of things like traffic, no sidewalks, dogs, and so on.
- ☐ Other? Please explain:

_____

_____

_____

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Obesity Assessment: Physical Examination Findings and Possible Etiologies

System	Findings	Possible Explanations
Anthropometry	• High body mass index percentile • Short stature	• Overweight or obesity • Underlying endocrine or genetic condition
Vital signs	• Elevated blood pressure	• Hypertension if systolic or diastolic blood pressure >95th percentile for age, gender, and height on ≥3 occasions
Skin	• Acanthosis nigricans • Hirsutism, acne • Irritation, inflammation • Violaceous striae	• Common in obese children, especially when skin is dark; increased risk of insulin resistance • Polycystic ovary syndrome • Consequence of severe obesity • Cushing syndrome
Eyes	• Papilledema, cranial nerve VI paralysis	• Pseudotumor cerebri
Throat	• Tonsillar hypertrophy	• Obstructive sleep apnea
Neck	• Goiter	• Hypothyroidism
Abdomen	• Tenderness • Hepatomegaly	• Gastroesophageal reflux disorder, gall bladder disease, nonalcoholic fatty liver disease (NAFLD)[a] • NAFLD[a]
Reproductive	• Tanner stage • Apparent micropenis • Undescended testis/micropenis	• Premature puberty ages <7 years in white girls, ages <6 years in black girls, and ages <9 years in boys • May be normal penis that is buried in fat • Prader-Willi syndrome
Extremities	• Abnormal gait, limited hip range of motion • Bowing of tibia • Small hands and feet, polydactyly	• Slipped capital femoral epiphysis • Blount disease • Prader-Willi syndrome, Bardet-Biedl syndrome

[a]*These conditions are usually without signs.*

Obesity Assessment: Findings on Review of Systems and Possible Etiologies

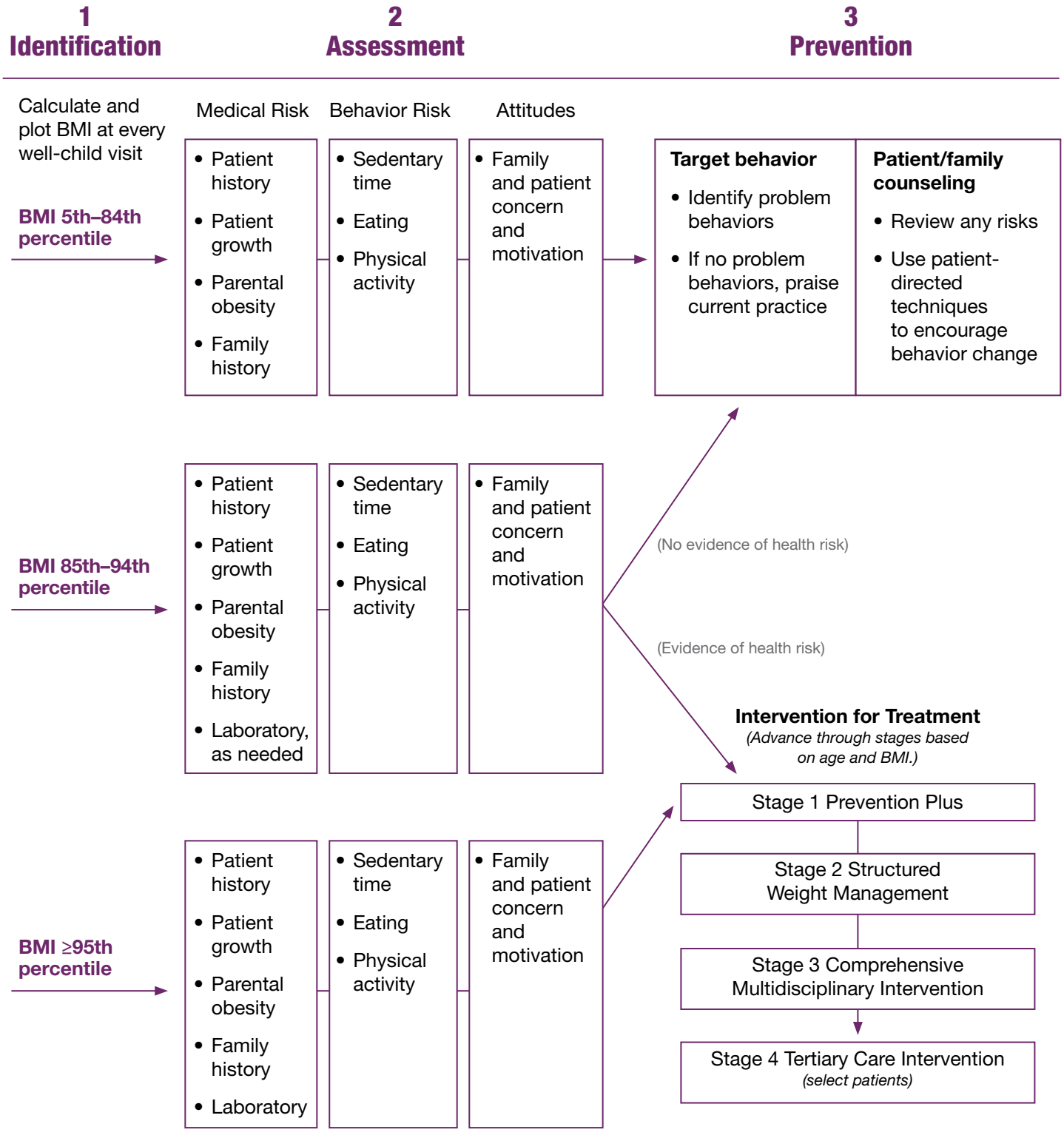
Symptom	Possible Etiologies
Anxiety, school avoidance, social isolation	Depression
Severe recurrent headaches	Severe recurrent headaches Pseudotumor cerebri
Shortness of breath, exercise intolerance	Asthma, lack of physical conditioning
Snoring, apnea, daytime sleepiness	Obstructive sleep apnea, obesity hypoventilation syndrome
Sleepiness or wakefulness	Depression
Abdominal pain	Gastroesophageal reflux disease, constipation, gall bladder disease, nonalcoholic fatty liver disease[a]
Hip pain, knee pain, walking pain	Slipped capital femoral epiphysis, Blount disease, musculoskeletal stress from weight (may be barrier to physical activity)
Foot pain	Musculoskeletal stress from weight (may be barrier to physical activity)
Irregular menses (<9 per year)	Polycystic ovary syndrome; may be normal if recent menarche
Primary amenorrhea	Polycystic ovary syndrome, Prader-Willi syndrome
Polyuria, polydipsia	Type 2 diabetes mellitus[a]
Unexpected weight loss	Type 2 diabetes mellitus[a]
Nocturnal enuresis	Obstructive sleep apnea
Tobacco use	Increased cardiovascular risk; may be as form of weight control

[a]*These conditions are often asymptomatic.*

Section 2

Treatment Strategies

Universal Assessment of Obesity Risk: Steps to Prevention and Treatment



Abbreviation: BMI, body mass index.

See breakdown of stages on pages 26–27.

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Universal Assessment of Obesity Risk: Steps to Prevention and Treatment (continued)

Stage 1
Prevention Plus

Primary Care Provider

Dietary habits and physical activity

5 Eat fruits and vegetables at least 5 or more times on most days.

2 Limit screen time unrelated to school to 2 hours or less daily.

1 Get 1 hour or more of moderate to vigorous physical activity every day and 20 minutes of vigorous activity at least 3 times a week.

0 Drink less sugar. Try water and low-fat milk instead of sugar-sweetened drinks.

Behavioral Counseling

- Eating a daily breakfast
- Limiting meals outside the home
- Family meals 5–6 times/week
- Allow child to self-regulate at meals without overly restrictive behavior

Goal

- Weight maintenance with growth resulting in decreased BMI

Monthly follow-up assessment. After 3–6 months, if no improvement in BMI/weight status, advance to Stage 2.

Stage 2
Structured Weight Management

Primary Care Provider with appropriate training

Dietary habits and physical activity

- Develop plan for utilization of balanced macronutrient diet emphasizing low amounts of energy-dense foods
- Increased structured daily meals and snacks
- Supervised active play of at least 60 minutes/day
- Screen time of 1 hour or less/day
- Increased monitoring (e.g., screen time, physical activity, dietary intake, restaurant logs) by provider, patient, and/or family

Goal

- Weight maintenance resulting in a decreasing BMI with age and increasing height. Weight loss not to exceed 1lb/month in children 2–11 years or an average of 2 lbs/week in older overweight/obese children and adolescents

Monthly follow-up assessment. If no improvement in BMI/weight after 3–6 months, patient should be advanced to Stage 3.

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Universal Assessment of Obesity Risk: Steps to Prevention and Treatment (continued)

Stage 3
Comprehensive Multidisciplinary Intervention

Weight Management Clinic with multidisciplinary team

Eating and Activity

- Same as Stage 2

Behavioral counseling

- Structured behavioral modification program, including food and activity monitoring and development of short-term diet and physical activity goals
- Involvement of primary caregivers/families for behavioral modification in children younger than 12 years and training of primary caregivers/families for all children

Goals

- Weight maintenance or gradual weight loss until BMI <85% not to exceed 1lb/month in children aged 2–5 years or 2 lbs/week in older obese children and adolescents

Stage 4
Tertiary Care Intervention
(select patients)

Hospital Setting with expertise in childhood obesity

Recommended for children with BMI >95% with significant comorbidities unsuccessful with Stages 1–3 and children with BMI >99% who have shown no improvement under Stage 3

- Multidisciplinary team with expertise in childhood obesity operating under a designated protocol
- Continued diet and activity counseling and consideration of such additions as meal replacement, very low calorie diet, medication, and surgery

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All Well-Child Visits Ages 3–18 Flowchart

Check-In: Front Desk

Everyone is given the age appropriate 5–2–1–0 survey

Check-In: CNA/MA

Height, weight measured and BMI percentile for age/gender is calculated, classified as underweight, healthy weight, overweight or obese and documented in appropriate part of patient chart

5th–84th percentile age/gender "Healthy Weight"

85th–94th percentile age/gender "Overweight"

≥95th percentile age/gender "Obese"

Provider

GOOD JOB! Reinforce healthy habits (eating & physical activity) and check BMI percentile age/gender annually

Both with and without comorbidities

Provider

- Review the 5–2–1–0 survey with patient/caretaker and document in chart
- Assess patient/family readiness for change
- Discuss concept of goal setting
- Set goal if appropriate or wait for follow up appointment
- Ask patient to schedule follow up contact on way out

CHOOSE FROM THE FOLLOWING OPTIONS for completion of in-depth physical activity & nutrition surveys

If time left for this appointment, patient fills out in-depth surveys in exam room while PCP tends to other patients. PCP returns to review & set goals.

Patient fills out in-depth surveys in waiting room and leaves for PCP to review during next scheduled visit.

If patient can't stay to fill out they can either bring in-depth surveys home & mail back to PCP office before next visit or staff can put surveys in chart with note to be completed in waiting room during next visit.

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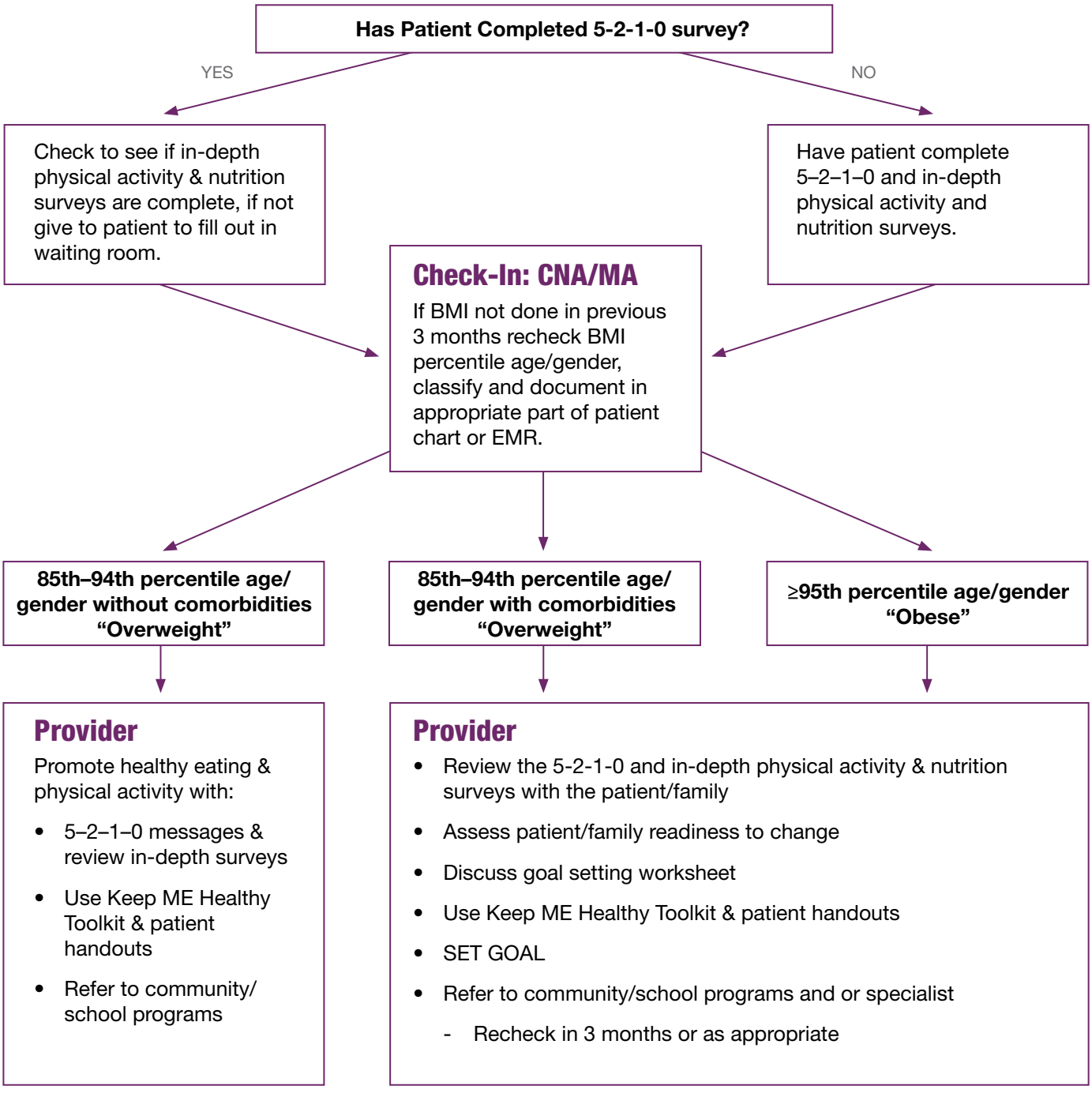
Planned Follow-Up Visit for a Youth Overweight/Obese Patient Ages 3–18 Flowchart

Check-In: Front Desk



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15-Minute Obesity Prevention Protocol

Steps	Possible Etiologies
STEP 1. ASSESSMENT	
Weight and height, convert to BMI. Provide BMI information.	We checked your child's body mass index (BMI), which is a way of looking at weight and taking into consideration how tall someone is. Your child's BMI is in the range where we start to be concerned about extra weight causing health problems.
Elicit parent's concern.	What concerns, if any, do you have about your child's weight? *He did jump two sizes this year. Do you think he might get diabetes someday?*
Reflect/probe.	So you've noticed a big change in his size and you are concerned about diabetes down the road. What makes you concerned about diabetes in particular? Etc.
Sweetened beverages, fruits and vegetables, TV viewing and other sedentary behavior, frequency of fast-food or restaurant eating, consumption of breakfast, and others.	(Use verbal questions or brief questionnaires to assess key behaviors.) Example: About how many times a day does your child drink soda, sports drinks, or powdered drinks like Kool-Aid?
Provide positive feedback for behavior(s) in optimal range. Elicit response. Reflect/probe.	You are doing well with sugared drinks. *I know it's not healthy. He used to drink a lot of soda, but now I try to give him water whenever possible. I think we are down to just a few sodas a week.* So you have been able to make a change without too much stress.
Provide neutral feedback for behavior(s) NOT in optimal range. Elicit response. Reflect/probe	Your child watches 4 hours of TV on school days. What do you think about that? *I know it's a lot, but he gets bored otherwise and starts picking an argument with his little sister.* So watching TV keeps the household calm.
STEP 2. AGENDA SETTING	
Query which, if any, of the target behaviors parent/child/adolescent may be interested in changing or might be easiest to change.	We've talked about eating too often at fast-food restaurants, and how TV viewing is more hours than you'd like. Which of these, if either of them, do you think you and your child could change? *Well, I think fast food is somewhere we could do better. I don't know what he would do if he couldn't watch TV. Maybe we could cut back on fast food to once a week.*
Agree on possible target behavior.	That sounds like a good plan.
STEP 3. ASSESS MOTIVATION AND CONFIDENCE	
3a: Willingness/Importance On a scale of 0 to 10, with 10 being very important, how important is it for you to reduce the amount of fast food he eats? 0 1 2 3 4 5 6 7 8 9 10 **Not at all** **Somewhat** **Very**	

Continued on Page 31.

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15-Minute Obesity Prevention Protocol (continued)

3b: Confidence On a scale of 0 to 10, with 10 being very confident, assuming you decided to change the amount of fast food he eats, how confident are you that you could succeed? 0 1 2 3 4 5 6 7 8 9 10 **Not at all** **Somewhat** **Very**	
3c: Explore IMPORTANCE and CONFIDENCE ratings with the following probes: - Benefits - Barriers - Solutions	You chose 6. Why did you not choose a lower number? *I know all that grease is bad for him.* You chose 6. Why did you not choose a higher number? *It's quick, cheap, and he loves it…especially the toys and fries.* REFLECTION: So there are benefits for both you and him. What would it take you to move to an 8? *Well, I really want him to avoid diabetes. My mother died of diabetes, and it wasn't pretty…maybe if he started showing signs of it…maybe if I could get into cooking a bit.*
STEP 4. SUMMARIZE AND PROBE POSSIBLE CHANGES	
Query possible next steps.	So where does that leave you? OR From what you mentioned it sounds like eating less fast food may be a good first step. OR How are you feeling about making a change?
Probe plan of attack.	What might be a good first step for you and your child? Or What might you do in the next week or even day to help move things along? Or What ideas do you have for making this happen? *If patient does not have any ideas…* If it's OK with you, I'd like to suggest a few things that have worked for some of my patients.
Summarize change plan, provide positive feedback.	Involving child in cooking or meal preparation. Ordering healthier at fast-food restaurants. Trying some new recipes at home.
STEP 5. SCHEDULE FOLLOW-UP	
Agree to follow up within X weeks/months.	Let's schedule a visit in the next few weeks/months to see how things went.
If no plan is made.	Sounds like you aren't quite ready to commit to making any changes now. How about we follow up with this at your child's next visit? OR Although you don't sound ready to make any changes, between now and our next visit you might want to think about your child's weight gain and lowering his diabetes risk.

Section 3

Healthcare Provider Educational Tools

Tips for Busy Clinicians

Treatment Interventions

Communication

- Deliver a set of consistent key messages—5-2-1-0.
- Keep a list of good websites to give your patients. Have appropriate books and magazines available in your waiting room. Provide books, puzzles, and activity sheets—especially for children—that help promote healthy eating and active living.
- Display educational posters and create a bulletin board for community partners to update.
- Frame your discussions to expand the patient/family perception of what healthy lifestyle changes they can make. Keep goals small, simple, and concrete. Allow for personal choices. Selections a child enjoys will be more easily sustained.
- Have patients set specific behavioral goals and action plans and be sure to ask about these during the next visit or follow-up contact.
- Be aware of the cultural norms of the patient, significance of meals/eating for the family/community, beliefs about special foods, and feelings about body size.

Team Approach

- Be a good role model—be physically active every day and work to make healthy food choices.
- Involve the clinical team in planning and implementing treatment intervention.
- Know your community resources and refer patients to them. These will help support families once they leave your office.
- Behavior change is a long-term process and involving other qualified staff will help ensure success.
- Encourage involvement and change for the whole family and all caregivers.

ABCs of Counseling and Motivating Overweight Children and Families

Ask Open-Ended Questions

- How do you feel about us talking about your physical activity, TV watching, and eating today?
- How concerned are you about your child's weight? Why?
- What are some of the things you might like to change?

Body Language

- Put patient at ease.
- Use eye contact without barriers.
- Convey respect.
- Counsel in a private setting.

Care and Empathy

- Do not criticize.
- Acknowledge patient's feelings.
- Answer questions without sign of judgment.
- Use language that is nonjudgmental
  - "Healthier" food vs "bad" food
  - "Healthier" weight vs "ideal" weight

Source: Adapted from the *Keep ME Healthy* chart developed by the Maine Center for Public Health and the Maine Chapter of the American Academy of Pediatrics (copyright 2006 Maine Center for Public Health). Reproduced with kind permission of the Maine Center for Public Health and the American Association of Pediatrics.

FAQs With Information Including BMI, Growth Charts, Nutrition (5–2–1–0 Messaging), Clinician Resources, and Community Involvement

1. What is BMI?

Body Mass Index (BMI) is a number calculated from a child's height and weight. BMI is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems. For children and teens, BMI is age- and sex-specific and is often referred to as BMI-for-age. *(Source: www.cdc.gov)*

2. What is a BMI percentile?

After BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-forage growth charts (for either girls or boys) to obtain a percentile ranking.

Weight Status Category	Percentile Range
Underweight	Less than the 5th percentile
Healthy Weight	5th percentile to less than the 85th percentile
Overweight	85th to less than the 95th percentile
Obese	Equal to or greater than the 95th percentile

3. How is BMI used with children and teens?

BMI is used as a screening tool to identify possible weight problems for children. CDC and the American Academy of Pediatrics (AAP) recommend the use of BMI to screen for possible weight problems in children beginning at 2 years of age. BMI is not a diagnostic tool. For example, a child may have a high BMI for age and sex, but to determine if excess fat is a problem, a healthcare provider would need to perform further assessments. These assessments might include evaluations of diet, physical activity, family history, skin fold thickness, and other appropriate health screenings.

4. What about the growth chart?

This is where the beauty of pediatrics shines through. We love our growth charts. The tracking of BMI over time on a CDC BMI-for-age growth chart provides clinical information for assessment, education and intervention.

5. How do I calculate BMI?

Use a BMI wheel, calculator (see below for a link to the CDC) or the BMI formula:

BMI (English) = weight(lb) ÷ [height(in) x height(in)] x 703

BMI (Metric) = weight(kg) ÷ [height(m) x height(m)]

BMI Percentile Calculator for Children and Teens:
http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx

6. How do you take a proper height and weight measurement of a patient 2 years or older?

Measuring Weight

Children should be weighed using a platform scale. This may be a beam balance scale or a digital (electronic load cell or strain gauge) scale. Check your equipment regularly to make sure you are getting accurate measurements. Scales should be calibrated on a routine basis. Calibration involves putting known weight on the scale to check accuracy. Be sure the scale is placed on a flat, uncarpeted floor.

Procedure:

A. Ask the child to remove shoes and bulky clothing.

B. Place the scale in the "zero" position before the child steps on the scale.

C. Ask the child to stand still with both feet in the center of the platform.

D. Record the measurement to the nearest decimal fraction.

E. Have the child step off the scale.

Source: Reprinted with kind permission from the *Let's Go! Childhood Obesity Toolkit for Healthcare Professionals*, www.letsgo.org.

FAQs With Information Including BMI, Growth Charts, Nutrition (5–2–1–0 Messaging), Clinician Resources, and Community Involvement (continued)

Measuring Height

A standing height board or stadiometer is required. This device has a vertical ruler with a sliding horizontal rod that adjusts to rest on the head. It also has a permanent surface to stand on or the entire device is mounted on the wall of a room with a level floor.

Procedure:

A. Before you begin, ask the child to remove shoes, hats, and bulky clothing, such as coats and sweaters. Ask the child to remove or undo hair styles and hair accessories that interfere with taking a measurement. In rare cases, a child may be unwilling to undo an intricate or costly hairstyle. In these situations, care should be taken to locate the actual crown of the head.

B. Direct the child to stand erect with shoulders level, hands at sides, thighs together, and weight evenly distributed on both feet. The child's feet should be flat on the floor or foot piece, with heels comfortably together and touching the base of the vertical board. There are four contact points between the body and the stadiometer: head, upper back, buttocks, and heels.

C. Ask the child to adjust the angle of his/her head by moving the chin up or down in order to align head into the Frankfort Plane. The Frankfort Plane is an imaginary line from the lower margin of the eye socket to the notch above the tragus of the ear (the fleshy cartilage partly extending over the opening of the ear). This is best viewed and aligned when the viewer is directly to the side of and at the eye level of the child. When aligned correctly, the Frankfort Plane is parallel to the horizontal headpiece and perpendicular to the vertical back piece of the stadiometer. NOTE: When the chin is correctly positioned, the back of the head may not make contact with the board. In fact, in a very few individuals, only two points will make contact with the vertical back piece.

D. Ask the child to breathe in and maintain his/her position. Lower the headpiece until it firmly touches the crown of the head and is at a right angle with the measurement surface. Check contact points to ensure that the lower body stays in the proper position and the heels remain flat. Some children may stand up on their toes, but verbal reminders are usually sufficient to get them in proper position.

E. Record height to the nearest 1/8th of an inch.
Adapted from the Center for Weight and Health at the University of California—Berkeley.

7. What does 5–2–1–0 stand for?

5—Eat at least five fruits and vegetables a day.

2—Limit TV and computer use (not related to school) to two hours or less a day.

1—Get one hour or more of physical activity every day.

0—Drink less sugar. Try water and low-fat milk instead of soda and drinks with lots of sugar.

8. What is the science behind the 5–2–1–0 message?

There is a scientific rationale supporting each component of the 5–2–1–0 message. It has been used in doctors' offices in Maine for the past three years and has been used in school settings for the past one and a half years. The 5–2–1–0 message is an easy way to begin an open discussion about the ways to increase physical activity and healthy eating.

5—Eat at least five fruits and vegetables on most days

Scientific Rationale: A diet rich in fruits and vegetables provides vitamins and minerals, important for supporting growth and development, and for optimal immune function in children. High daily intake of fruits and vegetables among adults is associated with lower rates of chronic diseases such as heart disease, stroke, high blood pressure, diabetes, and possibly, some types of cancers. Emerging science suggests fruit and vegetable consumption may help prevent weight gain, and when total calories are controlled, may be an important aid to achieving and sustaining weight loss.

Source: Reprinted with kind permission from the *Let's Go! Childhood Obesity Toolkit for Healthcare Professionals*, www.letsgo.org.

FAQs With Information Including BMI, Growth Charts, Nutrition (5–2–1–0 Messaging), Clinician Resources, and Community Involvement (continued)

2—Cut recreational screen time to two hours or less daily

Scientific Rationale: According to the AAP, the average child watches an average of 5–6 hours of television a day. Watching too much television is associated with an increased prevalence of overweight and obesity, lower reading scores, and attention problems. The AAP therefore recommends that children under age 2 shouldn't watch any television. In addition, the AAP recommends no TV or computer in the room in which the child sleeps, and no more than 2 hours of screen time a day.

1—Participate in one hour or more of physical activity every day

Scientific Rationale: Regular physical activity is essential for weight maintenance and prevention of chronic diseases such as heart disease, diabetes, colon cancer and osteoporosis. While most school-age children are quite active, physical activity sharply declines during adolescence. Children who are raised in families with active lifestyles are more likely to stay active as adults than children raised in families with sedentary lifestyles.

0—Drink water and low-fat milk instead of soda and sugar-sweetened drinks.

Scientific Rationale: Sugar-sweetened beverage consumption has increased dramatically over the past 20 years; high intake among children is associated with overweight/obesity, displacement of milk consumption, and dental cavities. It is recommended that children 1–6 years old consume no more than 4–6 ounces of juice per day and youth 7–18 years old consume no more than 8–12 ounces. Whole milk is the single largest source of saturated fat in children's diets. Switching to low-fat or nonfat milk products significantly reduces dietary saturated and total fat, as well as total calories.

9. How do I use the 5–2–1–0 Survey in my practice?

The first thing to institute in your practice is the 5–2–1–0 Survey at all well-child checks for children 2 years and older. Questions to consider:

- When and where will the survey be handed out?
- Who will the patient/parent give the survey back to?
- Who will review the survey with the patient/family?
- Where will the survey be placed in the chart?

10. Are there discussion points for the survey I can use?

Discussion Points (Please note the questions below are from the survey for ages 10–18. The same discussion points apply to both age ranges.):

A. How many servings of fruits or vegetables do you eat a day?

5 or more servings of fruits or vegetables per day help provide a healthy diet. The palm of the child's hand is a good reference for a serving size for meat and protein and most vegetables.

A more accurate guide for each meal is:

- 3 ounces of protein, such as chicken, lean meat, fish, tofu, or 2 tablespoons of peanut butter
- 1/2 cup to 1 cup of a starch, such as pasta, potato, rice, or 2 slices of bread
- 1/2 cup to 1 cup of vegetables
- 1/2 cup or one small piece fresh fruit
- 1 cup milk or 1–2 ounces of low-fat cheese

For more information, reference the following patient tools: "5 Brochure" and "Healthy Favorites: A booklet full of healthy tips and recipes"

B. How many times a week do you eat dinner at the table together with your family?

Family meals are associated with an increased intake of fruits, vegetables, and milk. Encourage families to eat meals together more. Mealtime is a great opportunity for parents to connect with their kids.

For more information, reference the following patient tool: "A Meal is a Family Affair"

C. How many times a week do you eat breakfast?

A daily breakfast is very important for a healthy diet. Skipping breakfast may be a risk factor for obesity.

For more information, reference the following patient tool: "Breakfast is Best!"

Source: Reprinted with kind permission from the *Let's Go! Childhood Obesity Toolkit for Healthcare Professionals*, www.letsgo.org.

FAQs With Information Including BMI, Growth Charts, Nutrition (5–2–1–0 Messaging), Clinician Resources, and Community Involvement (continued)

D. How many times a week do you eat takeout or fast food?

Eating takeout or fast food may be associated with obesity. These foods have a tendency to be more fatty so children should eat them less often. If children do eat takeout or fast food, they should look for healthy options.

For more information, reference the following patient tool: "Healthy Favorites: A booklet full of healthy tips and recipes"

E. How many hours a day do you watch TV/movies or sit and play video/computer games?

F. Do you have a TV in the room where you sleep?

G. Do you have a computer in the room where you sleep?

The American Academy of Pediatrics recommends the following: 2 hours or less of recreational screen time. They also recommend: no screens in the child's bedroom and no TV or computer under the age of 2.

For more information, reference the following patient tool: "2 Brochure"

H. How much time a day do you spend in active play (faster breathing/heart rate or sweating)?

One hour or more; the time spent doing physical activity can be separated out throughout the day.

For more information, reference the following patient tool: "1 Brochure"

I. How many 8-ounce servings of the following do you drink a day?

100% juice:

- 4–6 ounces for children 1–6 years old
- 8–12 ounces for children 7–18 years old
- Children 6 months and under should not be given juice

Water: unlimited

Fruit or sports drinks: limited—you can use this opportunity to have a conversation about when a sports drink is needed (after 60 mins of continuous vigorous activity).

Soda or punch: limited

Whole milk: recommended for children 1 year to 2 years. After age 2, children should be drinking low-fat or skim milk. Children under 1 year should drink breast milk or formula.

For more information, reference the following patient tool: "Calcium Counts!"

Fat-free or reduced fat milk:

Children ages 2–3: 2 cups a day

Children ages 4–8: 3 cups a day

Pre-teens and teens: 4 cups a day

For more information, reference the following patient tool: "0 Brochure"

11. Will discussion of the 5–2–1–0 message lead to an increase in eating disorders such as anorexia nervosa?

There is no current evidence that bringing up healthy behaviors in a positive manner leads to disordered eating. The 5–2–1–0 message provides an easy way to discuss general health subjects that apply to everyone. Its purpose is to spread healthy behaviors. A recent study in a medical journal (Austin, et al., Archives of Pediatrics and Adolescent Medicine, vol. 159: 225–230) supported the idea that interventions like Let's Go! may actually help prevent eating disorders in early adolescent girls.

12. How important is our office behavior to the success of this program's implementation?

Role modeling is a very important part of changing behaviors among children. Healthy behaviors you can model include: offering healthy snacks at office meetings, holding walking meetings when possible, promoting the use of pedometers by staff, and not using food as a reward.

For more information, reference the following patient tools: "Healthy Favorites: A booklet full of healthy tips and recipes" and "Creating a Healthy Office Environment"

Source: Reprinted with kind permission from the *Let's Go! Childhood Obesity Toolkit for Healthcare Professionals*, www.letsgo.org.

FAQs With Information Including BMI, Growth Charts, Nutrition (5–2–1–0 Messaging), Clinician Resources, and Community Involvement (continued)

13. I have obese kids in my practice. Now what?

Good question! There are many resources being put in place to help providers. We have educational opportunities such as regional workshops that will be offered in your area. Additionally, the Let's Go! Eat Right. Be Active. Get Healthy. Childhood Obesity Resource Toolkit for Healthcare Professionals is available by emailing infoletsgo@mmc.org. Finally, below are resources that you may find helpful to get you started.

Internet resources:

Childhood Obesity Action Network (COAN): The Childhood Obesity Action Network is a web-based national network aimed at rapidly sharing knowledge, successful practices and innovation.
www.nichq.org/NICHQ/Programs/Conferences AndTraining/ChildhoodObesityActionNetwork.htm

Let's Go!: Maine information for kids, teens, parents, childcare and healthcare providers, schools, and workplaces.
www.letsgo.org

Healthy Maine Partnerships:
www.healthymainepartnerships.org
www.healthymainewalks.org

CDC
Growth Charts: www.cdc.gov/growthcharts
Children's BMI Risk Category Dependent on Age: www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm

Children's BMI Calculator
www.kidsnutrition.org/bodycomp/bmiz2.html

14. How do I get involved in my community?

Because providers are one component of a diverse plan to help children make healthy behavior changes, getting involved with your community can be very effective. Providers have the opportunity to leverage their public standing and their medical expertise to make changes in the overall health of the community. We want to help you get involved! Please contact Let's Go! at infoletsgo@mmc.org with interest or ideas.

Source: Reprinted with kind permission from the *Let's Go! Childhood Obesity Toolkit for Healthcare Professionals*, www.letsgo.org.

Key Elements to Include in an Encounter Form

1. Vital Signs:

- Height and Weight
- BMI
- BMI percentile
- Weight classification
  - <5% Underweight
  - 5–84% Healthy Weight
  - 85–94% At Risk for Overweight
  - ≥95% Overweight

2. Current Health Habits:

- Nutrition
  - Fruits and vegetables
  - Sugar Sweetened Beverages
  - Milk—type and quantity
  - Snacking—types and quantity
- Physical Activity
  - Type and quantity
- Screen time
  - Type and quantity
  - TV/computer in the room the child sleeps

3. Review of Systems:

- Constitutional
  - Sleep Habits
  - Fatigue/Lethargy
- Respiratory
  - Snoring
  - Wheezing/Coughing
  - Difficulty breathing
- Cardiovascular
  - Chest Pain
- Gastrointestinal
  - Abdominal Pain/ Vomiting/Constipation
- Skin
  - Striae
- Neurologic
  - Developmental Delay
  - Headache
- Genitourinary
  - Menarche
  - Oligo/Amenorrhea
- Musculoskeletal
  - Knee/Hip Pain
  - Limp

4. Family History:

- Obesity
- Diabetes
- Hypertension
- Cardiovascular Disease
- Depression

5. Social History:

- School/Daycare
- Who lives at home?
- Who helps parent?

6. Past Medical History:

- Birth weight—IUGR/LGA
- Mental Health

7. Medications

8. Physical Exam:

- Special attention to respiratory, muscular skeletal, skin exam

9. Assessment:

- Weight Classification
- Lab work up
- Readiness to Change

10. Plan:

- Based upon Readiness to Change Tailor the Intervention
- Goal Setting Worksheet if indicated
- Follow up Plans
- Referral to Specialist

Source: Reprinted with kind permission of NICHQ, the National Initiative for Children's Healthcare Quality, and the teams from NICHQ's Learning Collaborative *Healthy Care for Healthy Kids, a Collaborative to Prevent, Identify and Manage Childhood Overweight*, sponsored by Blue Cross Blue Shield MA

Patient Evaluation Form

Name _____ Age _____ ☐ M ☐ F
Last, First, M.I.

Date of Birth _____ Date of Evaluation _____

Family History

☐ Obesity
☐ Type 2 Diabetes Mellitus
☐ Eating Disorders
☐ Dyslipidemia
☐ Hypertension
☐ Genetic Disorders
☐ Coronary Heart Disease
☐ Thyroid Disease

Dietary History

Water consumption _____ oz/day Fruit juice consumption _____ oz/day
Sweetened beverage consumption (sports drinks, sweetened tea) _____ oz/day
Soft drink consumption _____ cans/day
Milk consumption _____ oz/day and type: ☐ Skim ☐ 1% ☐ 2% ☐ Whole

Time and place of eating: _____ Breakfast
_____ Lunch
_____ Dinner

Number of meals eaten prepared outside the home _____ /wk
Number of fast food meals _____ /wk

Physical Activity History

Daily hours of television viewing/computer use/and video game playing _____ hrs/day
Television in child's bedroom ☐ Yes ☐ No

Amount of daily physical activity _____ hrs/day
Amount of physical education at school _____ days/wk
Participation in organized activities ☐ Yes ☐ No

Time spent outdoors _____ hrs/day

Parental exercise behaviors:

_____

Accessibility of local parks:

_____

_____

Social History

Smoker ☐ Yes ☐ No

Medications

_____

Review of Systems

Skin: ☐ Furunculosis ☐ Hyperpigmentation Around Neck

Endocrine: ☐ Polyuria ☐ Polydipsia ☐ Unexpected weight loss

Pulmonary: ☐ Wheezing ☐ Snoring ☐ Daytime Somnolence
☐ Apnea ☐ Shortness of breath ☐ Exercise
☐ Intolerance

Patient Evaluation Form (continued)

Gastrointestinal: ☐ Heartburn ☐ Abdominal Pain ☐ Gallbladder Disease

Genital *(Female Only)*: ☐ Age at Menarche _____ ☐ Hirsutism
☐ Irregular Menses (<9 cycles/yr) ☐ Amenorrhea

Genitourinary: ☐ Noctural Enuresis

Musculoskeletal: ☐ Hip Pain ☐ Knee Pain ☐ Walking Pain
☐ Foot Pain ☐ Groin Pain

Neurolgic: ☐ Headache ☐ Diplopia ☐ Hyperactivity

Psychiatric: ☐ Depression ☐ Poor Self-Image ☐ Behavior Problems
☐ Feelings of Isolation from Peers ☐ School
☐ Avoidance ☐ Anxiety ☐ Sleepiness
☐ Wakefulness ☐ Other _____

Additional Notes

Physical Exam

General

Vitals: Wt _____ Ht _____ BMI (Weight$_{lbs}$ / (Height$_{in}$ x Height$_{in}$) × 703) _____
BP _____ / _____ (see BP reference table) (Ensure proper sized BP cuff)

Skin: ☐ Acanthosis Nigricans ☐ Furunculosis ☐ Hirsutism
☐ Excessive Acne ☐ Violaceous striae ☐ Irritation/Inflammation

HEENT: Papilledema Tonsillar Size EOM

Neck: Palpation of Thyroid _____

CV:

Pulm: Wheezing

Abd: Liver Span RUQ Tenderness Epigastric Tenderness

GU: Tanner Stage

Extremities:

Musculoskeletal: Gait ROM Hip Bowing of tibia

Neurologic:

Patient Evaluation Form (continued)

Labs

Recommended for patients with BMI 5th–<85th percentile with Risk Factors (HTN, tobacco use, DM, FHx: elevated lipid levels or premature CV disease):

- Fasting serum lipid panel

Recommended for patients with BMI 85th–<95th percentile with NO Risk Factors:

- Fasting serum lipid panel

Recommended for patients with BMI 85th–<95th percentile with Risk Factors (FHx: obesity-related diseases, HTN, elevated lipid levels, tobacco use):

- Fasting serum lipid panel
- Fasting glucose (If 100–126mg/dL, prediabetic; If >126 mg/dL, diabetic)
- AST/ALT

Optional:

1) Fasting serum insulin (nl<17)
2) 2–hour glucose tolerance test
3) If BMI >95th percentile and evidence of hypertension screen for focal segmental glomerulosclerosis:
   a) Urinary microalbumin level (1st morning void) (abnormal urinary albumin excretion rate >20 µg/minute)
   b) Spot urine microalbumin/creatinine ratio1,2,3 (abnormal >30 micrograms of albumin/milligrams Cr)
   c) Spot urine protein/creatinine ratio (abnormal >0.2)

Assessment

☐ Overweight (BMI 85th-94th Percentile) ☐ Obese (BMI 95th percentile)

Associated comorbidities: _____

_____

Dietary Modification:

☐ Nutrition Guidelines handout provided

Lifestyle Modification:

☐ Lifestyle Guidelines handout provided
☐ Exercise plan initiated
☐ Encouraged decreased sedentary time

Behavior Modification:

☐ Behavior Guidelines handout provided

Referrals:

☐ Cardiology	☐ Dietitian	☐ Endocrinology
☐ ENT	☐ Gastroenterology	☐ Nephrology
☐ Ortho	☐ Pulmonary	☐ Weight management program

Follow up: _____

_____

_____

Remember: Weight loss is important in the treatment of all obesity-associated comorbidities.

OBESITY SOCIETY

Patient Weight Management Initial Visit—Evaluation Form

Name _____ Age _____ ☐ M ☐ F
Height _____ in/cm Weight _____ #/Kg BP _____ ___ / _____
Heart Rate _____ #/min BMI: _____ /_____ %

Patient Concerns _____
Allergies _____ ☐ None
Smoker in home? ☐ Yes ☐ No Current Smoker? ☐ Yes ☐ No
Accompanied By ☐ Mom ☐ Dad ☐ Other _____
Date of Evaluation _____ Phone _____

Regular MD:
Last Name, First Name
Medical Number
IMPRINT AREA

History

Chief Complaint/History of Present Illness _____
Questions or Concerns _____
Self Esteem—Self Image _____
Perception of Weight & Health _____
Current Health Habits _____
Physical Activity *(active play, sports)* _____
Sedentary Time *(TV, video games)* _____
Nutrition *(sodas/juice/fast food, fruits/veg, dairy, portion sizes)* _____
Eating Habits *(meal skipping, family meals, binging-purging)* _____
Successes & Barriers _____
Areas Chosen by Family to Work On _____
Readiness to Change *(child vs parent)* _____
Health Goals _____
Rewards _____

Review of Systems

No Problem	Problem	No Problem	Problem
Constitutional		***Gastrointestinal***	
☐ Depression	☐ _____	☐ Abdominal Pain	☐ _____
☐ Fatigue/Lethargy	☐ _____	☐ Vomiting	☐ _____
☐ Fever	☐ _____	***Skin***	
HEENT		☐ Striae	☐ _____
☐ Ear Pain	☐ _____	***Neurologic***	
☐ Runny Nose	☐ _____	☐ Developmental Delay	☐ _____
☐ Snoring	☐ _____	☐ Headache	☐ _____
☐ Sore throat	☐ _____	***Genitourinary***	
Respiratory		☐ Menarche	☐ _____
☐ Cough	☐ _____	☐ Oligo/Amenorrhea	☐ L.M.P.:_____
☐ Difficulty Breathing (noc)	☐ _____	***Musculoskeletal***	
☐ Wheezing/Stridor	☐ _____	☐ Limp	☐ _____
Cardiovascular		☐ Knee/Hip Pain	☐ _____
☐ Chest Pain	☐ _____	***Allergy***	
☐ All other systems negative		☐ Medication Allergy	☐ _____

PAST-FAMILY-SOCIAL HISTORY

☐ Tobacco Exposure Noted Above
☐ Immunizations Reviews
☐ Medical Record Reviewed
☐ Family History
- ☐ *Obesity/Overweight*
- ☐ *Type 2 Diabetes*
- ☐ *Hypertension*
- ☐ *Cardiovascular Disease*
- ☐ *Depression*

☐ Interpreter Used: ☐ Yes ☐ No—Language: _____

MEDICATIONS

☐ None
☐ See History
☐ See Chronic Med List
☐ Acetaminophen
☐ Ibuprofen
☐ Metformin
☐ Other _____

Patient Weight Management Initial Visit—Evaluation Form (continued)

Physical Exam

NL	NL=Normal, AB=Abnormal, Blank=Not Examined	AB	Abnormal Findings:
☐ 1	Constitutional *(alert, not toxic, not dysmorphic)*	☐	
☐ 2	Eyes *(no conjunctival infection, no papilledema)*	☐	
☐ 3	ENT *(no ext ear pain, TM's clear, nasal mucosa nl, teeth/gums nl., oral-pharynx nl, mucous memb moist)*	☐	
☐ 4	Neck *(supple, no adenopathy/masses, thyroid nl)*	☐	
☐ 5	Resp *(clear by auscultation, no retractions)*	☐	
☐ 6	Heart *(regular rhythm, no murmur)*	☐	
☐ 7	Abd *(nontender, no mas/organomegaly, bowel sounds nl)*	☐	
☐ 8	Skin *(no striae, no hirsutism, no acanthosis nigricans)*	☐	
☐ 9	Extr *(no cyanosis, pulses & perfusion nl, no edema)*	☐	
☐ 10	Musc *(nl gait, full ROM without pain, no tibial bowing)*	☐	
☐ 11	GU ☐ Ext Gen Vagina/Vulva *(no lesions/discharge)*	☐	
	☐ Penis/Scrotum *(no lesions/dischc, testes nl)*	☐	
	☐ Tanner Stage *(genital/breast)*: I II III IV V	☐	
	☐ Tanner Stage *(pubic hair)*: I II III IV V	☐	
☐ 12	Neuro *(DTR 2+, CN 2–12 nl)*	☐	
☐ 13	Psych *(normal affect and memory)*	☐	

Assessment

_____

Medications

_____

☐ **Overweight** (BMI>=95% for Age)
☐ **At Risk for Overweight** (BMI 85–95% for Age)
☐ **Normal Weight** (BMI 5–84% for Age)

Weight Change Since Last Visit:

Child Readiness to Change	Parent Readiness to Change
☐ High	☐ High
☐ Medium	☐ Medium
☐ Low	☐ Low

Areas of Improvement
☐ Activity ☐ Nutrition
☐ Self-Esteem ☐ Other

Medical Data

☐ CBC ☐ UA
☐ Fasting Cholesterol/Lipid Panel ☐ Fasting Blood Glucose
☐ Fasting Insulin
☐ Random Glucose ☐ HgbA1C
☐ TSH/Free T4 ☐ SGPT/SGO/Billirubin
☐ X Ray _____
☐ Old Records Reviewed

Immunizations

☐ DTAP ☐ Hep B ☐ Con-Pneumo ☐ V-Z ☐ Td
☐ IPV ☐ HIB ☐ MMR ☐ Hep A ☐ Influenza

Plan

☐ Environmental Tobacco Smoke
☐ Smoking Cessation/Advised to Quit
☐ **Counseling:**
- ☐ Activity/Exercise ☐ Nutrition/Eating Habits
- ☐ Self-Esteem ☐ Body Acceptance
- ☐ Other:

☐ **Written Information:**
- ☐ Tip Sheet ☐ Health Goals Spreadsheet
- ☐ Other:

☐ **Referral To:**
- ☐ Dietician ☐ Weight Management Program
- ☐ Mental Health ☐ Other:

Counseling—Information

Patient/Family Goals

_____
_____
_____
_____

5 _____
2 _____
1 _____
0 _____

RTC: ☐ PRN ☐ _____ week/month **MD/DO/NP**

_____
Signature **Date**

OBESITY SOCIETY

Patient Weight Management Follow-Up Visit—Evaluation Form

Name _____ Age _____ ☐ M ☐ F
Height _____ in/cm Weight _____ #/Kg BP _____ ___ / _____
Heart Rate _____ #/min BMI: _____ /_____ %

Patient Concerns _____
Allergies _____ ☐ None
Smoker in home? ☐ Yes ☐ No Current Smoker? ☐ Yes ☐ No
Accompanied By ☐ Mom ☐ Dad ☐ Other _____
Date of Evaluation _____ Phone _____

Regular MD:
Last Name, First Name
Medical Number
IMPRINT AREA

History

Chief Complaint/History of Present Illness _____
Questions or Concerns _____
Self Esteem—Self Image _____
Perception of Weight & Health _____
Current Health Habits _____
Physical Activity *(active play, sports)* _____
Sedentary Time *(TV, video games)* _____
Nutrition *(sodas/juice/fast food, fruits/veg, dairy, portion sizes)* _____
Eating Habits *(meal skipping, family meals, binging-purging)* _____
Successes & Barriers _____
Areas Chosen by Family to Work On _____
Readiness to Change *(child vs parent)* _____
Health Goals _____
Rewards _____

Review of Systems

No Problem	Problem	No Problem	Problem
Constitutional		***Gastrointestinal***	
☐ Depression	☐ _____	☐ Abdominal Pain	☐ _____
☐ Fatigue/Lethargy	☐ _____	☐ Vomiting	☐ _____
☐ Fever	☐ _____	***Skin***	
HEENT		☐ Striae	☐ _____
☐ Ear Pain	☐ _____	***Neurologic***	
☐ Runny Nose	☐ _____	☐ Developmental Delay	☐ _____
☐ Snoring	☐ _____	☐ Headache	☐ _____
☐ Sore throat	☐ _____	***Genitourinary***	
Respiratory		☐ Menarche	☐ _____
☐ Cough	☐ _____	☐ Oligo/Amenorrhea	☐ L.M.P.:_____
☐ Difficulty Breathing (noc)	☐ _____	***Musculoskeletal***	
☐ Wheezing/Stridor	☐ _____	☐ Limp	☐ _____
Cardiovascular		☐ Knee/Hip Pain	☐ _____
☐ Chest Pain	☐ _____	***Allergy***	
☐ All other systems negative		☐ Medication Allergy	☐ _____

MEDICATIONS

☐ None
☐ See History
☐ See Chronic Med List
☐ Acetaminophen
☐ Ibuprofen
☐ Metformin
☐ Other _____

Patient Weight Management Follow-Up Visit—Evaluation Form (continued)

Physical Exam

NL	NL=Normal, AB=Abnormal, Blank=Not Examined	AB	Abnormal Findings:
☐ 1	Eyes *(no conjunctival infection, no papilledema)*	☐	
☐ 2	ENT *(no ext ear pain, TM's clear, nasal mucosa nl, teeth/gums nl., oral-pharynx nl, mucous memb moist)*	☐	
☐ 3	Neck *(supple, no adenopathy/masses, thyroid nl)*	☐	
☐ 4	Resp *(clear by auscultation, no retractions)*	☐	
☐ 5	Abd *(nontender, no mas/organomegaly, bowel sounds nl)*	☐	
☐ 6	Skin *(no striae, no hirsutism, no acanthosis nigricans)*	☐	
☐ 7	Psych *(normal affect and memory)*	☐	

Assessment

☐ **Overweight** (BMI>=95% for Age)
☐ **At Risk for Overweight** (BMI 85–95% for Age)
☐ **Normal Weight** (BMI 5–84% for Age)

Weight Change Since Last Visit:

Child Readiness to Change
- ☐ High
- ☐ Medium
- ☐ Low

Parent Readiness to Change
- ☐ High
- ☐ Medium
- ☐ Low

Areas of Improvement
- ☐ Activity
- ☐ Nutrition
- ☐ Self-Esteem
- ☐ Other

Medications

Medical Data

- ☐ CBC
- ☐ UA
- ☐ Fasting Cholesterol/Lipid Panel
- ☐ Fasting Blood Glucose
- ☐ Fasting Insulin
- ☐ Random Glucose
- ☐ HgbA1C
- ☐ TSH/Free T4
- ☐ SGPT/SGO/Billirubin
- ☐ X Ray _____
- ☐ Old Records Reviewed

Immunizations

☐ DTAP ☐ Hep B ☐ Con-Pneumo ☐ V-Z ☐ Td
☐ IPV ☐ HIB ☐ MMR ☐ Hep A ☐ Influenza

Plan

Counseling—Information

- ☐ Environmental Tobacco Smoke
- ☐ Smoking Cessation/Advised to Quit
- ☐ **Counseling:**
  - ☐ Activity/Exercise
  - ☐ Nutrition/Eating Habits
  - ☐ Self-Esteem
  - ☐ Body Acceptance
  - ☐ Other:
- ☐ **Written Information:**
  - ☐ Tip Sheet
  - ☐ Health Goals Spreadsheet
  - ☐ Other:
- ☐ **Referral To:**
  - ☐ Dietician
  - ☐ Weight Management Program
  - ☐ Mental Health
  - ☐ Other:

Patient/Family Goals

~~5~~
~~2~~
~~1~~
~~0~~

RTC: ☐ PRN ☐ _____ week/month

MD/DO/NP **Signature** **Date**

Techniques for Initiating Communication—Time Commitment and Target Audience

Type of Advice	Appointment Type	Time Commitment	Who
Lifestyle advice	• Well-child visit • Urgent visit	<1 minute	Children not currently overweight
Brief, focused advice	• Well-child visit	<3 minutes	Children who are overweight or obese
Brief negotiation and cognitive behavioral skills	• Follow-up visit • Weight management intervention	>10 minutes Single or multiple sessions	Children who are overweight or obese

Assessing Readiness for Change

Determining a patient's readiness for change is essential for success. Discussing changes when a patient is not ready often leads to resistance, denial of problems and frustration that may hamper future efforts. The following tool provides a basis for starting discussions with patients. Using questionnaires may also provide valuable insight while saving valuable office visit time.

Effective Communication With Families

Scott Gee, MD; Jodi Ravel, MPH; Sandra Roberts, RN; Amanda Wylie, Regional Health Education—Kaiser Permanente Northern California

Communication Techniques

Lifestyle Advice—Well-Child or Urgent Visit

- <1 minute
- Children not currently at risk for overweight

Brief Focused Advice—Well-Child Visit

- <3 minutes
- Children who are overweight or at risk for overweight

Brief Negotiation & Cognitive Behavioral Skills—Follow up Visit or Weight Management Intervention

- 10+ minutes: single or multiple sessions
- Children who are overweight or at risk for overweight

Who Do You Communicate With?

2–5 Years Old

- Communicate with Parent
- Child in Room

6–12 Years Old

- Communicate with parent or both
- The first encounter, consider taking parent to your office to discuss in private first

Over 12 Years Old

- Communicate with teen or both
- The first encounter, consider having parent leave exam room first

Brief Negotiation Skills—Particularly Effective for Contemplative/Ambivalent Patients

- Asking open ended questions
- Listening
- Summarizing
- Clinician Style: empathetic, accepting, collaborative

Cognitive Behavior Skills—For Patients Ready and Willing to Make Changes

- Develop awareness of eating habits, activity and parenting behavior
- Identification of problem behaviors
- Problem solving and modification of problem behaviors
- Weekly goal setting for children and parents on dietary, activity and self-esteem/parenting goals
- Positive reward systems
- Record keeping
- Weight checks

Effective Communication With Families (continued)

Lifestyle Advice

To stay healthy and energized:

- Get up and play hard, 30–60 minutes a day
- Limit TV and video games to 60 minutes or less a day
- Eat 5 helpings of fruits or vegetables every day
- Limit sodas & juice drinks to 1 cup or less a day

Brief Focused Advice

Step # 1: Engage the Patient/Parent

- Can we take a few minutes together to discuss your health and weight?
- How do you feel about your health and weight?

Step # 2: Share Information (optional)

- Your current weight puts you at risk for developing heart disease and diabetes.
- What do you make of this?
- Some ideas for staying healthy include…(see poster)
- What are your ideas for working toward a healthy weight?

Step # 3: Make a Key Advice Statement

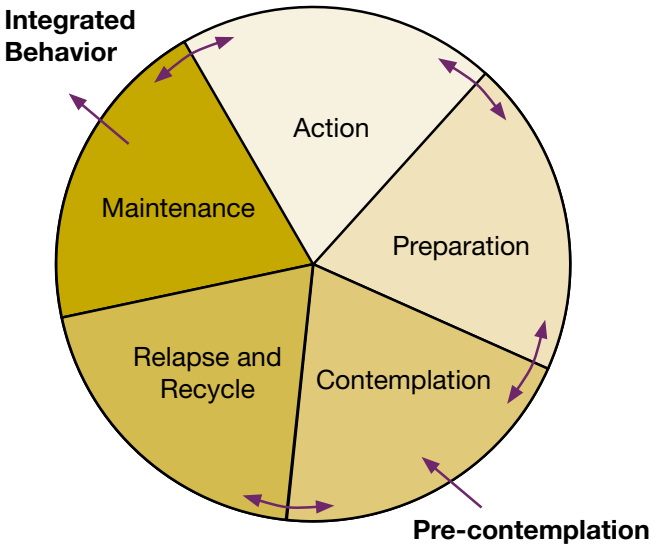
I strongly encourage you to...

- Get up and play hard, 30–60 minutes a day
- Limit TV and video games to 60 minutes or less a day
- Eat 5 helpings of fruits or vegetables every day
- Limit sodas and juice drinks to 1 cup or less a day
- Use patient ideas from step #2

Step # 4: Arrange for Follow up

- Would you be interested in more information on ways to reach a healthier weight? AND/OR
- Let's set up an appointment in __ weeks to discuss this further.

Stages of Behavior Change



Prochaska & Di Clemente: Transtheoretical Model of Behavior Change

Brief Negotiation

Open the Encounter

Ask Permission

- "Would you be willing to spend a few minutes discussing your weight?"
  - "Are you interested in discussing ways to stay healthy and energized?"

Ask an Open-Ended Question—Listen—Summarize

- "What do you think/How do you feel about your weight?"
  - "What have you tried so far to work toward a healthier weight?"

Share BMI/Weight/Risk Factors (Optional)

- Your current weight puts you at risk for developing heart disease and diabetes.
  - Ask for the patient's interpretation: "What do you make of this?"
  - Add your own interpretation or advice as needed after eliciting the patient's/parent's response

Negotiate the Agenda

- "There are a number of ways to achieve a healthy weight. They include (see poster)":
  - Get up and Play Hard
  - Eat 5 helpings of fruits and vegetables a day
  - Cut back on TV and video games
  - Cut down on soda and juice
- "Would you like to discuss any of these further today—or perhaps you have another idea that isn't listed here?"

Assess Readiness

- "On a scale from 0 to 10, how ready are you to consider (option chosen above)"
- Straight question: "Why a 5?"
- Backward question: "Why a 5 and not a 3?"
- Forward question: "What would it take to move you from a 5 to a 7?"

Overweight Sensitivity

"Do no harm"

Obesity →	**Overweight**
Ideal Weight →	**Healthier Weight**
Personal Improvement →	**Family Improvement**
Focus on Weight →	**Focus on Lifestyle**
Diets or "Bad Foods" →	**Healthier Food Choices**
Exercise →	**Physical Activity**

Explore Ambivalence

- Step 1: Ask a pair of questions to help the patient explore the pros and cons of the issue:
  - What are the things you like about_____? And What are the things you don't like about_____?
  - What are the advantages of keeping things the same? And What are the advantages of making a change?
- Step 2: Summarize Ambivalence:
  - "Let me see if I understand what you've told me so far…"
    - Begin with reasons for maintaining the status quo, end with reasons for making a change
    - Ask: "Did I get it all?/Did I get it right?"

1 2 3 4 5 6 7 8 9 10

Brief Negotiation (continued)

Tailor the Intervention

Stage of Readiness	Key Questions
Not Ready: 0–3 • Raise Awareness • Elicit Change Talk • Advise and Encourage	• Would you be interested in knowing more about reaching a healthy weight? • How can I help? • What might need to be different for you to consider a change in the future?
Unsure: 4–6 • Evaluate Ambivalence • Elicit Change Talk • Build Readiness	• Where does that leave you now? • What do you see as your next steps? • What are you thinking/feeling at this point? • Where does _____fit into your future?
Ready: 7–10 • Strengthen Commitment • Elicit Change Talk • Facilitate Action Planning	• Why is this important to you now? • What are your ideas for making this work? • What might get in the way? How might you work around the barriers? • How might you reward yourself along the way?

Close the Encounter

- Summarize: "Our time is almost up. Let's take a look at what you've worked through today…"
- Show Appreciation/Acknowledge willingness to discuss change: "Thank you for being willing to discuss your weight."
- Offer advice; emphasize choice, and express confidence: "I strongly encourage you to be more physically active. The choice to increase your activity, of course, is entirely yours. I am confident that if you decide to be more active you can be successful."
- Confirm next steps and arrange for follow up: "Are you able to come back in one month so we can continue to work together?"

Sample Dialogue of a Brief Negotiations Encounter

Before entering the exam room you note the patient's age, gender, BMI and percentile, blood pressure, and pulse which have been taken by your medical assistant.

Patient Info	
Name	Charles
Gender	Male
Age	10 years
Ethnicity	Latino
Height	55 inches
Weight	100 lbs
BMI	23.2 *(95th percentile for age and gender)*

MD: Good morning! I see you are in for your annual well-check. Do you have any concerns about your health?

Charles: No, my mom made me come in.

MD: Can we take a few minutes together to talk about your health and weight?

Charles: I guess so.

MD: How do you feel about your weight?

Charles: I know I'm bigger than most kids.

MD: Have you tried to do anything to get to a healthier weight?

Charles: Not really—I just eat what all my friends eat.

MD: Your family has a history of diabetes. Did you know that your current weight makes you more likely to develop diseases like diabetes?

Charles: No. My grandpa always complains about his diabetes.

MD: Yes, diabetes is not easy to live with—I can understand why he complains. OK, well let's see what we can do to help you be healthy. Here are some ideas that my patients usually find helpful: eating at least 5 fruits and vegetables per day, cutting back on the number of sodas they drink, being physically active for 30 minutes or more, and reducing the amount of time they spend watching TV or playing on the computer. Do you want to talk about any of these, or do you have any other ideas?

Charles: Would riding my bike to school count as physical activity?

Sample Dialogue of a Brief Negotiations Encounter (continued)

MD: It sure would! On a scale from 1 to 10, how ready do you think you are to start riding your bike to school?

Charles: Probably a 5.

MD: Why a 5?

Charles: Well, I don't have anyone to ride with and there are a couple of busy streets.

MD: I see how that would make it sort of scary. What sounds good about riding your bike to school?

Charles: Riding my bike is pretty fun. And I wouldn't have to wait in traffic in the car and be late for school.

MD: So the busy streets and having no one to ride with may make this change difficult, but you like to ride your bike and traffic wouldn't make you late for school if you were on your bike. Did I get it right?

Charles: Yeah.

MD: What do you think your next step is?

Charles: I guess I'll try riding my bike to school one day next week. Maybe I'll find someone to ride with along the way.

MD: Great. I think you are making a very healthy choice for yourself. Thank you for being so willing to discuss this with me. When you come back next month for your flu shot I want to hear how things are going.

Provider Resources

BMI Calculators and Information

- **2000 CDC Growth Charts**
  www.cdc.gov/growthcharts
- **CDC Z Score Data Files**
  www.cdc.gov/nchs/about/major/nhanes/growthcharts/zscore/zscore.htm
- **Children's BMI Risk Category Dependent on Age**
  www.cdc.gov/nccdphp/dnpa/bmi
- **Children's BMI Calculator including plot to graph [for parents]**
  www.kidsnutrition.org/bodycomp/bmiz2.html
- **Medscape: Using the BMI-for-Age Growth Charts**
  www.medscape.com/viewprogram/2640
- **BMI Adults National Heart, Lung & Blood Institute**
  www.nhlbisupport.com/bmi
- **Free Download for Palm OS Handhelds**
  www.statcoder.com/growthcharts.htm

National Resources

- **American Academy of Pediatrics**
  www.aap.org/obesity
- **Bright Futures in Practice**
  www.brightfutures.aap.org/web
- **Call to Action: Healthy School Nutrition Environments**
  www.fns.usda.gov/tn/healthy/calltoaction.html
- **Harvard Prevention Research Center**
  www.hsph.harvard.edu/prc
- **National Initiative for Children's Healthcare Quality—Childhood Obesity Action Network**
  www.nichq.org/NICHQ/Programs/ConferencesAndTraining/ChildhoodObesityActionNetwork.htm

Resources for Parents and Kids

- **Healthy eating and activities for kids & parents**
  www.kidnetic.com
- **KidsHealth**
  www.kidshealth.org
- **My Pyramid**
  www.mypyramid.gov
- **Overview of the VERB campaign**
  www.cdc.gov/youthcampaign
- **VERB Tween interactive website**
  www.verbnow.com

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Internet Resources for Parents, Teens, Providers and Internet Weight-Loss Programs

Childhood Overweight

- **Links to fact sheets on "Helping your Overweight Child", "Tips for Parents", Teenagers Guide to Better Health"**
  http://win.niddk.nih.gov/publications/index.htm

Healthy Eating

- **A step-by-step explanation of the key concepts of the MyPyramid for Kids symbol.**
  http://teamnutrition.usda.gov/resources/mpk_close.pdf
- **Online recipes for heart-healthy African American style foods.**
  www.nhlbi.nih.gov/health/public/heart/other/chdblack/cooking.htm
- **Online recipes for traditional Latino dishes cooked in heart-healthy ways.**
  www.nhlbi.nih.gov/health/public/heart/other/sp_recip.htm
- **USDA's resource guide on child nutrition and health for motivated parents.**
  www.nal.usda.gov/fnic/pubs_and_db.html
- **USDA site to view and order materials to help motivate children and their families for healthy eating and physical activity.**
  www.fns.usda.gov/eatsmartplayhard/

Fitness & Physical Activity

- **Fitness and exercise guide with a short quiz to assess your child's activity level.**
  www.keepkidshealthy.com/welcome/treatementguides/exercise.html
- **A parent handbook from the National Heart, Lung and Blood Institute, offering concrete tools and tips for parents to help their children make healthy food choices and increase their physical activity. *We Can!* provides ways to enhance children's activity and nutrition.**
  http://wecan.nhlbi.nih.gov

Internet Resources for Teens

- **Interesting interactive website with games, recipes and fast facts for teens.**
  http://www.cspinet.org/smartmouth/index1.html - Center for Science in the Public
- **Website geared toward teens with information on a number of health issues including nutrition and exercise. Website includes a BMI calculator.**
  www.teengrowth.com
- **BAM! Body and Mind is a CDC site designed for youth ages 9–13 with games and information on a number of health issues including food, nutrition and physical activity.**
  www.bam.gov/
- **Cookbook for teens: Fast meals and Quick Snacks.**
  http://www.mch.dhs.ca.gov/reportspubs/

Internet Resources for Parents, Teens, Providers and Internet Weight-Loss Programs (continued)

Resource Links and Calculators

Centers for Disease Control and Prevention

- **Information about BMI, online calculators (Adults, Child/Teen), and links to additional BMI resources, and growth charts.**
  http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm

PDA Software (Free Downloads for use on Palm OS and Pocket PC)

- **Provides information on BMI, PDA calculators (English and Metric measurements), and adult BMI classification tables.**
  http://hp2010.nhlbihin.net/bmi_palm.htm

Adolescent Health Working Group

- **Body Basics—Adolescent Provider Toolkit that includes materials for healthcare providers and their patients focusing on nutrition, physical activity, body image, overweight and eating disorders among teenagers.**
  www.ahwg.net/resources/toolkit.htm

National Initiative for Children's Health Care Quality

- **Childhood Obesity Action Network.**
  http://www.nichq.org/NICHQ/Programs/ConferencesAndTraining/ChildhoodObesityActionNetwork.htm

CME Resources

WellPoint CME on the CMA Foundation site

- **This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The California Medical Association and WellPoint. The California Medical Association is accredited by the ACCME to provide continuing medical education for physicians. The California Medical Association designates this educational activity for a maximum of 1.5 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity. This credit may also be applied to the CMA Certification in Continuing Medical Education.**
  http://www.calmedfoundation.org/projects/PatientEdResources.aspx
  http://www.eventstreams.com/wellpoint/010rde/

Internet Weight Loss Programs

The following Programs were designed by registered dietitians:

- **California Adolescent Nutrition and Fitness Program.**
  www.canfit.org
- **USDA's Eat Smart, Play Hard initiative.**
  www.fns.usda.gov/eatsmartplayhardkids
- **The purpose of Shape Up America! is to educate the public on the importance of the achievement and maintenance of a healthy body weight through the adoption of increased physical activity and healthy eating.**
  www.Shapeup.org

Informational Website Links

Informational Website Links

- **American Academy of Family Physicians (AAFP)**
  http://familydoctor.org/online/famdocen/home/healthy/food/kids/343.html
- **American Academy of Pediatrics**
  http://www.aap.org/obesity/
- **American Dietetic Association**
  http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition.html
- **California Medical Association Foundation**
  http://www.calmedfoundation.org
- **Center for Disease Control and Prevention**
  http://www.cdc.gov/nccdphp/dnpa/obesity/childhood/index.htm
- **Center for Medicare & Medicaid Services**
  http://www.cms.hhs.gov/home/schip.asp
- **National Heart Lung and Blood Institute**
  http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/index.htm
- **National Eating Disorders Organization**
  http://www.nationaleatingdisorders.org/p.asp?WebPage_ID=294
- **North American Association for the Study of Obesity (NAASO)**
  http://naaso.org/information/childhood_overweight.asp
- **Obesityhealth.com**
  www.obesityhealth.com
- **Obesity Help**
  http://www.obesityhelp.com/morbidobesity/information/childhood-obesity/
- **US Department of Agriculture (USDA)**
  www.nutrition.gov
- **US Food and Drug Administration (FDA)**
  http://www.cfsan.fda.gov/~dms/wh-wght.html

Healthy Lifestyle Prescription

Patient's Name ______________________________ Date ______________

Diagnosis ____

Specific Instructions:

- ☐ Eat breakfast EVERYDAY.
- ☐ Eat at least 5 servings/day of fruits and vegetables.
- ☐ Eat healthy snacks like fruits, vegetables, and whole-grain crackers.
- ☐ Limit fast food and fried food.
- ☐ No supersizing fast food or drinks.
- ☐ Limit sugary drinks such as sodas and sports drinks.
- ☐ Limit juice to ________ ounces per day.
- ☐ Drink water when thirsty.
- ☐ Increase consumption of low-fat milk and dairy products (1% or skim milk).
- ☐ Play outside for 1 hour during the day.
- ☐ Limit TV/video/computer to 2 hours/day.

In my professional opinion, in accordance with accepted medical practice standards, the above-mentioned patient requires healthy lifestyle changes for the problems indicated above.

Physician's Signature ___________________________ Date ______________

- -

Healthy Lifestyle Prescription

Patient's Name ______________________________ Date ______________

Diagnosis ____

Specific Instructions:

- ☐ Eat breakfast EVERYDAY.
- ☐ Eat at least 5 servings/day of fruits and vegetables.
- ☐ Eat healthy snacks like fruits, vegetables, and whole-grain crackers.
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- ☐ Increase consumption of low-fat milk and dairy products (1% or skim milk).
- ☐ Play outside for 1 hour during the day.
- ☐ Limit TV/video/computer to 2 hours/day.

In my professional opinion, in accordance with accepted medical practice standards, the above-mentioned patient requires healthy lifestyle changes for the problems indicated above.

Physician's Signature ___________________________ Date ______________

Receta Médica Para Un Estilo de Vida Saludable

Nombre de paciente ______________________________ Fecha ______________

Diagnosis ____

Instruccións:

- ☐ Desayune TODOS los días.
- ☐ Sirva al menos 5 raciones de frutas y vegetales al día.
- ☐ Come bocadillos saludables como frutas, vegetales, y galletas de trigo integral.
- ☐ Límite el consumo de comida rápida y comida frita.
- ☐ NO pida el tamaño extra grande.
- ☐ Límite el consumo de bebidas endulzadas como sodas y bebidas deportivas.
- ☐ Límite jugo a _________onzas al día.
- ☐ Tome agua cuando tenga sed.
- ☐ Aumente el consumo de leche y productos lácteos bajos en grasa (1% de grasa o descremada).
- ☐ Juege afuera por lo menos un hora al día.
- ☐ Límite el tiempo del uso de la televisión, videos, videojuegos, y computadora a no más de 2 horas al día.

En mi opinion professional, de acuerdo con la práctica de medicina, el paciente mencionado necesita cambios en su estilo de vida para las problemas indicadas.

Firma de médico ______________________________ Fecha ______________

- -

Receta Médica Para Un Estilo de Vida Saludable

Nombre de paciente ______________________________ Fecha ______________

Diagnosis ____

Instruccións:

- ☐ Desayune TODOS los días.
- ☐ Sirva al menos 5 raciones de frutas y vegetales al día.
- ☐ Come bocadillos saludables como frutas, vegetales, y galletas de trigo integral.
- ☐ Límite el consumo de comida rápida y comida frita.
- ☐ NO pida el tamaño extra grande.
- ☐ Límite el consumo de bebidas endulzadas como sodas y bebidas deportivas.
- ☐ Límite jugo a _________onzas al día.
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- ☐ Juege afuera por lo menos un hora al día.
- ☐ Límite el tiempo del uso de la televisión, videos, videojuegos, y computadora a no más de 2 horas al día.

En mi opinion professional, de acuerdo con la práctica de medicina, el paciente mencionado necesita cambios en su estilo de vida para las problemas indicadas.

Firma de médico ______________________________ Fecha ______________

Section 4

Community Health Center Office Tools

Things to Think About Before a Practice Starts Measuring BMI

1. The focus is on healthy behaviors. It's important to remember the focus should be on healthy behaviors and NOT on the weight. Healthy behaviors include 5-2-1-0, plus setting structured mealtimes, eating less fast food, and getting enough sleep.

2. The 5-2-1-0 Survey. The first thing to institute in your practice is the 5-2-1-0 Survey at all well-child checks for children 2 years and older. Questions to consider:

- When and where will the survey be handed out?
- Who will the patient/parent give the survey back to?
- Where will the survey be placed in the chart?

3. Goal setting with patients and families. It's important to have patients and families work on one area at a time. Simple, easily attainable goals are the key to success. An example is reducing intake of sugar-sweetened beverages.

4. Parent information. It's important to have information for parents on how they can make simple changes in their lives to be healthier. The Let's Go! Toolkit has many handouts available for your patients. These handouts will also be available on the Let's Go! website in the coming months at www.letsgo.org. Questions to consider:

- What handouts are you going to use?
- Where will the handouts be stored/displayed?
- Who is responsible for ordering/stocking handouts?

5. Measuring BMI can be complicated. Here are some things to consider:

- How does your office currently measure patients' height and weight? Who does the measuring? Is it standardized throughout the office?
- Can the person who does the measuring also calculate the BMI and determine the BMI percentile and weight classification? (Usually one person does all of this.)
- Where will the BMI percentile and weight classification be documented?
- Are the appropriate staff trained in BMI calculations and documentation?

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Things to Think About Before a Practice Starts Measuring BMI (continued)

6. The language we use is very important when working with patients and families on healthy behaviors. Focus on positive, healthy behaviors, not on the weight.

- **A BMI of 5–84%** is medically termed "healthy weight". It is still important to talk about healthy behaviors with this group.
- **A BMI of 85–94%** is medically termed "overweight".
  - Instead of using the term "overweight", try reviewing the BMI growth chart with the child/parent. Use wording such as "Your child might be carrying a little extra weight. It might not mean he/she has extra fat."
  - Quickly steer the conversation to the 5-2-1-0 behaviors.
  - Ask the child/parent if there is one behavior they would like to work on.
  - Use the survey to help elicit interest.
  - If they are not interested in making a change now, stay positive and encourage them to pick a behavior to start thinking about.
- **BMI of 95–98%** is medically termed "obese".
  - Instead of using the term "obese", try "Your child has put on more weight than they have grown tall," or "Your child is carrying around extra weight and this can put them at risk for health conditions such as heart disease and diabetes."
  - Once again, quickly move the discussion to healthy behaviors.
  - Refer to the clinical algorithm in the Toolkit to determine the recommended evaluation, intervention and follow-up.
- **A BMI of 99% or greater** has no specific medical term.
  - Try using some of the wording reviewed above.
  - Additional discussion of the health risks such as heart disease, diabetes, and liver problems is warranted.
  - Once again, focus the visit on making healthy behavior choices.
  - Refer to the clinical algorithm.

7. It's important to set a good example. Practices can set a good example by having healthy snacks available for office staff and avoiding junk food and soda.

8. Potential limitations on the use of the BMI. BMI does not directly measure fat, it measures weight. That said, there have been numerous studies determining BMI to be a good screening tool to identify children who have an increased percentage of body fat and are at risk for medical conditions, such as heart disease and diabetes.

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Measuring Height and Weight

Measuring Weight

Children should be weighed using a platform scale. This may be a beam balance scale or a digital (electronic load cell or strain gauge) scale. Check your equipment regularly to make sure you are getting accurate measurements. Scales should be calibrated on a routine basis. Calibration involves putting known weight on the scale to check accuracy. Be sure the scale is placed on a flat, uncarpeted floor.

Procedure:

1. Ask the child to remove shoes and bulky clothing.

2. Place the scale in the "zero" position before the child steps on the scale.

3. Ask the child to stand still with both feet in the center of the platform.

4. Record the measurement to the nearest decimal fraction.

5. Have the child step off the scale.

Measuring Height

A standing height board or stadiometer is required. This device has a vertical ruler with a sliding horizontal rod that adjusts to rest on the head. It also has a permanent surface to stand on or the entire device is mounted on the wall of a room with a level floor.

Procedure:

1. Before you begin, ask the child to remove shoes, hats, and bulky clothing, such as coats and sweaters. Ask the child to remove or undo hair styles and hair accessories that interfere with taking a measurement. In rare cases, a child may be unwilling to undo an intricate or costly hairstyle. In these situations, care should be taken to locate the actual crown of the head.

2. Direct the child to stand erect with shoulders level, hands at sides, thighs together, and weight evenly distributed on both feet. The child's feet should be flat on the floor or foot piece, with heels comfortably together and touching the base of the vertical board. There are four contact points between the body and the stadiometer: head, upper back, buttocks, and heels.

3. Ask the child to adjust the angle of his/her head by moving the chin up or down in order to align head into the Frankfort Plane. The Frankfort Plane is an imaginary line from the lower margin of the eye socket to the notch above the tragus of the ear (the fleshy cartilage partly extending over the opening of the ear). This is best viewed and aligned when the viewer is directly to the side of and at the eye level of the child. When aligned correctly, the Frankfort Plane is parallel to the horizontal headpiece and perpendicular to the vertical back piece of the stadiometer. NOTE: When the chin is correctly positioned, the back of the head may not make contact with the board. In fact, in a very few individuals, only two points will make contact with the vertical back piece.

4. Ask the child to breathe in and maintain his/her position. Lower the headpiece until it firmly touches the crown of the head and is at a right angle with the measurement surface. Check contact points to ensure that the lower body stays in the proper position and the heels remain flat. Some children may stand up on their toes, but verbal reminders are usually sufficient to get them in proper position.

5. Record height to the nearest 1/8th of an inch.

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Creating a Healthy Office Environment

The physician's office is a worksite that can be a powerful tool to communicate healthy eating and active living messages.

- Hang physical activity and nutrition posters in waiting areas and in examination rooms; make them as prominent as vaccination posters.
- Create a 5-2-1-0 bulletin board:
  - Monthly or quarterly updates can feature patient activities in their communities.
  - Post resources and news articles for parents and children.
  - Post seasonal activities.
  - Feature a fruit or vegetable of the month.
- Play videos that show children taking part in nontraditional sports and other physical activities.
- Play videos of children trying new fruits and vegetables.
- Display books, puzzles and activity sheets that support healthy eating and active living to entertain children.
- Replace lollipop and candy rewards with stickers, bookmarks and other nonfood items.

Work with your staff to make healthy eating and active living a part of their lives.

- Have a staff contest to create an office slogan or universal message about healthy lifestyles.
- Sample a fruit or vegetable of the month—select items of different cultures to try.
- Host a healthy lunch.
- Provide 10-minute physical activity or walk break during the work day.

Source: Adapted from the Healthy Care for Healthy Kids Learning Collaborative (A Partnership of Blue Cross Blue Shield of Massachusetts and the National Initiative on Children's Healthcare Quality).

Obesity and Related Comorbidities Coding Fact Sheets for Primary Care Pediatricians

While coding for the care of children with obesity and related comorbidities is relatively straightforward, ensuring that appropriate payment is received for such services is a more complicated matter. Many insurance carriers will deny claims submitted with "obesity" codes (e.g., 278.00), essentially carving out obesity-related care from the scope of benefits. Therefore, coding for obesity services is fundamentally a two-tiered system, where
the first tier requires that the provider submit claims using appropriate codes and the second tier involves the practice-level issues of denial management and contract negotiation.

This Coding Fact Sheet will provide you with a guide to coding for obesity-related healthcare services.

Procedure Codes

Current Procedural Terminology (CPT©) Codes

Body Fat Composition Testing

There is no separate CPT code for body fat composition testing. This service would be included in the examination component of the evaluation and management (E/M) code reported.

Calorimetry

94690 Oxygen uptake, expired gas analysis; rest, indirect (separate procedure)

or

94799 Unlisted pulmonary service or procedure
{Note: Special report required}

Glucose Monitoring

95250 Glucose monitoring for up to 72 hours by continuous recording and storage of glucose values from interstitial tissue fluid via a subcutaneous sensor (includes hook-up, calibration, patient initiation and training, recording, disconnection, downloading with printout of data)

Routine Venipuncture

36415 Collection of venous blood by venipuncture

36416 Collection of capillary blood specimen (e.g., finger, heel, ear stick)

Venipuncture Necessitating Physician's Skill

36406 Venipuncture, under age 3 years, necessitating physician's skill, not to be used for routine venipuncture; other vein

36410 Venipuncture, ages 3 years or older, necessitating physician's skill (separate procedure), for diagnostic or therapeutic purposes (not to be used for routine venipuncture)

Digestive System Surgery Codes

43644 Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and Roux-en-Y gastroenterostomy (roux limb 150 cm or less)

43645 Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and small intestine reconstruction to limit absorption

43770 Laparoscopy, surgical, gastric restrictive procedure; placement of adjustable gastric restrictive deviceband (e.g., gastric band and subcutaneous port components)

43771 Laparoscopy, surgical, gastric restrictive procedure; revision of adjustable gastric restrictive deviceband component only

43772 Laparoscopy, surgical, gastric restrictive procedure; removal of adjustable gastric restrictive deviceband component only

43773 Laparoscopy, surgical, gastric restrictive procedure; removal and replacement of adjustable gastric restrictive deviceband component only

43774 Laparoscopy, surgical, gastric restrictive procedure; removal of adjustable gastric restrictive deviceband and subcutaneous port components

43842 Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical-banded gastroplasty

43843 Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical-banded gastroplasty

43845 Gastric restrictive procedure with partial gastrectomy, pylorus-preserving duodenoileostomy and ileoileostomy (50 to 100 cm common channel) to limit absorption (biliopancreatic diversion with duodenal switch)

43846 Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (150 cm or less) Roux-en-Y gastroenterostomy

Obesity and Related Comorbidities Coding Fact Sheets for Primary Care Pediatricians (continued)

43847 Gastric restrictive procedure, with gastric bypass for morbid obesity; with small intestine reconstruction to limit absorption

43848 Revision, open, of gastric restrictive procedure for morbid obesity; other than adjustable gastric restrictive deviceband (separate procedure)

Health and Behavior Assessment/Intervention Codes

These codes cannot be reported by a physician nor can they be reported on the same day as Preventive Medicine Counseling codes (99401-99412).

96150 Health and behavior assessment (e.g., health-focused clinical interview, behavioral observations, psychophysiological monitoring, health-oriented questionnaires), each 15 minutes face-to-face with the patient; initial assessment

96151 Health and behavior assessment (e.g., health-focused clinical interview, behavioral observations, psychophysiological monitoring, health-oriented questionnaires), each 15 minutes face-to-face with the patient; re-assessment

The focus of the assessment is not on mental health but on the biopsychosocial factors important to physical health problems and treatments.

96152 Health and behavior intervention, each 15 minutes, face-to-face; individual

96153 Health and behavior intervention, each 15 minutes, face-to-face; group (2 or more patients)

96154 Health and behavior intervention, each 15 minutes, face-to-face; family (with patient present)

96155 Health and behavior intervention, each 15 minutes, face-to-face; family (without patient present)

The focus of the intervention is to improve the patient's health and well-being utilizing cognitive, behavioral, social, and/or psychophysiological procedures designed to ameliorate the specific obesity related problems.

Medical Nutrition Therapy Codes

These codes cannot be reported by a physician.

97802 Medical nutrition therapy; initial assessment and intervention, individual, face-to-face with patient, each 15 minutes

97803 Medical nutrition therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes

97804 Medical nutrition therapy; group (2 or more individuals), each 30 minutes

Healthcare Common Procedural Coding System (HCPCS) Level II Procedure and Supply Codes

CPT codes are also known as Healthcare Common Procedure Coding System (HCPCS) Level I codes. The Healthcare Common Procedure Coding System also contains Level II codes. Level II codes (commonly referred to as HCPCS ("hick-picks") codes) are national codes that are included as part of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) standard procedural transaction coding set along with CPT codes.

HCPCS Level II codes were developed to fill gaps in the CPT nomenclature. While they are reported in the same way as CPT codes, they consist of one alphabetic character (A-V) followed by four digits. In the past, insurance carriers did not uniformly recognize HCPCS Level II codes. However, with the implementation of HIPAA, carrier software systems must now be able to recognize all HCPCS Level I (CPT) and Level II codes.

HCPCS Education and Counseling Codes

S9445 Patient education, not otherwise classified, non-physician provider, individual, per session

S9446 Patient education, not otherwise classified, non-physician provider, group, per session

S9449 Weight management classes, non-physician provider, per session

S9451 Exercise class, non-physician provider, per session

S9452 Nutrition class, non-physician provider, per session

S9454 Stress management class, non-physician provider, per session

S9455 Diabetic management program, group session

S9460 Diabetic management program, nurse visit

S9465 Diabetic management program, dietician visit

S9470 Nutritional counseling, dietician visit

Source: Reproduced with kind permission of the American Academy of Pediatrics.

Obesity and Related Comorbidities Coding Fact Sheets for Primary Care Pediatricians (continued)

Diagnosis Codes

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Codes

Circulatory System

401.9 Essential hypertension; unspecified

429.3 Cardiomegaly

Congenital Anomalies

758.0 Down syndrome

759.81 Prader-Willi syndrome

759.83 Fragile X syndrome

759.89 Other specified anomalies {Laurence-Moon-Biedl syndrome}

Digestive System

530.81 Esophageal reflux

564.00 Constipation, unspecified

571.8 Other chronic nonalcoholic liver disease

Endocrine, Nutritional, Metabolic

244.8 Other specified acquired hypothyroidism

244.9 Unspecified hypothyroidism

250.00 Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled

250.02 Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled

253.8 Other disorders of the pituitary and other syndromes of diencephalohypophyseal origin

255.8 Other specified disorders of adrenal glands

256.4 Polycystic ovaries

259.1 Precocious sexual development and puberty, not elsewhere specified

259.9 Unspecified endocrine disorder

272.0 Pure hypercholesterolemia

272.1 Pure hyperglyceridemia

272.2 Mixed hyperlipidemia

272.4 Other and unspecified hyperlipidemia

272.9 Unspecified disorder of lipoid metabolism

277.7 Dysmetabolic syndrome X/metabolic syndrome

278.00 Obesity, unspecified

278.01 Morbid obesity

278.02 Overweight

278.1 Localized adiposity

278.8 Other hyperalimentation

Genitourinary System

611.1 Hypertrophy of the breast

Mental Disorders

300.00 Anxiety state, unspecified

300.02 Generalized anxiety disorder

300.4 Dysthymic disorder

307.50 Eating disorder, unspecified

307.51 Bulimia nervosa

307.59 Other and unspecified disorders of eating

308.3 Other acute reactions to stress

308.9 Unspecified acute reaction to stress

311 Depressive disorder, not elsewhere classified

313.1 Misery and unhappiness disorder

313.81 Oppositional defiant disorder

Musculoskeletal System and Connective Tissue

732.4 Juvenile osteochondrosis of lower extremity, excluding foot

Nervous System and Sense Organs

327.23 Obstructive sleep apnea (adult) (pediatric)

327.26 Sleep related hypoventilation/hypoxemia in conditions classifiable elsewhere

327.29 Other organic sleep apnea

348.2 Benign intracranial hypertension

Skin and Subcutaneous Tissue

701.2 Acquired acanthosis nigricans

Symptoms, Signs, and Ill-Defined Conditions

780.50 Sleep disturbance, unspecified

780.51 Insomnia with sleep apnea, unspecified

Obesity and Related Comorbidities Coding Fact Sheets for Primary Care Pediatricians (continued)

780.52 Insomnia, unspecified

780.53 Hypersomnia with sleep apnea, unspecified

780.54 Hypersomnia, unspecified

780.57 Unspecified sleep apnea

780.71 Chronic fatigue syndrome

780.79 Other malaise and fatigue

783.1 Abnormal weight gain

783.3 Feeding difficulties and mismanagement

783.40 Lack of normal physiological development, unspecified

783.43 Short stature

783.5 Polydipsia

783.6 Polyphagia

783.9 Other symptoms concerning nutrition, metabolism, and development

786.05 Shortness of breath

789.1 Hepatomegaly

790.22 Impaired glucose tolerance test (oral)

790.29 Other abnormal glucose; pre-diabetes not otherwise specified

790.4 Nonspecific elevation of levels of transaminase or lactic acid dehydrogenase [LDH]

790.6 Other abnormal blood chemistry (hyperglycemia)

Other

NOTE: The ICD-9-CM codes below are used to deal with occasions when circumstances other than a disease or injury are recorded as "diagnoses" or "problems." Some carriers may request supporting documentation for the reporting of V codes.

V18.0 Family history of diabetes mellitus

V18.1 Family history of endocrine and metabolic diseases

V49.89 Other specified conditions influencing health status

V85.51 Body Mass Index, pediatric, less than 5th percentile for age

V85.52 Body Mass Index, pediatric, 5th percentile to less than 85th percentile for age

V85.53 Body Mass Index, pediatric, 85th percentile to less than 95th percentile for age

V85.54 Body Mass Index, pediatric, greater than or equal to 95th percentile for age

V58.67 Long-term (current) use of insulin

V58.69 Long-term (current) use of other medications

V61.0 Family disruption

V61.20 Counseling for parent-child problem, unspecified

V61.29 Parent-child problems; other

V61.49 Health problems with family; other

V61.8 Health problems within family; other specified family circumstances

V61.9 Health problems within family; unspecified family circumstances

V62.81 Interpersonal problems, not elsewhere classified

V62.89 Other psychological or physical stress not elsewhere classified; other

V62.9 Unspecified psychosocial circumstance

V65.19 Other person consulting on behalf of another person

V65.3 Dietary surveillance and counseling

V65.41 Exercise counseling

V65.49 Other specified counseling

V69.0 Lack of physical exercise

V69.1 Inappropriate diet and eating habits

V69.8 Other problems relating to lifestyle; self-damaging behavior

V69.9 Problem related to lifestyle, unspecified

V85.51 Body Mass Index, pediatric, less than 5th percentile for age

V85.52 Body Mass Index, pediatric, 5th percentile to less than 85th percentile for age

V85.53 Body Mass Index, pediatric, 85th percentile to less than 95th percentile for age

V85.54 Body Mass Index, pediatric, greater than or equal to 95th percentile for age

Source: Reproduced with kind permission of the American Academy of Pediatrics.

Coding and Reimbursement for Children With Abnormal Weight Gain in Primary Care

CPT Evaluation and Management Codes
Office or Other Outpatient Services/Consultations

Complexity	New Consults *(MD Referred ONLY)*		Initial Outpatient Visit		Returns		Prolonged Physician Service *(re-checking & re-evaluating)*	Care Plan Oversight Services *(only to be filled once a month)*
1 (lowest)	99241		99201		99211		99354X1	99374
2	99242	99243	99202	99203	99212	99213	99354X1 and 99355X1	99375
3	99243	99244	99203	99204	99213	99214	99354X1 and 99355X2	
4	99244	99245	99204	99205	99214	99215	99354X1 and 99355X3	
5 (highest)	99245		99205		99215			

ICD-9-CM Codes

Diagnosis (up to 4)	
Sleep	
780.50	Sleep disturbances unspecified
780.51	Insomnia with sleep apnea
780.53	Hypersomnia with sleep apnea
780.54	Other Hypersomnia
Nutrition and Metabolism	
779.3	Feeding problems in newborn
781.21	Loss of weight
783.0	Anorexia (not nervosa)
783.1	Abnormal weight gain
783.2	Abnormal loss of weight
783.3	Feeding difficulties and mismanagement
783.22	Underweight
783.40	Lack of expected normal Physiological development
783.41	Failure to thrive
783.43	Short stature
783.5	Polydipsia
783.6	Polyphagia (excessive eating)
783.9	Other symptoms concerning nutrition met. and devel.

Vitamins and minerals deficiencies	
268	Vitamin D deficiency
268.0	Rickets active
268.1	Rickets late effect
272.9	Unspecified disorder of lipoid metabolism
280	Iron deficiency anemia
Digestive system	
564.0	Constipation
787.01	Nausea with vomiting
787.02	Nausea alone
787.03	Vomiting alone
530.11	Reflux esophagitis
787.2	Dysphagia (difficulties swallowing)
787.3	Flatulence, eructation and gas pain
787.6	Incontinence of feces
787.7	Abnormal feces
787.91	Diarrhea
565.0	Anal fissure
579.9	Unspecified intestinal malabsorption
789.0	Abdominal pain

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Coding and Reimbursement for Children With Abnormal Weight Gain in Primary Care (continued)

Diagnosis (up to 4)	
536.8	Dyspepsia and other disorders
520.6	Disturbances in tooth eruption
530.81	Gastroesophageal Reflux
General symptoms	
381.4	Nonsuppurative otitis media
382.00	Acute suppurative otitis media
460	Acute nasophryngitis (cold)
780.6	Fever
307.6	Enuresis
520.7	Teething syndrome
521.0	Dental caries
530.0	Esophagitis unspecified
Respiratory system	
786.00	Respiratory abnormality unspecified
786.01	Hyperventilation
786.02	Orthopnea
786.09	Other (apnea, resp. distress)
786.1	Stridor
786.7	Abnormal chest sounds (frictions, rales)
786.05	Shortness of breath
Dermatological conditions	
691	Atopic dermatitis
693.1	Dermatitis due to food
701.2	Acquired acanthosis nigricans
695.89	Erythema intertrigo
Cardiovascular system	
785.0	Tachycardia unspecified
785.2	Undiagnosed cardiac murmurs
785.6	Enlargement of lymph nodes
404.9	Hypertension
Artificial opening status *(excludes attention or management)*	
V44.0	Tracheostomy
V44.1	Gastrostomy
V44.2	Ileostomy
V55.1	Gastrostomy

Neurological/Mental disorders	
314.00	Attention deficit disorder without hyperactivity
314.01	ADD with hyperactivity
314.1	Hyperkinesis with developmental delay
315.9	Unspecified delay in development
783.42	Delayed milestone
317	Mild mental retardation
318.0	Moderate mental retardation
343.9	Infantile cerebral palsy, unspecified
345.0	Epilepsy
Endocrine system	
250.0	Diabetes unspecified
250.00	Diabetes type II
250.02	Diabetes type I
243	Congenital hypothyroidism
244	Acquired hypothyroidism
244.9	Unspecified hypothyroidism
256.4	Polycystic ovaries
Syndromes	
758.0	Down syndrome
759.81	Prader-Willi syndrome
759.82	Marfan syndrome
759.83	Fragile X syndrome
759.89	Other: Lawrence-Moon-Biedl
Other	
V65.41	Exercise counseling
36415	Venus blood draw (on-site)

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Section 5

Patient/ Family Educational Tools

A Meal Is a Family Affair

In such a busy world, mealtimes often revolve around our lifestyles. As a result of this, we miss meals or eat foods that are not the best for our bodies. Did you know that experts have found that kids who eat regularly with their families are more likely to eat fruits, vegetables, and whole grains? So, no matter how busy life may seem, it's important to make family meals a priority.

To get started, try some of these ideas:

- Choose a time when everyone can enjoy at least one meal together—it may be breakfast, lunch, or dinner.
- As the parent, you should decide what time meals are served and what the choices are. Your children can then decide what to eat and how much.
- Include your children in preparing the meal and turn off the TV.
- Gather around the table for a meal.
- Make the meal pleasant by keeping the conversation positive.
- Help your child learn good manners and mealtime behaviors.
- Limit eating and drinking unhealthy snacks between meals.
- Role model the habits you want your children to develop.

Calcium Counts!

Calcium is a mineral found in some foods and drinks. It works with other vitamins and minerals to build strong bones and teeth for life! The best sources of calcium in the diet are milk and milk products. The United States Department of Agriculture says that most young people should drink nonfat or low-fat milk products in these amounts:

Children ages 1–3: 2 cups a day

Children ages 4–8: 3 cups a day

Preteens and teens: 4 cups a day

What if your child can't or won't drink that much milk?

Other foods containing smaller amounts of calcium include low-fat macaroni and cheese, turnip or beet greens, kale, canned salmon, broccoli, cottage cheese, navy or pinto beans, almonds, and oranges.

If milk products cause gas or diarrhea in an older child, don't let that stop her from getting enough calcium. Serve Lactaid™ (specially treated) milk instead of regular milk. Small servings of yogurt and cheese may not cause a problem.

If your child has an allergy to milk, ask your healthcare provider how to select a calcium supplement. Or, ask for a nutrition "check up" to help you make sure your child is getting enough calcium.

Here are some easy options that have the same amount of calcium (300 mg) as a cup of nonfat milk:

- Yogurt, nonfat or low-fat, 1 cup; choose those with less added sugar or corn syrup
- Smoothies made with milk, yogurt, and frozen fruit
- Nonfat or low-fat chocolate milk, 1 cup; try mixing chocolate milk 50/50 with low-fat or skim white milk
- Cheese, 2 ounces
- Orange juice plus calcium, 1 cup
- Calcium-fortified soy milk, 1 cup (shake well)
- Total cereal, 3/4 cup

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Breakfast Is Best

Boost your energy and brain power!

Why eat breakfast every day?

- It will give you the energy you need to start your day. It is "fuel" for the body!
- It can help you do better in school!
- It can help you feel and act your best!
- It can help with weight control and keep you healthy!

Not hungry in the morning? Start small… try:

- a cup of low-fat fruit blend yogurt
- a piece of fruit such as a banana, orange or apple
- a bowl of cereal with low-fat milk
- a slice of toast with peanut butter and a glass of low-fat milk
- half of a toasted English muffin with a slice of low-fat cheese
- trail mix of raisins, nuts and cereal

Keep it simple, but keep it delicious! You may like:

- oatmeal with cinnamon, applesauce, a glass of low-fat milk
- a waffle or pancake with light syrup and blueberries
- an English muffin with a slice of ham, egg and low-fat cheese
- a low-fat raisin bran muffin, glass of low-fat milk and a banana

How To Add Fiber To Your Meals

Fiber is the part of plant foods that the body can not digest. Eating more fiber can help your child prevent constipation, diabetes, and heart disease. Foods that contain a lot of fiber are filling, have lots of vitamins and minerals, and help children maintain a healthy weight.

Fiber should be added very gradually to give the body time to adjust. Drinking plenty of fluids helps fiber do its work.

How much fiber is enough?

You can find out how much fiber is in food by looking for the "dietary fiber" line on food labels. A simple rule of thumb: children ages 3-15 should aim for "age plus 5 grams" of fiber. For example, an 8-year-old should eat 8 plus 5=13 grams of fiber a day. Older teens should eat 20–35 grams of fiber a day.

Here are some easy ways to add fiber:

- Serve high-fiber cereal for breakfast, like bran flakes, oatmeal, or shredded wheat
- Add some raisins or a banana to breakfast cereal
- Serve whole fruit instead of juices
- Add a salad to lunch or dinner
- Eat apples, pears, and potatoes with the peels on
- Add beans (like kidney or navy beans) to salads and soups or eat baked beans as a side dish
- Popcorn makes a great high-fiber snack
- Fill 3/4 of the lunch or dinner plate with plant-based foods, such as fruits, vegetables, and whole grains

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The Fittest Food

Nutritious foods give your family the most vitamins, minerals and other nutrients for the fewest calories.

Naturally nutritious foods make your child's calories count:

- Brightly colored fruits and 100% fruit juices
- Vibrant-colored vegetables
- Lean meat, skinless poultry, fish, eggs, beans, and nuts
- Fat-free and low-fat milk, cheese, and yogurt
- Whole, fortified, and fiber-rich grain foods

Tips to Help Your Kids Eat Healthier:

Picky eaters? Remember, experts say that parents and caregivers, not children, should decide what foods to buy and serve. New foods may have to be offered many times before they are accepted. Here are some easy ways to get your child to accept unfamiliar nutritious foods:

- Combine whole grain/high-fiber cereals with your child's favorite cereal.
- Make your own pizza with prepared whole wheat dough, a few veggies, and part-skim mozzarella cheese.
- Children ages 2 and older: slowly step down from whole milk to low-fat to fat-free milk.
- Clean and cut up fresh veggies in advance. Kids love dips, so serve them with salsa or hummus!
- On-the-go options: dried fruits, nuts, hard boiled eggs, low-fat cheese sticks, yogurt cups, and single-serve fruits canned in water or 100% fruit juice.

These nutritious foods are inexpensive and convenient:

- Canned beans (rinse well)
- Frozen vegetables
- Fresh fruit in season
- Whole grains in bulk
- Store brand whole-grain breakfast cereals

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What's a Healthy Portion?

Food portions are larger than ever these days—usually much more than you need. The recommended serving size is enough. But how much is that? These tips will help keep your portions, as well as your waistline, right-sized.

Here are some tips to help you keep your portions under control:

- Teach your children portion size by relating food to everyday items. For example, a deck of cards is equal to a serving of meat, fish, or poultry. An apple or serving of fruit is about the size of a tennis ball.
- Teach your children the concept of the divided plate. Think of a plate divided into four equal sections. Use one of the top sections for protein, and the other one for starch, preferably a whole grain; fill the bottom half with veggies (none of the foods should overlap or be piled high).
- Check the label on your food to see if it meets some basic needs in your diet, like calcium or Vitamin C; if it's not "good" for you, eat less of that food.
- Avoid eating directly out of the package. Try putting snacks into a small bowl or snack-size baggie.
- Eat three meals a day; this way you won't stuff yourself if you have skipped a meal.
- Serve food on smaller plates.
- Serve meals from the stove. This tip will keep you from feeling tempted to eat more when you are not hungry.
- Skip the "clean plate" club. Instead, encourage your children to start with smaller portions and eat until they are satisfied.
- At restaurants, ask for a lunch-size portion or share your meal.
- Role model the behaviors that you want your children to develop.

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Get Your Portions in Proportion

Five simple, healthy steps families can take when serving food at home:

1. Breads, Cereals and Grains

A bagel the size of a hockey puck = 2 servings.

- Health experts recommend that adults eat at least six servings of breads, cereals and grains daily. At least half of those grain servings should be whole grain.* A bagel the size of a hockey puck equals two of those servings.

2. Meat, Poultry or Seafood

A meat, poultry or seafood portion the size of a deck of cards = 1 serving.

- Health experts recommend that adults eat two servings of lean meat, poultry or seafood daily. An average serving size is three ounces cooked. That's the size of a deck of cards.

3. Fruits and Vegetables

An apple or orange the size of a tennis ball = 1 cup.
Carrots or broccoli the size of a fist = 1 cup.
A potato the size of a computer mouse = 1 cup.

- Health experts recommend that adults should have two cups of fruit daily and two and one half cups of vegetables daily.

4. Serve only from the Kitchen Counter!

- When serving meals at home, portion your food at the counter. Then, instead of bringing all the extra food to the table, leave it on the counter. Studies show people are far less likely to load their plate a second time—and double their calories—if the food is not right in front of them.

5. Serve it on the Side!

Teaspoon of butter = 36 calories

- Serve salad dressing, sour cream, mayonnaise and butter on the side, or use salsa or mustard to add flavor without additional calories. Every added teaspoon of butter, margarine or oil is approximately 36 more calories.

**Whole grains are: brown rice, bulgar (cracked wheat), graham flour, whole grain corn, oatmeal, pearl barley, whole oats, whole rye, whole wheat. Examples of these foods are whole wheat bread; whole grain ready-to-eat cereal; low-fat whole wheat crackers; oatmeal; whole wheat pasta; whole barley added to soups, casseroles, and salads.*

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Get Your Portions in Proportion (continued)

What's a Serving?

- A whole fruit the size of a tennis ball
- 1/2 cup of cut up fruit or vegetables
- 1 cup of raw leafy greens
- 1/4 cup of dried fruit
- 3/4 cup of 100% juice
  Limit to one serving per day

However, serving sizes for very young children are less.

- Ages 1–3 years a serving is 1/4 cup.
- Ages 4–6 years a serving is 1/3 cup.

Choose With the Seasons!

Summer—enjoy the harvest, whether from your own garden, vegetable stands or markets. Eat and preserve fruits and vegetables that are local, fresh, and at the peak of ripeness.

Fall—most tree fruit is plentiful and will store well in a cool shed or cellar. Winter squash, cauliflower, broccoli are in season and provide a great value.

Winter—root vegetables like carrots, turnip, onions, beets, and cabbage.

Spring—Think dark leafy greens and add nuts or dried fruits to spice up a salad.

Make vegetables the largest portion on your plate.

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Food Comparison Chart

How can you and your family eat healthier? See below for ideas on how healthier choices can save you calories and money.

Lunch					
Typical Fast Food Lunch	**Cost***	**Calories**	**Typical Brown Bag Lunch**	**Cost***	**Calories**
Combo Meal: ¼ pound hamburger with cheese (with medium French fries and large soda)	$5.39	510	Turkey sandwich on whole wheat bread with mustard, lettuce and tomato	$1.09	200
Soda, large (32 ounces)	—	310	Water, small bottle (16.9 ounces)	$0.99	0
French fries, large (super sized from medium size)	$0.40	570	Apple, medium	$0.46	70
Chocolate chip cookies, 1 package	$1.00	270	Graham crackers, 1 large square	$0.28	140
			Low-fat yogurt, 1 cup	$0.79	120
Total:	**$6.79**	**1,660**		**$3.61**	**530**

Snack					
Typical Snack	**Cost***	**Calories**	**Healthier Snack**	**Cost***	**Calories**
Chips, 3 ounce bag	$0.99	465	Apple, medium	$0.46	70
Soda, regular (21 ounces)	$1.25	250	Water, small bottle (16.9 ounces)	$0.99	0
			Low-fat yogurt, 1 cup	$0.79	120
Total:	**$2.24**	**715**		**$1.45**	**70**

**Costs may vary by region and season.*

For more information about ***We Can!*** visit http://wecan.nhlbi.nih.gov or call 1-866-35-WECAN

Source: Reprinted with kind permission of NICHQ, the National Initiative for Children's Healthcare Quality, and the teams from NICHQ's Learning Collaborative Healthy Care for Healthy Kids, a Collaborative to Prevent, Identify and Manage Childhood Overweight, sponsored by Blue Cross Blue Shield MA

Drink Comparison Chart

Tool Name: Drink Comparison Chart and Display

Use: To demonstrate (and provide a visual display) how much sugar is contained in each drink.

Directions:

- For Simple Chart—Post on bulletin board or show patient/family.
- For Display—Purchase bottles in sizes below, empty, dry and fill with appropriate amounts of sugar. Substitutions may be used by calculating sugar content 4.2 gms/teaspoon or 200 gms/cup.
- For Exercise—Ask child to fill an empty bottle with the amount of sugar he/she thinks it contains.

Drink	Size	Total Calories	Tsp. Sugar	# Dots Sugar Cubes*
Mountain Dew®	20 oz	275 cal	18.45	37
Hawaiian Punch®	20 oz	300 cal	17.26	35
Pepsi®	20 oz	250 cal	16.07	36
Coca-Cola®	20 oz	250 cal	16.07	36
Sprite®	20 oz	250 cal	15.47	31
Dole® 100% Apple Juice	15.2 oz	220 cal	11.42	23
Tropicana® Orange Juice	14 oz	190 cal	9.28	18
Fanta® Orange	20 oz	275 cal	17.85	36
Dunkin' Donuts Strawberry Fruit Collata®	16 oz	290 cal	15.47	31
Vault®	20 oz	290 cal	18.57	38
Propel Fitness Water	16.9 oz	20 cal	0.6	1

**One Domino Dot Sugar Cube = 1/2 teaspoon sugar*

Source: Reprinted with kind permission of NICHQ, the National Initiative for Children's Healthcare Quality, and the teams from NICHQ's Learning Collaborative Healthy Care for Healthy Kids, a Collaborative to Prevent, Identify and Manage Childhood Overweight, sponsored by Blue Cross Blue Shield MA

Nutrition Tips

Get a Healthy Start on Eating Smart

One of the best ways you can help your family stay healthy is to focus on good nutrition and develop smart eating habits early. You may not realize it, but you are the best example your children have when it comes to developing their own eating habits. Use this opportunity, and the following tips, to show them the best way to get a healthy start on eating smart.

Guidelines for Eating Smart

Eat breakfast. Teach your children that breakfast is the most important meal of the day. By skipping breakfast, you're setting your child up to be tired and hungry throughout the day.

Drink water. By keeping your children's beverage intake mostly to water, you're teaching them a healthier way to quench their thirst. Fruit-flavored drinks and soda both contain extra, empty calories. Try to have your child drink at least four large glasses of water each day, and more if they're very active.

Can the soda. A 12-ounce can of regular soda has at least 10 teaspoons of sugar in it, and while diet soda may seem like a good alternative, it still contains artificial ingredients as well as caffeine.

Downsize, not supersize. How much you eat is just as important as what you eat. Keep in mind that serving sizes vary. Learn to keep an eye on how big the plate is and how much you eat, both at home and when dining out.

Snack attack. Most snack foods are high in calories and fat. Instead of snack cakes, candy bars, or chips, try offering your child these foods instead: dried fruit, low-fat yogurt, air-popped popcorn, fruit cocktail in light syrup or juice, unsalted roasted nuts, frozen grapes, bananas, or all-fruit pops.

Filling, fantastic fiber. Foods rich in dietary fiber are great for many reasons. First, they're filling. Second, they can help improve digestion and provide long-term energy. Foods rich in fiber include bran cereals, fresh and dried fruits, broccoli, asparagus, peas, corn, cabbage, brussels sprouts, whole grain breads, brown rice, lentils, and popcorn—air-popped with a small amount of salt.

Calcium for strong bones. To ensure that your child's bones grow strong, make sure that they're getting enough calcium. Aim for three to four servings each day. Foods rich in calcium include skim milk, low-fat yogurt or cheese, cottage cheese, certain green vegetables (like broccoli and spinach), calcium-fortified orange juice, calcium-fortified tofu, and salmon. A great after-school snack loaded with calcium is a smoothie made with low-fat vanilla yogurt, low-fat milk, and a frozen banana. (You can also try adding frozen strawberries, blueberries, or raspberries.)

Lean protein. Protein is a key nutrient. Lean protein foods should be the main source of protein in your diet. These foods include skinless chicken or turkey breast, fish, shellfish, ham, Canadian bacon, lean red meats, egg whites, low-fat milk, low-fat yogurt, low-fat cheeses, legumes (such as baked beans, kidney beans, chick peas, lima beans), tofu, and soybeans.

Source: Adapted from Jump Up and Go! © Blue Cross Blue Shield Massachusetts

Nutrition Tips (continued)

Fast foods are fat foods. Today's families are often busy, and the convenience of fast food is very appealing. However, most fast-food restaurants offer selections that are high in fat and calories. If you are eating out, make the healthiest choices you can. Bring home a pizza with vegetable toppings. Go for a small plain hamburger, a grilled chicken sandwich, or a green salad with low-fat dressing.

Variety is valuable. Offering your children a variety of foods from an early age will encourage them to try new things. Many parents assume that kids will only stick to one or two foods they enjoy, but the more you offer them different things, the more likely they are to try—and enjoy—healthy options.

Don't diet. Low-carb, no carb, high-protein, low-protein. No matter what you may hear, diets are just short-term attempts to fix what requires a long-term solution. Don't diet yourself, and never put your child on a diet. Eat modest portions of a variety of foods, including lots of fresh fruits and vegetables, and your child will learn that it's moderation and variety that matter.

Reading Food Labels. The new food labels carry an up-to-date, easier-to-use nutrition information guide which is required on almost all packaged foods. The Nutrition Facts labels serve as a key to help in planning a healthy diet.

Serving sizes. All values on the label are based on the serving size. If you eat two servings, multiply all values by two. Use serving sizes to compare two different products.

List of nutrients covers those most important to the health of today's consumers, most of whom need to worry about getting too much of certain nutrients (fat, for example), rather than too few vitamins or minerals, as in the past.

The label of larger packages may now tell the number of calories per gram of fat, carbohydrate, and protein.

Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving

Calories 260	Calories from Fat 120
	% Daily Value*
Total Fat 13g	**20%**
Saturated Fat 5g	**25%**
Cholesterol 30mg	**10%**
Sodium 660mg	**28%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g	**0%**
Sugars 5g	
Protein 5g	

Vitamin A 4% • Vitamin C 2%
Calcium 15% • Iron 4%

* Percent Daily Values are based on a 2,000-calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

New title signals that the label contains the newly required information.

Calories from fat are now shown on the label to help consumers meet dietary guidelines that recommend people get no more than 30 percent of the calories in their overall diet from fat.

% Daily Value shows how a food fits into the overall daily diet.

Daily Values. Some are maximums, as with fat (65 grams or less); others are minimums, as with carbohydrate (300 grams or more). The daily values for a 2,000- and 2,500-calorie diet must be listed on the label of larger packages.

Source: Adapted from Jump Up and Go! © Blue Cross Blue Shield Massachusetts

Parent Tips: Making Healthier Food Choices

As a parent, you want to give your family the best you can. Serving healthier foods in the appropriate portions per food group and calorie level is one of the best ways to ensure that your children are getting proper nutrition without eating too many calories. These simple tips can help you plan and prepare meals and snacks to help your family to get the most nutrition out of the calories consumed.

What is a "Healthy Diet"?

The U.S. Dietary Guidelines for Americans describes a healthy eating plan as one that:

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts;
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars; and
- Stays within your calorie needs.

We Can! has tips and tools to help you choose and prepare healthier foods for your family. Use these tips and tools to help your family eat nutritiously and help them maintain a healthy weight.

GO, SLOW, and WHOA Foods

Focus on Food Choices

GO foods are the lowest in fat and added sugar. They are also "nutrient dense" (which means they are better sources of vitamins, minerals, and other nutrients important to health) and relatively low in calories. Enjoy GO foods almost anytime. Examples of GO foods are: fruits (fresh, frozen, or canned in juice), vegetables (fresh, frozen without added fat, canned without added sodium), whole grains, fat-free or low-fat milk products, lean meat, poultry, fish, beans, egg whites or egg substitute.

SLOW foods are higher in fat, added sugar, and/or calories than GO foods. SLOW foods include: vegetables with added fat, white refined flour bread, low-fat mayonnaise, and 2% low-fat milk. Have SLOW foods sometimes or less often.

WHOA foods are the highest in fat and/or added sugar. They are "calorie dense" (a small portion is relatively high in calories), and many are low in vitamins, minerals, and other nutrients as well. Have WHOA foods only once in a while or on special occasions. And, when you do have them, have small portions. Examples of WHOA foods are: whole milk, cheese, fried potatoes, croissants, muffins, butter, and creamy salad dressings.

To download a GO, SLOW, and WHOA Foods Chart, go to http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/downloads/gswtips.pdf.

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Parent Tips: Making Healthier Food Choices (continued)

Healthy Eating Choices

From WHOA to SLOW to GO. How you choose to prepare or order your food when eating out can quickly turn a less healthy food into a healthier option. Choosing baked, broiled, steamed, grilled, and microwaved foods saves you from extra fat and calories. See the example on how similar foods can go from a WHOA to a SLOW or to a GO food.

	WHOA (eat once in a while)	Calories	SLOW (eat sometimes or less often)	Calories	GO (eat almost anytime)	Calories
Fruit	Apple pie, 1/8 of 9-inch pie	296	Baked apple, 1 cup slices, with 1 Tbsp butter	193	Apple, 1 medium	72
Bread	½ plain bagel (3 ½ inch) with 1 Tbsp butter and jelly	249	½ plain bagel (3 ½ inch) with 1 Tbsp jelly	147	1/2 whole wheat bagel (3 ½ inch)	91
Meat	Fried chicken, 2 drumsticks	386	Roasted chicken breast with skin, ½ breast	193	Roasted chicken breast without skin, ½ breast	142

You can go from WHOA to GO by making these substitutions when cooking. Substituting the low-fat and fat-free versions of foods as alternatives to the full fat items can help reduce overall calories of favorite foods without affecting taste. Try using low-fat mozzarella cheese in lasagna instead of the full fat variety. Your family will likely not notice the difference. Substitute applesauce for butter in baking and still get a rich, moist product. Try some of the calorie-reducing substitutions below when you cook or bake.

Instead of:	Substitute:
1 cup cream	1 cup evaporated fat-free milk
1 cup butter, stick margarine, or shortening for baking	Tub margarine, vegetable oil, or ½ cup apple butter or applesauce without added sugar
1 egg	2 egg whites or ¼ cup egg substitute
Butter or stick margarine for sautéing	Cooking spray, low-sodium chicken broth, or a small amount of olive oil or vegetable oil

For more tips on making healthier substitutions, visit http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/live-it/cooking.htm

Also, check out heart healthy recipes from the National Institutes of Health (NIH) at http://www.nhlbi.nih.gov/health/index.htm#recipes

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Parent Tips: Making Healthier Food Choices (continued)

Making healthier selections when dining out. There are several things you can do at restaurants to lower your intake of fat and calories. For example, order foods that are steamed, broiled, baked, roasted, poached, or lightly sautéed or stir-fried. You can also trim visible fat from poultry or meat. In addition, request:

- olive oil for dipping instead of butter or margarine
- fat-free or low-fat milk rather than whole milk or cream in coffee or in other drinks
- food without butter, gravy, or sauces
- salad dressing "on the side" and request light or fat-free dressing
- steamed vegetables or a fruit cup as a substitute for french fries
- "hold the cheese" or "cheese on the side" when ordering sandwiches or salads so you can decide how much cheese you want to eat.
- unsweetened beverages, such as water, unsweetened iced-tea, or sugar-free or diet iced-tea and lemonade.

Portion Distortion

Anyone who has eaten out lately is likely to notice how big the food portions are. It's hard to find "small" anymore—"supersize" is more like it. Sometimes your plate arrives and there's enough food for two or even three people. These ever-large portions have changed what we think of as a "normal" portion, and that affects how much food we eat at home as well. Cutting back on portion size can help you and your family limit your calorie intake. Follow these simple tips to get started:

- Select an appetizer that is low in fat and includes a fruit or vegetable instead of an entrée at a restaurant.
- Put a smaller portion on a smaller plate; it won't look so skimpy.
- Share a portion with a family member or friend.
- Instead of giving your child or yourself an entire bottle of fruit juice or soda, pour a small amount (1/2 cup) into a cup. Better yet, choose water or small amounts of 100% fruit juice over soda.
- Use tall, narrow glasses instead of short, wide glasses. You will drink less.
- Order a medium pizza instead of a large. Everyone gets the same number of slices as before; they're just smaller.
- Before you eat your meal ask the wait staff to put half of the meal in a take home bag for leftovers to eat the next day.

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Parent Tips: Making Healthier Food Choices (continued)

20 Years Ago			Today		
	Portion	**Calories**		**Portion**	**Calories**
Bagel	3-inch	140	Bagel	6-inch	350
Fast food cheeseburger	1	333	Large fast food cheese-burger with sauces	1	590
Spaghetti and meatballs	1 cup spaghetti, 3 small meatballs	500	Spaghetti and meatballs	2 cups spaghetti, 3 large meatballs	1,020
Soda	6.5 ounces	85	Soda	20 ounces	250
Blueberry muffin	1.5 ounces	210	Blueberry muffin	5 ounces	500

Compare the size of foods from 20 years ago to today. Portions have grown and so have the calories!

To test your knowledge on serving sizes, check out the Portion Distortion activity on the ***We Can!*** website, http://hp2010.nhlbihin.net/portion/index.htm.

Visit the ***We Can!*** website, http://wecan.nhlbi.nih.gov or call 1-866-35-WECAN to order a free copy of the ***We Can!*** Families Finding the Balance: Parent Handbook.

We Can!, or "Ways to Enhance Children's Activity & Nutrition," is a national education program designed for families and communities to help children achieve a healthy weight. The program focuses on three important behaviors: improved food choices, increased physical activity and reduced screen time.

For more information about ***We Can!*** visit http://wecan.nhlbi.nih.gov or call 1-866-35-WECAN.

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Parent Tips: Healthier Eating While Saving Money

Deciding which foods to serve your family each week can be hard, especially if you are on a tight budget. There are so many choices at the store that decisions are often based on what we see in front of us, rather than on a plan for making healthier choices. The ***We Can!*** program can help you plan your family meals before you go to the store.

Creating a healthier food plan depends on what foods are in season, what foods your family likes, and what foods you have at home already. You can also plan around sale items. Not only will you make more informed choices, but you may also be able to save money and time. Also, eating healthier foods in moderate portions and saving leftovers will help trim your budget and waistline by eating fewer calories at one time.

Ahead

- **Make a plan and stick to it.** With a little planning, you can get most of your groceries for the week in one trip, which will save a lot of time. And, the fewer trips to the store, the less likely you will be to buy unnecessary items. To help you plan, use the ***We Can!*** Weekly Meal Planner that can be found in the ***We Can!*** Resources on the website.
- **Review store ads and clip coupons for healthier items** such as skinless chicken breasts, lean cuts of meat or ground beef, fruit (fresh, frozen, or canned in its own juice), vegetables (fresh, frozen without added fat, or canned without added sodium), whole grain breads and cereals, and low-fat or fat-free milk and milk products.
- **Check your cupboards and refrigerator** for items that you can use and then plan to use them.
- **Check out heart healthy recipes** from the National Institutes of Health (NIH) to help you plan your meals and shopping list at http://www.nhlbi.nih.gov/health/index.htm#recipes
- **To help you prepare your grocery list**, you can download the ***We Can!*** Grocery List Template and My Shopping List to help organize your weekly grocery shopping. Both can be found in ***We Can!*** Resources on the website.
- **Don't shop hungry.** If you shop when you are hungry, you are more likely to buy more than you need and possibly buy less healthy items that appeal to you at that moment.
- **Try to go grocery shopping without children.** Stores put foods that many children like such as candy and sugary cereal where they can see and reach them. These foods are often advertised with characters that appeal to children. If you must bring children, grocery shopping can be a great way to teach them about food and nutrition (and colors, math, and reading!)

Grocery Shopping Tips

- **Sign up for your grocer's bonus/discount card** for additional savings.
- **Try store brands.** The most costly brands are typically placed at eye level. Store brands that may be cheaper and are just as good are often placed higher or lower on the shelf.
- **Comparison shop for healthier brands.** Read the Nutrition Facts Label. Learn how to find serving sizes and the per serving amounts of calories, fat, saturated fat, trans fat, sodium, sugars, protein, fiber, and vitamins and minerals. For more information on the Nutrition Facts Label, check out the Live It section of the ***We Can!*** website.
- **Use the unit price and the Nutrition Facts Label to compare similar foods.** The unit price tells you the cost per ounce, pound, or pint, so you'll know which brand and size are best to buy. Look for it on the shelf sticker below the product. Then, read the Nutrition Facts Label to be sure that you are getting the healthiest option at the lowest cost. Click on these Food Label resources from the Food and Drug Administration (FDA): http://www.csfan.fda.gov/~ear/hwm/labelman.html and http://www.csfan.fda.gov/~acrobat/ nutractds.pdf.
- **No matter what the form—fresh, frozen, canned, dried, juice—all varieties of fruits and vegetables count toward your daily recommendation.** Choose fruits without added sugar or syrups and vegetables without added salt, butter, or cream sauces. Although 100% fruit or vegetable juice counts towards your daily recommendation, the majority of the total daily amount of fruit and vegetables should come from whole fruits and vegetables to help you get enough fiber. Click on http://www.fruitsandveggiesmorematters.org/ for more information.

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Parent Tips: Healthier Eating While Saving Money (continued)

- **Buy in-season fruits and vegetables.** Use local farmer's markets when possible—the foods are fresher and usually cost the same, if not less, because you are buying direct from the farmer.
- **Buy milk (low-fat or fat-free) in the largest containers you can handle before it spoils** (gallon or ½ gallon). Milk sold at convenience stores usually costs more than at supermarkets. (Fat-free dry milk is an inexpensive back-up choice for using milk in recipes.)
- **Buy a whole chicken and cut it up into parts** instead of buying pre-cut chicken (breast, wings, thighs, legs). Remove the skin before cooking or serving.
- **Stock up on sale items** of healthier foods that you may be able to use in a timely manner. Buy canned, frozen, or packaged foods in bulk for quality and value, but serve appropriate portions within estimated calorie needs. Buy produce, lean meats, and low-fat or fat-free milk and milk products in bulk amounts that you can eat before they spoil (refer to ***We Can!*** Portion Distortion for more information on appropriate portion sizes http://hp2010.nhlbihin.net/portion/index.htm).
- **Use your food budget wisely.** If you spend $7 on lunch 5 days a week for a year, you will spend a total of $1,820. You can save money and calories by bringing a healthier brown bag lunch from home. (see ***We Can!*** Food Comparison Chart in the We Can! Resources section of the website.)

Saving Money (and Calories) on Healthy Meals and Snacks

- **Assemble snacks at home** in small baggies using foods such as nuts and seeds, dried whole grain cereal, low-fat cheese, dried fruit, fresh vegetables and fruits, rather than buying less healthy, more expensive pre-packaged and processed snacks. Serve water, or low-fat or fat-free milk instead of calorically sweetened beverages. For more ideas on healthier snacks, you can download the Go, Slow, and Whoa Foods Chart in the ***We Can!*** Resources section of the website.
- **Cook once, eat twice.** Serve moderate portions of meals, avoid seconds, and freeze leftovers to enjoy later. This will help you save money and calories!
- **Do "batch cooking"** when the food budget and time allow. Cook large amounts of spaghetti sauce, divide it into family-size portions and freeze promptly for later in the month.

Source: Adapted from "My Money-Saving Tips: A Healthier You" Based on the Dietary Guidelines for Americans, December 2006.

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Mealtime Recommendations

Babies can

- sit at the table in a high chair;
- smile and laugh;
- notice smells, textures and colors;
- listen to sounds and voices;
- play with objects (banging, shaking, and dropping things are ways that babies play);
- put things in their mouths (watch out for dangerous objects).

Toddlers can

- eat finger foods;
- reach for foods;
- sit at the table in a booster seat;
- express likes and dislikes;
- hold and drink from a cup;
- assist with some simple tasks, such as table setting;
- enjoy table conversations.

Pre-schoolers can

- sit at the table in their own seat;
- enjoy helping with food preparation;
- express likes and dislikes;
- serve themselves;
- pour cereal and beverages (expect spills!);
- enjoy pretending to be waiter, cook;
- follow simple directions.

School-age children can

- express likes and dislikes;
- be more helpful with food preparation and cleanup;
- be more independent with food choices and meal planning;
- initiate conversations, tell about their day;
- understand differences in foods: what's healthy, differences in preparation, etc.

Teens

- may not value family mealtime as much (be flexible, but keep trying);
- are concerned about body image;
- have more demands on time with sports/school activities (they may have less time for family meals);
- are affected by outside influences of media and peers;
- still benefit from family mealtimes.

Source: Adapted from The University of Maine Cooperative Extension, "Making the Most of Family Mealtimes"

Healthy Snack Recommendations for Children Ages 3 and Older

Examples of Quick, Healthy Snacks for Children Ages 3 and Older.

- Cereal bar or granola bar
- Light microwave popcorn or air-popped popcorn
- Crackers like Melba toast, Saltines, and reduced fat Triscuits
- Pretzels
- Toasted cinnamon raisin bread
- Rice cakes
- Graham crackers & animal crackers
- Oatmeal
- Baked tortilla chips with salsa or any baked chips
- Cereal (dry or with low-fat milk)
- Low-fat or frozen yogurt
- Low-fat milk or soy milk
- Hummus with pita or veggies
- Nuts, sunflower seeds or soy nuts
- Peanut butter, almond butter, or soy nut butter (on celery, apple, or crackers)
- Beans and tortillas
- Raw vegetables (like baby carrots) with reduced-fat ranch dressing or yogurt dip
- Celery with low-fat cream cheese
- Fresh fruit, fruit salad or dried fruit such as raisins, craisins, dried apricots
- Frozen grapes or melon
- Applesauce

Dos & Don'ts of Talking to Children of All Ages

Do	Don't
Provide information	Lecture
Make observations	Be judgmental
Ask questions	Have all the answers
Offer suggestions	Reprimand
Be honest	Be manipulative
Tread lightly	Nag
Provide support	Threaten
Praise their attributes	Criticize
Provide encouragement	Push

Healthy Sleeping Habits

National experts recently surveyed kids about their sleep habits.

Here's what they learned:

- 70% of kids said they wish they could get more sleep.
- 71% of kids said they feel sleepy or very sleepy when it's time to wake up for school.
- 25% of kids said they feel tired at school every single day.

Five Tips for Bedtime

It may be a challenge to make a change to your children's bedtime routine, but if you stick to it, your efforts will pay off. These ideas will help:

- Help your child prepare for school the night before by laying out their clothes, backpack, etc.
- Slow down and set a routine before bed.
- Make the bedroom a cozy environment where your child wants to be.
- Avoid putting a TV in your child's bedroom; if they already have one, do not let them watch TV in their bedroom at bedtime.
- Adjust your child's bedtime if they are not getting enough sleep.

How Much Sleep is Enough?

There's no exact number of hours of sleep required by all kids in a certain age group, but the National Sleep Foundation suggests:

- **Preschoolers (ages 3 to 5):** should sleep about 11 to 13 hours per night
- **School-Age Children (ages 5 to 12):** need about 9 to 11 hours of sleep a night
- **Teens:** need at least 8.5 to 9.5 hours of sleep per night

Source: Reprinted with kind permission from the Let's Go! Childhood Obesity Toolkit for Healthcare Professionals, www.letsgo.org.

Lifestyle Guidelines

- Limit time devoted to media use (including television/videos/video games/computer use) to no more than 1–2 hours per day.
  - Try not to use the remote control while watching television.
  - Get up and move around during television commercials.
- Discourage children younger than 2 years from watching television.
- No TV/VCRs/or video games in children's bedrooms.
  - This is associated with an increased risk of being overweight.
- Encourage play time.
  - Toddlers and preschoolers should participate in at least 30 to 60 minutes per day of structured play.
  - At least 60 minutes per day should be dedicated to unstructured physical activity.
  - Children should not lie down for more than 60 minutes at a time except when sleeping.
- Make physical activity a part of your daily routine.
  - Walk or ride a bike to school.
  - Play outdoors, in the gym, or on the playground 30 minutes before homework every day.
  - Walk with friends instead of talking to them on the phone.
- Get 1 hour of exercise during the day.
  - Both children and adults should be active for 1 hour every day. This exercise can occur throughout the day.
  - Purchase a pedometer and aim to walk 10,000 steps a day.
- Consider participating in organized sports or physical activities.
  - Get involved in team sports or marching band at school.
  - Take classes in activities you enjoy such as dance, martial arts, swimming, or tennis, or buy an aerobics tape and exercise at home.
- Encourage your family to exercise together. Parents can be role models!
  - Take walks together.
  - Go on a family bike ride.
  - Plan trips to the zoo, museum, or library; or plan house or yard projects.
- Variety in exercise helps to avoid boredom.
  - Take into account different times of day and weather conditions.

Consejos para el estilo de vida

- Límite el tiempo dedicado al uso de la televisión, videos, videojuegos, y computadora a no más de 1 ó 2 horas al día.
  - NO use el control remoto cuando vea la televisión.
  - Haga ejercicio durante los comerciales.
- No deje que los niños menores de 2 años vean la televisión.
- NO ponga televisiones, VCR o videojuegos en las recámaras de los niños.
  - Esto promueve que vean la televisión y puede aumentar el riesgo de que sean obesos.
- Anime a los niños a que jueguen juegos tanto estructurados como libres.
  - Los niños pequeños y de kinder deben participar en un mínimo de 30 a 60 minutos de juego estructurado por día.
  - Por lo menos 60 minutos diarios deben dedicarse a actividades físicas libres.
  - Los niños no deben permanecer inactivos por más de 60 minutos seguidos excepto cuando duermen.
- Incorpore actividades físicas dentro de la rutina diaria.
  - Haga que vayan a la escuela caminando o en bicicleta.
  - Haga que jueguen al aire libre, en el gimnasio, o en el patio de recreo por 30 minutos todos los días antes de hacer la tarea.
  - Haga que salgan a caminar con sus amigos en vez de hablarles por teléfono.
- Acumulen 1 hora de actividad física durante el día.
  - Tanto los niños como los adultos deben estar activos por una hora todos los días. Esta actividad se puede acumular a lo largo del día.
  - Compre un pedómetro y tráte de caminar 10,000 pasos al día.
- Considere la participación en deportes organizados o en actividades físicas.
  - Haga que participen en deportes en equipo o en la banda musical/escolar en la escuela.
  - Haga que tomen clases de actividades que disfruten como baile, artes marciales, natación o tenis, o compre un video de aeróbics y hagan ejercicio en casa.
- Anime a los miembros de la familia a que hagan ejercicio juntos y haga que los padres pongan el ejemplo.
- Manténgase físicamente activos como familia. ¡Padres puden ser modelos ejemplar!
  - Salgan a caminar juntos como familia.
  - Vayan en paseos de bicicleta como familia.
  - Planea actividades como paseos al zoológico, al museo o a la biblioteca, y hagan proyectos en la casa o en el jardín.
- Anime a los niños a participar en varias actividades físicas para evitar que se aburran.
  - Tome en cuenta diferentes horas del día y el estado del tiempo.

Go Walking Tips

Go Walking—Together

Life can be hectic. Why not take a walk with your children? Not only will you be able take a break from a busy day, you'll be starting a healthy activity that will last a lifetime.

- Make walking your "together time." Instead of spending time in front of the TV, you and your children can go for a walk and talk about your day.
- While you're walking, start slowly. See if you and your children are able to walk and talk easily. If you're having a hard time talking, slow your pace down. Walking and being able to talk easily is a simple way to see how in shape you are.
- If your children are walking alone or with friends, make sure that they stick to sidewalks or an established walking path.
- Walking at sunset or after dark? Wear bright colors or something with reflective material on it.
- Even if you're not thirsty, take water along for your walk. You and your children should make sure to drink frequently throughout the walk.
- Walking is a great way to relieve frustration. Taking a walk together can help you relieve tension, and may give you a chance to talk about a difficult situation.
- If you have friends in the neighborhood, walk by and say hello. Encourage your children to stop by instead of using the phone. You'll not only get to see your friends and neighbors, but you'll help your health.
- Want to make walking even more fun? Use a pedometer to count your steps and figure out how far you've walked. Challenge your children to do the same and see who can walk the farthest.
- Start a walking club with your extended family and friends. Encourage everyone to bring the kids and plan a weekly walking trip to a special destination.
- Work walking into your everyday life. Whether you're running errands or going to the mall, park as far from the store entrance as possible. Then, when inside, take the stairs instead of the escalator.
- Deciding where to walk can be fun too. If you choose a place (a park, walking path, playground) you all like, you'll be more likely to walk for a longer time and enjoy yourself.

Source: Adapted from Jump Up & Go!, a youth wellness program developed in Massachusetts

Screen Time Recommendations

Recommendation:

Cut screen time to 2 hours or less daily.

[Screen time includes television, computer & video games—usually does not include computer time necessary for home work.]

From Who:

- The American Academy of Pediatrics recommendation is children have less than two a hours a day of screen time.
- They also recommend keeping the TV out of the bedroom.
- Children under the age of 2 should not have any at all while ages 3–5 should have less than an hour.

Why—The Reason:

- Watching television occupies many children for several hours each day, and is associated with physical inactivity, increased energy intake (sitting in front of the TV many children snack more than they should), and increased obesity.
- Too much TV has been linked to lower reading scores and attention problems.

Tips to Tame the TV:

Set Limits: Know how much TV your child is watching.

- Set some basic rules such as no television before homework or chores are done.
- Do not watch TV during mealtime.
- Negotiate rules and weekly plans with your children.
- Choose specific shows to watch; don't just have the TV on as a constant background.
- Use a timer and when the bell rings its time to turn off the TV or eliminate TV time during the week.

Participate: Don't put computers and TV's in your child's room.

- Having the TV in a common room makes watching a family activity.
- Watch TV with your child and discuss the program. Ask them questions and express your views.
- This will also let you know what your children are watching.

Monitor: Encourage children to watch programs about characters who show cooperation and caring.

- Having kids keep a journal recording the amount of TV watched helps them see how much time they spend in front of the television instead of other activities they enjoy.

Analyze Commercials: Help children to critically evaluate advertisements and recognize exaggerated claims.

- Limit the number of commercials seen by recording shows and then fast-forwarding through them. This will also help maximize the allowed TV time.

Be a Good Role Model & Create Alternatives: Follow your own rules. Because children model behavior, set a good example with your own television viewing habits. Avoid watching programs containing adult content when your child is in the room or nearby.

Have children help with dinner. It gets them involved and shows them helping is important.

Put on music and let the kids dance.

Every time you turn on the TV, you see commercials, right? (More than 40,000 a year). Companies pay big money to get their ads on TV—just so we will see them.

In 1999, advertisers spent over 13 billion dollars (WOW) on advertising.

When we see their products, we are more likely to buy them or ask for them. Think about many of the new products you have tried lately, where did you get the idea that you had to have them? Hmmm….I bet you've seen commercials for at least some of these things. YIKES! Maybe those advertisers gotcha.

Now advertisers are getting really smart and promoting their products in the shows we watch. Next time look at what your favorite character is eating or drinking. Do you recognize the brand?

Some Stats:

- By the time you are 65, you will have seen about 2 million ads on TV.
- By the time a child is 18, they will have seen more than 200,000 violent acts on TV.
- The number of programs with sexual content has doubled since 1998.
- Children who watch more than 10 hours per week of TV are less likely to do well in school.

Source: Adapted from Growing Healthy Kids—Nemours Health & Prevention Services

Physical Activity Recommendations

Recommendation:

Participate in a least 1 hour or more of moderate physical activity every day & 20 minutes of vigorous activity at least 3 times a week.

[Moderate intensity physical activity is defined as hiking or dancing while vigorous activities include running, aerobics, basketball etc. Either type of activity should increase heart rate.]

From Who:

- Key recommendations from the 2005 Dietary Guidelines for Americans from the US Department of Health & Human Services, Department of Agriculture state that children and adolescents should engage in at least one hour of moderate physical activity on most, preferably all days of the week.

Why—The Reason:

- While most school age children are quite active, physical activity sharply declines during adolescence.
- Children who are raised in families with active lifestyles are more likely to stay active as adults than children raised in families with sedentary lifestyles.
- Learning to be physically active as children will help them grow into healthy adults.
- Regular physical activity is essential for weight maintenance and prevention of chronic diseases such as heart disease, diabetes, colon cancer and osteoporosis.
- Physical activity can provide energy and help you feel better when you are sad or worried.

Strategies to Help Increase Physical Activity and …Remember to Keep Physical Activity Fun!

- Encourage "30 minute" rule for inactivity—i.e. don't allow kids to sit for more than 30 minutes without moving.
- Encourage kids and adults to be active after prolonged periods of inactivity—i.e. encourage them to be active for 30 minutes after school (or work) before sitting to begin homework. Fit physical activity/play into your schedule every day.
- Walk while talking on your cell phone. Take a family walk after dinner.
- Encourage "weekend rule"—i.e. encourage some type of physical activity for at least 30 minutes of each day of the weekend.
- Increase daily activity levels (park further from door, take the stairs instead of an elevator & plan family activities that involve walking—a hike or visit to a local park or museum).
- Turn off the TV and keep the TV out of your bedroom.
- Limit recreational computer time.
- Use a pedometer and keep track of your steps—aim for 10,000 steps a day.
- Act as role model and be a good example. Keep sports equipment in your trunk so you are ready to play anytime!

Most people know what physical activity is, but do you know why it is so important?

Physical Activity Recommendations (continued)

Benefits of Physical Activity		
Helps control appetite	Decreases stress	Builds strength
Prevents disease	Improves health	Increases social contact
Burns calories	Helps you to deal with emotions and feelings	Helps keep your mind off of eating

- It isn't so you can look all sweaty like people on TV commercials for equipment. And it isn't so you can have huge muscles to bust out of your clothes like a superhero, either.
- Physical activity is important because it keeps people's bodies–and minds–healthy. Without it, we wouldn't feel or look very good.

Actually, there are so many reasons why physical activity is good for you; it's time to get right into it and see why it's cool to be fit!

Reason # 1: Physical Activity Makes You Feel Good

- Being physically active is a most excellent way to feel happy, whether you do it on your own or with a group.
- Plus, when you're breathing deeply during physical activity and bringing more air into your lungs, your brain likes the extra oxygen. And when you're active and running around, sometimes it's hard to think about what was bothering you.

Reason # 2: Physical Activity Helps Keep Your Weight Healthy

- Every time you eat food; your body does the same thing: it "eats" the nutrients in the food as fuel. It burns these nutrients, or calories, to give you energy. But if the body isn't able to use all the calories that are coming from food, it stores them away as fat. Physical activity helps keep your weight right for your height by burning up extra calories. When you are physically active, your body uses that extra fuel to keep you going strong.

Reason # 3: Physical Activity Makes Your Heart Happy

- Your heart is the hardest-working muscle in your body. Its #1 job is to pump blood through your body every day of your life! Since it can't lift weights to get stronger, it needs you to do aerobic physical activity.
- Aerobic is a fancy word for needing oxygen and aerobic physical activity is any kind of activity that makes your muscles use oxygen. When you do aerobic physical activity and bring in that oxygen, your heart becomes stronger (and even a tiny bit bigger!).

Reason # 4: Physical Activity Makes You Stronger

- All the muscles in your body do a fine job when you use them for easy stuff, like picking up a book or walking down the stairs. But what about using them for harder stuff, like taking long bike rides, climbing a tree or carrying your backpack to class? That's where physical activity comes in: it makes your muscles get stronger and sometimes larger. As your muscles get stronger, you can do more active things for longer periods of time.
- And strong muscles also help protect you from injuries when you play, because they give better support to your joints (where your bones meet).

Reason # 5: Physical Activity Makes You Flexible

- Can you touch your toes easily without yelling "ouch"? If so, you're pretty flexible, which means you can bend and stretch your body without too much trouble. But as people get older they tend to get less flexible, so that's why it's important to be active when you're a kid–to stay flexible.
- Plus, when you're flexible, you can play harder without having to worry about getting sprained and strained muscles.

A Menu for Action—Physical Activity and Nutrition Survey Management Plan

Are You a Healthy Kid?

Patient Name _____ Age _____ Date _____

While you are waiting to see your clinician, please take a moment to answer questions 1–10 below. For each of the following questions, check "yes" or "no."

	Yes	No
1. Do you eat five or more fruits and vegetables per day?	☐	☐
2. Do you have a favorite fruit or vegetable that you eat every day?	☐	☐
3. Do you eat breakfast every day?	☐	☐
4. Do you watch TV, videos, or play computer games for two hours or less per day?	☐	☐
5. Do you take gym class or participate in sports or dance in or outside of school three or more times a week?	☐	☐
6. Do you have a favorite sport or physical activity that you love to do?	☐	☐
7. Do you eat dinner at the table with your family at least once a week?	☐	☐
8. Do you have a TV in your bedroom?	☐	☐
9. Do you eat in front of the TV?	☐	☐
10. Do you drink more than one soda, juice, or other sugar-sweetened drink a week?	☐	☐

5-2-1 Daily Prescription for Better Health (to be completed by clinician)

Height _____ Weight _____ BMI _____ BMI Percentile _____

To help you get healthy and grow strong, begin doing what we've discussed and I've marked below.

At Least 5 Fruits & Vegetables
Servings (1/2 cup)

_____ Apples/Bananas/Oranges
_____ Apricots/Pears/Plums
_____ Asparagus/Broccoli
_____ Beans/Lentils/Peas
_____ Berries/Grapes/Kiwi
_____ Carrots/Celery/Spinach
_____ Dates/Figs/Raisins
_____ Guava/Mango/Papaya
_____ Lettuce/Tomatoes/Peppers
_____ Other:

No More Than 2 Hours of Screen Time
Minutes

_____ TV/Videos/DVDs
_____ Video/Computer
_____ Games
_____ Game Boy
_____ Movies
_____ Computer/IM Chat
_____ Other:

At Least 1 Hour of Physical Activity
Minutes

_____ Aerobics/Dance
_____ Baseball/Softball/Basketball
_____ Bicycle/Swim/Tennis
_____ Football/Soccer
_____ Gymnastics/Martial Arts
_____ Hockey/Field Hockey
_____ Ice-skate/Roller-skate
_____ Jump Rope/Run/Walk
_____ Skate-Snowboard/Ski
_____ Other:

Weekly Recommendations:

No more than one sugar-sweetened beverage: Soda _____ Fruit Drink _____ Sports Drink _____

Other Suggestions/Recommendations:

Source: Adapted from Jump Up & Go!, a youth wellness program developed in Massachusetts

Healthy Lifestyle Goal Setting Worksheet

Healthy Lifestyle Goal Setting Worksheet

It is important for your medical team to know how ready you are to make changes to improve your health. The following information can help you and your provider talk about steps you can take to move toward a healthier lifestyle for you and your family.

On a scale of 0 (not ready) to 10 (very ready) how ready are you to consider making a change?

0 1 2 3 4 5 6 7 8 9 10

(please circle appropriate number)

Ideas for Change

5—Eat at least 5 servings of fruits and vegetables on most days.
- Try one new vegetable or fruit each week
- Add fruit to my cereal everyday
- Choose a fruit for a snack
- Change from fruit juice to whole fruit
- Switch sweets to fruit

2—Reduce screen time to 2 hours or less every day
- Plan my TV time
- Take the TV out of my bedroom
- Don't eat in front of the TV

1—Participate in at least 1 hour or more of physical activity every day
- Take a walk or enjoy a family walk after dinner
- Play my favorite sport or physical activity
- Wear a pedometer & walk 10,000 steps a day
- Obtain physical activity equipment to try something new

0—Limit soda, sugar sweetened drinks and whole milk
- Drink no soda
- Limit fruit and sports drinks
- Switch to low-fat or skim milk
- Drink more water

Other: Familiarize myself with portion sizes
- Eat two family meals together each week
- Eat breakfast
- Eat no fast/junk food
- Limit snacks after dinner

My child's personal health goal is to: _____

When I/my child reach goal I/my child will be rewarded by: _____
(ideas might be a special privilege, attend an event, do a special activity)

Patient Signature _____ Clinician Signature _____

Guardian Signature _____ BMI Classification _____ Visit #_____

It may be helpful for someone from our office to call you to check in on your progress.
The best time to call me (Monday to Friday) is: _____
- The best phone number to reach me at (Monday to Friday) is: _____

☐ I prefer not to be called for follow-up

Weekly Meal Planner

Use this tool to help plan healthier meals for your family. Below make lists of ideas for healthier breakfasts, lunches, and dinners. To the right are lists of ideas for healthier breakfasts, lunches, and dinners. Remember to eat mostly GO foods and watch your portion sizes!

Day	Breakfast	Lunch	Dinner
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Weekly Meal Planner (continued)

Suggestions for Healthier Breakfasts:

- 1 cup whole grain cold cereal or ½ cup hot cereal, ½ cup fat-free or low-fat milk, and ½ cup fresh or frozen fruit such as blueberries, strawberries, or bananas.
- 2 slices whole grain toast with 2 tablespoons jam or peanut butter, 1 cup low-fat or fat-free yogurt, and ½ cup 100% juice (orange, grapefruit, etc.)
- 2 scrambled eggs, 2 slices whole grain toast with jam, ½ cup sliced strawberries.
- Tortilla with melted low-fat cheese, 2 scrambled eggs or ½ cup egg substitute, ½ cup spinach, and ¼ cup salsa.

Suggestions for Healthier Lunches:

- 1 cup garden salad with 1 tablespoon light dressing and ½ turkey sandwich on whole grain bread with lettuce, tomato, and mustard.
- 1 cup broth or tomato-based soup and ½ lean roast beef sandwich on whole grain bread with lettuce, tomato, and mustard.
- 1 slice cheese or vegetable pizza made with low-fat cheese, small garden salad, and 2 tablespoons of light dressing.

Suggestions for Healthier Dinners:

- 3 ounces grilled honey mustard chicken, ½ cup roasted asparagus, and 1 cup wild rice.
- 3 ounces baked fish with lemon dill dressing, 1 cup herbed pasta, and 1 cup garden salad with 2 tablespoons light dressing.
- 1 cup pasta with ½ cup tomato sauce, and ½ cup steamed broccoli, 1 slice whole grain bread, and ½ cup pineapple slices.

For more information about ***We Can!*** visit http://wecan.nhlbi.nih.gov or call 1-866-35-WECAN.

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Your Weekly Log

Growing Up Healthy and Strong Is as Easy as 5-2-1!

5—Record the servings of fruits and veggies you eat each day. 5 or more each day is the healthy way.

2—Limit your screen time; try not to guess—you'll be a success if it's 2 hours or less.

1—Add up your time to get the activity score—get 1 hour or more to build a strong core.

Track your progress every day. Record each amount in the chart below and show when you drink soda and other sugar-sweetened beverages.

Family Member Name _____

Week of _____

	Monday Date:	Tuesday Date:	Wednesday Date:	Thursday Date:	Friday Date:	Saturday Date:	Sunday Date:
Fruits and Veggies	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____
Screen Time	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:	☐ 2 hrs or less ☐ Over 2 hrs Describe:
Physical Activity	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:	☐ 1 hr or more ☐ 30 minutes or more Describe:

Sugar-Sweetened Beverages—Soda, Juice, Sports Drink						

Completed by participating family member _____

Confirmed by another family member _____

Source: Adapted from Jump Up & Go!, a youth wellness program developed in Massachusetts.

Reduce Children's Screen Time Log

Print and complete this log to determine how much time you are spending in front of a screen. Help your family do the same. Place the log in an easy location for everyone to use and see, such as near the family television, by the computer, or on the refrigerator. If screen time for you or your family members is less than 2 hours a day, pat yourselves on the back! If it's 2 hours or more, then check out the Get Moving section to help you reduce your screen time and switch to some physically active alternatives.

Sample Log

Name **Billy** Age **11** Date **6/6/2010**

	TV	Video Games	DVD	Computer/ Internet	Time (hours)
Monday	2 hours	1 hour		1 hour	4 hours
Tuesday	3 hours	1 ½ hours		1 hour	5 ½ hours
Wednesday	1 ½ hours	1 hour	2 ½ hours	½ hours	5 ½ hours
Thursday	4 hours			1 hour	5 hours
Friday	4 hours	1 hour			5 hours
Saturday	3 hours	2 hour	2 hour	1 hour	8 hours
Sunday	2 hour	1 hour	2 hour	2 hour	7 hours
					Total: 40hrs

Name _____ Age _____ Date _____

	TV	Video Games	DVD	Computer/ Internet	Time (hours)
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					
					Total:

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Reduce Children's Screen Time Log (continued)

Name ______________________ Age ________ Date ______________

	TV	Video Games	DVD	Computer/ Internet	Time (hours)
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					
					Total:

Name ______________________ Age ________ Date ______________

	TV	Video Games	DVD	Computer/ Internet	Time (hours)
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					
					Total:

Name ______________________ Age ________ Date ______________

	TV	Video Games	DVD	Computer/ Internet	Time (hours)
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					
					Total:

Source: ***We Can!*** is an effort of the the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the NationalInstitute of Diabetes and Digestive and Kidney Diseases (NIDDK), the National Institute of Child Health and Human Development (NICHD) and the National Cancer Institute (NCI).

Goal Tracker: My Goal Is to Eat More Fruits and Veggies

Date _____

Circle the number of fruits & vegetables that you ate today. One serving equals a medium-sized fruit (apple, banana, pear, etc.), a 1/2 cup of cut fruit or cooked veggies (about the size of a tennis ball), or 1 cup of raw veggies (about the size of a softball).

Monday	1	2	3	4	5
Tuesday	1	2	3	4	5
Wednesday	1	2	3	4	5
Thursday	1	2	3	4	5
Friday	1	2	3	4	5
Saturday	1	2	3	4	5
Sunday	1	2	3	4	5

Tips:

- **Be prepared.** Keep washed, ready-to-eat produce on hand so it's always available.
- **Be creative.** Add diced tomatoes, carrots, broccoli, onions, and mushrooms to sauces, pizza, soups, and casseroles.
- **Be a role model.** Other family members are more likely to eat fruits and vegetables if they see you eating them.
- **Don't give up.** You may need to see or taste a food 7–10 times before you like it.

My favorite fruit or vegetable that I ate this week was _____

A new fruit or vegetable that I want to try next week is _____

Source: Maine Center for Public Health.

Goal Tracker: My Goal Is to Be More Physically Active

Date _____

Circle the number of hours that you were moderately or vigorously physically active today. This includes any activities that you participated in such as sporting events, family walks or bike rides, outdoor activities, etc. where you broke into a sweat.

Monday	1	2	3	4	5
Tuesday	1	2	3	4	5
Wednesday	1	2	3	4	5
Thursday	1	2	3	4	5
Friday	1	2	3	4	5
Saturday	1	2	3	4	5
Sunday	1	2	3	4	5

Tips:

- **Every step counts!** Take the stairs instead of the elevator and/or walk anywhere you can instead of riding in a car.
- **Be active as a family.** Make activities, such as walks and bike rides, part of your daily routine.
- **Turn off the tube.** Substitute physical activity for one hour of TV each day.
- **Join a team.** Group sports are a great way to get involved and moving.

My favorite physical activity that I did this week was _____

A new physical activity that I can try next week is _____

Source: Maine Center for Public Health.

Goal Tracker: My Goal Is to Drink More Water and Less Soda and Juice

Date _____

Circle the number of glasses of water that you drank today. 1 serving equals 8 ounces or 1 cup.

Monday	1	2	3	4	5
Tuesday	1	2	3	4	5
Wednesday	1	2	3	4	5
Thursday	1	2	3	4	5
Friday	1	2	3	4	5
Saturday	1	2	3	4	5
Sunday	1	2	3	4	5

Tips:

- **Mix half water and half juice.** This way you can enjoy the flavor with only half of the sugar.
- **Pass on the soda.** Don't have it around. It has no nutritional value, adds calories to your diet, increases the occurrence of cavities, and may increase your risk for bone fractures later in life.
- **Water is the best choice!** Not only is it the most healthful drink, it is also the cheapest.

Water makes me feel good because _____

Source: Maine Center for Public Health.

Goal Tracker: My Goal Is To Watch Less TV

Date _____

Circle the number of hours that you had any type of screen time. This includes watching TV, movies, playing video games, or using the computer.

Monday	1	2	3	4	5
Tuesday	1	2	3	4	5
Wednesday	1	2	3	4	5
Thursday	1	2	3	4	5
Friday	1	2	3	4	5
Saturday	1	2	3	4	5
Sunday	1	2	3	4	5

Tips:

- **Turn off the tube.** Substitute physical activity for one hour of TV viewing each day.
- **Try something new.** Pick a new activity that you can do once a week instead of watching TV. Trips to the library, museum, local pool, or farmers market are great ideas.
- **Tune into dinner not the TV.** Do not watch TV during mealtimes. Instead focus on eating together as a family.
- **Keep it out of the bedroom.** Do not have a TV in your bedroom.

Instead of watching TV this week, I _____

Another activity that I could do other than watch TV is _____

Source: Maine Center for Public Health.

Willingness/Importance? And Confidence Scales

Willingness/Importance?

On a scale of 0—10, how willing/important is it to you to make a change toward a healthier lifestyle?

0 1 2 3 4 5 6 7 8 9 10

Not at all **Somewhat** **Very**

Why didn't you choose a lower number?

Why didn't you choose a higher number?

What would make you more willing?

Confidence?

On a scale of 0—10, how confident are you that you can succeed?

0 1 2 3 4 5 6 7 8 9 10

Not at all **Somewhat** **Very**

What would make you more confident?

What might your next steps be?

What is your plan?

Source: Maine Center for Public Health. Adapted With Kind Permission.

Glossary and Acknowledgment

Glossary

Abdominal fat: Fat (adipose tissue) that is centrally distributed between the thorax and pelvis and that induces greater health risk.

Adipose tissue: (body fat or fat) Connective tissue composed of adipocytes. Its main role is to store energy which can be burned to meet the energy needs of the body, although it also cushions and insulates the body. Adipose tissue contains many small blood vessels. In the skin, it accumulates in the deepest level, the subcutaneous layer, providing insulation from heat and cold. Around organs, it provides protective padding.

Aerobic exercise: A type of physical activity that improves the use of oxygen in the body and includes walking, jogging, running, and dancing. Aerobic training improves the efficiency of the aerobic energy-producing systems that can improve cardio-respiratory endurance.

Age-adjusted: Summary measures of rates of morbidity or mortality in a population using statistical procedures to remove the effect of age differences in populations that are being compared. Age is probably the most important and the most common variable in determining the risk of morbidity and mortality.

Anaerobic exercise: A type of high-intensity, short-duration exercise, such as weightlifting, that doesn't require large amounts of oxygen to burn energy and that athletes use to build body mass.

Anorexiant: A drug, process, or event that leads to anorexia.

Anthropometric measurements: Measurements of human body height, weight, and size of component parts, including skinfold measurement. Used to study and compare the relative proportions under normal and abnormal conditions.

Bariatric surgery: Surgery that is performed for the treatment of morbidly obese individuals. This type of surgery is also known as *obesity surgery* and *weight loss surgery*.

Blood glucose: Simple blood sugar that is the body's main source of energy. A blood test for glucose is used to evaluate blood sugar levels and results may be used to diagnose diabetes, monitor diabetic control or for screening purposes.

Blood pressure: Pressure of the blood on the walls of the blood vessels that is measured in two numbers.

BMI: see Body mass index.

Body composition: The ratio of lean body mass (structural and functional elements in cells, body water, muscle, bone, heart, liver, kidneys, etc.) to body fat (essential and storage) mass. Essential fat is necessary for normal physiological functioning (e.g., nerve conduction). Storage fat constitutes the body's fat reserves, the part that people try to lose.

Body Mass Index (BMI): Is a mathematical calculation involving height and weight. BMI is calculated by dividing a person's body weight in kilograms by their height in meters squared (weight [kg] height [m]^2) or by using the conversion with pounds (lbs) and inches (in) squared as shown below, This number can be misleading, however, for very muscular people, or for pregnant or lactating women.

$$\text{Weight (kg)} \div \text{height (m)}^2$$

or

$$[\text{Weight (lbs)} \div \text{height (in)}^2\ ] \times 703 = \text{BMI}$$

Calcium: Important mineral for the growth, maintenance and reproduction of human cells.

Calorie: The calorie is a pre-SI metric unit of energy. The unit was first defined by Professor Nicolas Clément in 1824 as a unit of heat. This definition entered French and English dictionaries between 1841 and 1867. In most fields its use is archaic, having been replaced by the SI unit of energy, the joule. However, in many countries it remains in common use as a unit of food energy.

The definition of calorie is based on the specific heat capacity of water. The gram calorie, approximately 4.2 J, is based on one gram of water. The kilogram calorie, equal to one thousand gram calories, is based on one kilogram of water. In the context of nutrition, and especially food labeling, this larger unit is used and referred to interchangeably by the terms *calorie* (or *Calorie*) and *kilocalorie*. The kilogram calorie, large calorie, food calorie, Calorie (capital C) is the amount of energy required to raise the temperature of one kilogram of water by one degree Celsius.

Cancer: Cancer involves the uncontrolled growth of abnormal cells that have mutated from normal tissues. These cells prevent normal function of vital organs, damaging essential systems.

Carbohydrates: A carbohydrate is an organic compound with the general formula $C_m(H_2O)_n$, that is, consists only of carbon, hydrogen and oxygen, with the last two in the 2:1 atom ratio. The carbohydrates (saccharides) are divided into four chemical groupings: monosaccharides, disaccharides, oligosaccharides, and polysaccharides. Carbohydrates perform numerous roles in living things. Polysaccharides serve for the storage of energy and as structural components. The 5-carbon monosaccharide ribose is an important component of coenzymes and the backbone of the genetic molecule known as RNA. In food, carbohydrates often means any food that is particularly rich in starch (such as cereals, bread and pasta) or sugar (such as candy, jams and desserts) and supplies 4 calories/gram.

Glossary (continued)

Cardiovascular disease (CVD): Any abnormal condition characterized by dysfunction of the heart and blood vessels. CVD includes atherosclerosis (especially coronary heart disease, which can lead to heart attacks), cerebrovascular disease (e.g., stroke), and hypertension (high blood pressure).

Central fat distribution: The **waist circumference** is an index of body fat distribution. Increasing waist circumference is accompanied by increasing frequencies of overt type 2 diabetes, dyslipidemia, hypertension, coronary heart disease, stroke, and early mortality.

Cholesterol: A soft, waxy substance manufactured by the body and used in the production of hormones, bile acid, and vitamin D and present in all parts of the body, including the nervous system, muscle, skin, liver, intestines, and heart. Blood cholesterol circulates in the bloodstream. Dietary cholesterol is found in foods of animal origin. Total blood cholesterol levels above 240 mg/dl are considered high. Levels between 200–239 mg/dl are considered borderline high. Levels under 200 mg/dl are considered desirable.

Cimetidine: A weight loss drug that is thought to work by suppression of gastric acid or suppression of hunger by blocking histamine H2 receptors. It is not approved by the FDA.

Comorbidity: Two or more diseases or conditions existing together in an individual.

Complex carbohydrate: Starch and dietary fiber.

Congestive heart failure (CHF): Congestive heart failure is a condition in which the heart's function as a pump is inadequate to meet the body's needs.

Computed tomography (CT) scans: A radiographic technique for direct visualization and quantification of fat that offers high image contrast and clear separation of fat from other soft tissues. CT can estimate total body adipose tissue volume and identify regional, subcutaneous, visceral, and other adipose tissue depots. Radiation exposure, expense, and unavailability restrict the epidemiologic use of CT.

Coronary heart disease (CHD): A type of heart disease caused by narrowing of the coronary arteries that feed the heart, which needs a constant supply of oxygen and nutrients carried by the blood in the coronary arteries. When the coronary arteries become narrowed or clogged by fat and cholesterol deposits and cannot supply enough blood to the heart, CHD results.

Dexfenfluramine: A serotonin agonist drug used to treat obesity. FDA approval has been withdrawn.

Diabetes: A complex disorder of carbohydrate, fat, and protein metabolism that is primarily a result of relative or complete lack of insulin secretion by the beta cells of the pancreas or a result of defects of the insulin receptors.

Diastolic blood pressure: The minimum pressure that remains within the artery when the heart is at rest.

Diet: What a person eats and drinks. Any type of eating plan.

Diethylproprion: An appetite suppressant prescribed in the treatment of obesity.

Dietary fiber: Plant food components, including plant cell walls, pectins, gums, and brans that cannot be digested.

Digestion: Digestion is the mechanical and chemical breaking down of food into smaller components. Food enters the mouth, being chewed by teeth, with chemical processing beginning with chemicals in the saliva from the salivary glands. Then it travels down the esophagus into the stomach, where acid both kills most contaminating microorganisms and begins mechanical break down of some food and chemical alteration of some for subsequent absorption or excretion.

Dopamine: A catecholamine neurotransmitter that is found primarily in the basal ganglia of the central nervous system. Major functions include the peripheral inhibition and excitation of certain muscles; cardiac excitation; and metabolic, endocrine and central nervous system actions.

Dual energy X-ray absortiometry (DEXA): A method used to estimate total body fat and percent of body fat. Potential disadvantages include whole body radiation.

Dyslipidemia: Disorders in the lipoprotein metabolism; classified as hypercholesterolemia, hypertriglyceridemia, combined hyperlipidemia, and low levels of high-density lipoprotein (HDL) cholesterol. All of the dyslipidemias can be primary or secondary. Both elevated levels of low-density lipoprotein (LDL) cholesterol and low levels of HDL cholesterol predispose to premature atherosclerosis.

Efficacy: The extent to which a specific intervention, procedure, regimen, or service produces a beneficial result under ideal conditions. Ideally, the determination of efficacy is based on the results of a randomized control trial.

Glossary (continued)

Energy balance: Energy balance is the state in which the total energy intake equals total energy needs.

Energy deficit: A state in which total energy intake is less than total energy need.

Energy expenditure: The amount of energy, measured in calories, that a person uses. Calories are used by people to breathe, circulate blood, digest food, and be physically active.

Ephedrine: A sympathomimetic drug that stimulates thermogenesis in laboratory animals and humans. Animal studies show that it may reduce fat content and, therefore, body weight by mechanisms that probably involve increased expenditure and reduced food intake.

Esophagus: When you swallow food, muscle action brings the food down your esophagus, or food pipe, and empties through a one-way valve into the stomach.

Extreme obesity: A body mass index ≥99th percentile BMI for age is considered severely obese and a BMI ≥40 is considered morbidly obese in children and adolescents.

Fat: With proteins and carbohydrates, fat, also known as lipid, is one of the three types of nutrients used as energy sources by the body. The energy produced by fats is nine calories per gram. Proteins and carbohydrates each provide four calories per gram. Hence, fat is more than twice as caloric as protein and carbohydrate.

Fatty acids: Fatty acids supply energy and promote absorption of fat-soluble vitamins. Some fatty acids are "essential," because they cannot be made by the body.

Femoxetine: A selective serotonin reuptake inhibitor drug used in obese patients for weight loss.

Fenfluramine: A serotonin agonist drug used in the treatment of obesity. FDA approval has been withdrawn.

Fibrinogen: A plasma protein that is converted into fibrin by thrombin in the presence of calcium ions. Fibrin is responsible for the semisolid character of a blood clot.

Fluoxetine: An antidepressant drug used to promote weight loss whose action is mediated by highly specific inhibition of serotonin reuptake into presynaptic neurons. Serotonin acts in the brain to alter feeding and satiety by decreasing carbohydrate intake, resulting in weight reduction.

Gallbladder: The gallbladder is attached underneath the liver; it stores and concentrates bile. When food enters the stomach, it 'signals' the gallbladder to squeeze out bile into the duodenum for digestion.

Gallstones: Constituents in the gallbladder that are not reabsorbed, including bile salts and lipid substances such as cholesterol that become highly concentrated. They can cause severe pain (obstruction and cramps) as they move into the common bile duct. Risk factors for cholesterol gallstone formation include female gender, weight gain, overweight, high energy intake, ethnic factors (Pima Indians and Scandinavians), use of certain drugs (clofibrate, estrogens, and bile acid sequestrants), and presence of gastrointestinal disease. Gallstones sometimes develop during dieting for weight reduction. There is an increased risk for gallstones and acute gallbladder disease during severe caloric restriction.

Gastric banding: Surgery to limit the amount of food the stomach can hold by closing part of it off. A band made of special material is placed around the stomach near its upper end, creating a small pouch and a narrow passage into the larger remainder of the stomach.

Gastric bypass: A surgical procedure that combines the creation of small stomach pouches to restrict food intake and the construction of bypasses of the duodenum and other segments of the small intestine to cause food malabsorption. Patients generally lose two-thirds of their excess weight after 2 years.

Gastric exclusion: Same as gastric partitioning and Roux-en Y bypass. A small stomach pouch is created by stapling or by vertical banding to restrict food intake. A Y-shaped section of the small intestine is attached to the pouch to allow food to bypass the duodenum as well as the first portion of the jejunum.

Gastric partitioning: See gastric exclusion.

Gastroplasty: See also jejuno-ileostomy. A surgical procedure that limits the amount of food the stomach can hold by closing off part of the stomach. Food intake is restricted by creating a small pouch at the top of the stomach where the food enters from the esophagus. The pouch initially holds about 1 ounce of food and expands to 2–3 ounces with time. The pouch's lower outlet usually has a diameter of about 1/4 inch. The small outlet delays the emptying of food from the pouch and causes a feeling of fullness.

Genotype: The entire genetic makeup of an individual. The fundamental constitution of an organism in terms of its hereditary factors. A group of organisms in which each has the same hereditary characteristics.

Glucose: A building block for most carbohydrates. Digestion causes carbohydrates to break down into glucose. After digestion, glucose is carried in the blood and goes to body cells where it is used for energy or stored.

Glossary (continued)

Glucose tolerance: The power of the normal liver to absorb and store large quantities of glucose and the effectiveness of intestinal absorption of glucose. The glucose tolerance test is a metabolic test of carbohydrate tolerance that measures active insulin, a hepatic function based on the ability of the liver to absorb glucose. The test consists of ingesting 100 grams of glucose into a fasting stomach; blood sugar should return to normal in 2 to 21 hours after ingestion.

Gout and hyperuricemia: Gout is a condition that results from crystals of uric acid depositing in tissues of the body. Gout is characterized by an overload of uric acid in the body and recurring attacks of joint inflammation (arthritis). Chronic gout can lead to deposits of hard lumps of uric acid in and around the joints, decreased kidney function, and kidney stones.

Heart disease: Heart disease is any disorder that affects the heart's ability to function normally. The most common cause of heart disease is narrowing or blockage of the coronary arteries, which supply blood to the heart.

Heartburn: Heartburn is a painful burning sensation in the esophagus, just below the breastbone. The pain often rises in your chest and may radiate to your neck or throat.

Hemoglobin A1c: Glycosylated hemoglobin is formed when linkages of glucose and related monosaccharides bind to hemoglobin A and its concentration represents the average blood glucose level over the previous several weeks. HbA1c levels are used as a measure of long-term control of plasma glucose (normal, 4 to 6 percent). In controlled diabetes mellitus, the concentration of glycosylated hemoglobin A is within the normal range, but in uncontrolled cases the level may be 3 to 4 times the normal concentration. Generally, complications are substantially lower among patients with HbA1c levels of 7 percent or less than in patients with HbA1c levels of 9 percent or more.

Hemorrhagic stroke: A disorder involving bleeding within ischemic brain tissue. Hemorrhagic stroke occurs when blood vessels that are damaged or dead from lack of blood supply (infarcted), located within an area of infarcted brain tissue, rupture and transform an "ischemic" stroke into a hemorrhagic stroke. Ischemia is inadequate tissue oxygenation caused by reduced blood flow; infarction is tissue death resulting from ischemia. Bleeding irritates the brain tissues, causing swelling (cerebral edema). Blood collects into a mass (hematoma). Both swelling and hematoma will compress and displace brain tissue.

Heritability: The proportion of observed variation in a particular trait that can be attributed to inherited genetic factors in contrast to environmental ones.

High blood pressure: High blood pressure is measured in millimeters of mercury (mm Hg). Hypertension (high blood pressure) is when your blood pressure frequently goes over 140/90 mm Hg.

About 1 in every 5 adults in the U.S. has high blood pressure. High blood pressure occurs more often in men than in women. In addition, African Americans are affected almost twice as much as Caucasians. The prevalence of hypertension in overweight U.S. adults is 22.1 percent for men with a BMI greater than 25 and less than 27; 27.0 percent for men with a BMI greater than 27 and less than 30; 27.7 percent for women with a BMI greater than 25 and less than 27; and 32.7 percent for women with a BMI greater than 27 and less than 30.

High-density lipoproteins (HDL): Lipoproteins that contain a small amount of cholesterol and carry cholesterol away from body cells and tissues to the liver for excretion from the body. Low-level HDL increases the risk of heart disease, so the higher the HDL level, the better. The HDL component normally contains 20 to 30 percent of total cholesterol, and HDL levels are inversely correlated with coronary heart disease risk.

Hirsutism: Presence of excessive body and facial hair, especially in women; may be present in normal adults as an expression of an ethnic characteristic or may develop in children or adults as the result of an endocrine disorder.

Hypercholesterolemia (high blood cholesterol): Cholesterol is the most abundant steroid in animal tissues, especially in bile and gallstones. The relationship between the intake of cholesterol and its manufacture by the body to its utilization, sequestration, or excretion from the body is called the cholesterol balance. When cholesterol accumulates, the balance is positive; when it declines, the balance is negative. In 1993, the NHLBI National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults issued an updated set of recommendations for monitoring and treatment of blood cholesterol levels. The NCEP guidelines recommended that total cholesterol levels and subfractions of high-density lipoprotein (HDL) cholesterol be measured beginning at age 20 in all adults, with subsequent periodic screenings as needed. Even in the group of patients at lowest risk for coronary heart disease (total cholesterol 200 mg/dL and HDL 35 mg/dL), the NCEP recommended that rescreening take place at least once every 5 years or upon physical examination.

Hypertension: High blood pressure (i.e., abnormally high blood pressure tension involving systolic and/or diastolic levels). The Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure defines hypertension as a systolic blood pressure of 140 mm Hg or greater, a diastolic blood pressure of 90 mm Hg or greater, or taking hypertensive medication. The cause may be adrenal, benign, essential, Goldblatt's, idiopathic, malignant PATE, portal, postpartum, primary, pulmonary, renal or renovascular.

Glossary (continued)

Hypertriglyceridemia: An excess of triglycerides in the blood that is an autosomal dominant disorder with the phenotype of hyperlipoproteinemia, type IV. The National Cholesterol Education Program defines a high level of triglycerides as being between 400 and 1,000 mg/dL in adults

Incidence: The rate at which a certain event occurs (i.e., the number of new cases of a specific disease occurring during a certain period).

Insulin: Hormone that helps the body use glucose for energy. A hormone in the body that helps move glucose (sugar) from the blood to muscles and other tissues. Insulin controls blood sugar levels.

Insulin-dependent diabetes mellitus (type I diabetes): A disease characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. Autoimmune, genetic, and environmental factors are involved in the development of type I diabetes.

Ischemic stroke: A condition in which the blood supply to part of the brain is cut off. Also called "plug-type" strokes. Blocked arteries starve areas of the brain controlling sight, speech, sensation, and movement so that these functions are partially or completely lost. Ischemic stroke is the most common type of stroke, accounting for 80 percent of all strokes. Most ischemic strokes are caused by a blood clot called a thrombus, which blocks blood flow in the arteries feeding the brain, usually the carotid artery in the neck, the major vessel bringing blood to the brain. When it becomes blocked, the risk of stroke is very high.

Large Intestine: Also known as the large bowel, most fluids are absorbed in the large intestine. The leftover waste products from food digestion are concentrated and passed through the rectum as stool.

Lipoprotein: Protein-coated packages that carry fat and cholesterol throughout the bloodstream. There are four general classes: high-density, low-density, very low-density, and chylomicrons.

Liver: The liver produces bile—an important chemical aiding digestion. Bile drains into the gallbladder where it is stored until needed for digestion.

Longitudinal study: Also referred to as a "cohort study" or "prospective study"; the analytic method of epidemiologic study in which subsets of a defined population can be identified who are, have been, or in the future may be exposed or not exposed, or exposed in different degrees, to a factor or factors hypothesized to influence the probability of occurrence of a given disease or other outcome. The main feature of this type of study is to observe large numbers of subjects over an extended time, with comparisons of incidence rates in groups that differ in exposure levels.

Low-calorie diet (LCD): Caloric restriction of about 800 to 1,500 calories (approximately 12 to 15 kcal/kg of body weight) per day in adults.

Low-density lipoprotein (LDL): (Also known as "bad cholesterol.") A lipoprotein that contains most of the cholesterol in the blood, LDL carries cholesterol to the tissues of the body, including the arteries. A high level of LDL increases the risk of heart disease. LDL typically contains 60 to 70 percent of the total serum cholesterol and both are directly correlated with CHD risk.

Lower-fat diet: An eating plan in which 30 percent or less of the day's total calories are from fat.

Macronutrients: Nutrients in the diet that are the key sources of energy, namely protein, fat, and carbohydrates.

Magnetic resonance imaging (MRI): Magnetic resonance imaging uses radio frequency waves to provide direct visualization and quantification of fat. The sharp image contrast of MRI allows clear separation of adipose tissue from surrounding nonlipid structures. Essentially the same information provided by CT is available from MRI, including total body and regional adipose tissue, subcutaneous adipose, and estimates of various visceral adipose tissue components. The advantage of MRI is its lack of ionizing radiation and hence its presumed safety in children, younger adults, and pregnant women. The minimal present use of MRI can be attributed to the expense, limited access to instrumentation, and long scanning time.

Metabolism: The sum total of all the chemical reactions that go on in living cells. All of the processes that occur in the body that turn the food you eat into energy your body can use.

Morbid obesity: A magnitude of obesity that qualifies someone for surgical treatment. Weight criteria are approximately 100 pounds or more over ideal body weight, or a BMI of 40 or higher.

Mianserine: An antidepressant sometimes used in the pharmacotherapy of bulimia nervosa.

Midaxillary line: An imaginary vertical line that passes midway between the anterior and posterior axillary (armpit) folds.

Monounsaturated fat: An unsaturated fat that is found primarily in plant foods, including olive and canola oils. Monounsaturated fat is found in canola oil, olives and olive oil, nuts, seeds, and avocados. Eating food that has more monounsaturated fat instead of saturated fat may help lower cholesterol and reduce heart disease risk. However, it has the same number of calories as other types of fat, and may still contribute to weight gain if eaten in excess.

Glossary (continued)

Myocardial infarction (MI): Gross necrosis of the myocardium as a result of interruption of the blood supply to the area; it is almost always caused by atherosclerosis of the coronary arteries, upon which coronary thrombosis is usually superimposed.

NHANES: National Health and Nutrition Examination Survey; conducted every 10 years by the National Center for Health Statistics to survey the dietary habits and health of U.S. residents.

Obesity: The condition of having an abnormally high proportion of body fat. Defined as a body mass index (BMI) of greater than or equal to 30 in adults and greater than or equal to the 95th percentile BMI in children and adolescents. Subjects are generally classified as obese when body fat content exceeds 30 percent in women and 25 percent in men.

Observational study: An epidemiologic study that does not involve any intervention, experimental or otherwise. Such a study may be one in which nature is allowed to take its course, with changes in one characteristic being studied in relation to changes in other characteristics. Analytical epidemiologic methods, such as case-control and cohort study designs, are properly called observational epidemiology because the investigator is observing without intervention other than to record, classify, count, and statistically analyze results.

Orlistat: A lipase inhibitor used for weight loss. Lipase is an enzyme found in the bowel that assists in lipid absorption by the body. Orlistat blocks this enzyme, reducing the amount of fat the body absorbs by about 30 percent. It is known colloquially as a "fat blocker." Because more oily fat is left in the bowel to be excreted, Orlistat can cause an oily anal leakage and fecal incontinence. Orlistat may not be suitable for people with bowel conditions such as irritable bowel syndrome or Crohn's disease.

Osteoarthritis: Noninflammatory degenerative joint disease occurring chiefly in older persons, characterized by degeneration of the articular cartilage, hypertrophy of bone at the margins, and changes in the synovial membrane. It is accompanied by pain and stiffness. Can accompany obesity and overweight.

Overweight: An excess of body weight but not necessarily body fat; a body mass index of 25 to 29.9 kg/m^2 in adults, and between the 85th and 95th percentile BMI in children and adolescents.

Pancreas: The pancreas is a gland located behind the stomach that produces enzymes essential to digestion. These enzymes are also released into the duodenum when food in the stomach 'signals' the start of the digestion process.

Pharmacotherapy: The treatment of diseases, including obesity, by the administration of drugs. In obesity-related conditions, a regimen of using appetite suppressant medications to manage obesity by decreasing appetite or increasing the feeling of satiety. These medications decrease appetite by increasing serotonin or catecholamine—two brain chemicals that affect mood and appetite.

Phentermine: An adrenergic isomeric with amphetamine, used as an anorexic; administered orally as a complex with an ion-exchange resin to produce a sustained action.

Physical activity: Any form of exercise or movement. Physical activity may include planned activity such as walking, running, basketball, or other sports. Physical activity may also include other daily activities such as household chores, yard work, walking the dog, etc. It is recommended that adults get at least 30 minutes and children get at least 60 minutes of moderate physical activity most days of the week. Moderate physical activity is any activity that requires about as much energy as walking two miles in 30 minutes.

Polyunsaturated fat: An unsaturated fat found in greatest amounts in foods derived from plants, including safflower, sunflower, corn, and soybean oils.

Protein: A class of compounds composed of linked amino acids that contain carbon, hydrogen, nitrogen, oxygen, and sometimes other atoms in specific configurations. Protein is an essential nutrient that helps build many parts of the body, including muscle, bone, skin, and blood. Protein provides 4 calories per gram and is found in foods like meat, fish, poultry, eggs, dairy products, beans, nuts, and tofu.

Refractory obesity: Obesity that is resistant to treatment.

Registered Dietitian (RD): A health professional who is a food and nutrition expert. A person who has studied diet and nutrition at an American Dietetic Association (ADA) approved college program and passed an exam to become a registered dietitian.

Relative risk: The ratio of the incidence rate of a disease among individuals exposed to a specific risk factor to the incidence rate among unexposed individuals; synonymous with risk ratio. Alternatively, the ratio of the cumulative incidence rate in the exposed to the cumulative incidence rate in the unexposed (cumulative incidence ratio). The term relative risk has also been used synonymously with odds ratio. This is because the odds ratio and relative risk approach each other if the disease is rare (5 percent of population) and the number of subjects is large.

Glossary (continued)

Resting metabolic rate (RMR): RMR accounts for 65 to 75 percent of daily energy expenditure and represents the minimum energy needed to maintain all physiological cell functions in the resting state. The principal determinant of RMR is lean body mass (LBM). Obese subjects have a higher RMR in absolute terms than lean individuals, an equivalent RMR when corrected for LBM and per unit surface area, and a lower RMR when expressed per kilogram of body weight. Obese persons require more energy for any given activity because of a larger mass, but they tend to be more sedentary than lean subjects.

Restrictive: The amount of food intake is restricted by altering the digestive system.

Roux-en-Y bypass: See gastric exclusion; the most common gastric bypass procedure.

Saturated fat: A type of fat found in greatest amounts in foods from animals, such as fatty cuts of meat, poultry with the skin, whole-milk dairy products, lard, and in some vegetable oils, including coconut, palm kernel, and palm oils. Saturated fat raises blood cholesterol more than anything else eaten. A fat that is solid at room temperature. Fats that are in foods are combinations of monounsaturated, polyunsaturated, and saturated fatty acids. Saturated fat is found in high-fat dairy products (like cheese, whole milk, cream, butter, and regular ice cream), fatty fresh and processed meats, the skin and fat of chicken and turkey, lard, palm oil, and coconut oil. They have the same number of calories as other types of fat, and may contribute to weight gain if eaten in excess. Eating a diet high in saturated fat also raises blood cholesterol and risk of heart disease.

Sedentary behavior: A pattern of behavior that is relatively inactive, such as a lifestyle characterized by a lot of sitting.

Serotonin: A monoamine vasoconstrictor, found in various animals from coelenterates to vertebrates, in bacteria, and in many plants. In humans, it is synthesized in the intestinal chromaffin cells or in the central or peripheral neurons and is found in high concentrations in many body tissues, including the intestinal mucosa, pineal body, and central nervous system. Produced enzymatically from tryptophan by hydroxylation and decarboxylation, serotonin has many physiologic properties (e.g., inhibits gastric secretion, stimulates smooth muscle, serves as central neurotransmitter, and is a precursor of melatonin).

Skinfold measurement: Estimation of body fat by measuring thickness of skin from 3 to 9 different standard anatomical sites around the body. The right side is usually only measured (for consistency). The tester pinches the skin at the appropriate site to raise a double layer of skin and the underlying adipose tissue, but not the muscle. The calipers are then applied 1 cm below and at right angles to the pinch, and a reading in millimeters (mm) taken two seconds later. The mean of two measurements should be taken. If the two measurements differ greatly, a third should then be done, then the median value taken.

Sibutramine: A drug used for the management of obesity that helps reduce food intake and is indicated for weight loss and maintenance of weight loss when used in conjunction with a reduced-calorie diet. It works to suppress the appetite primarily by inhibiting the reuptake of the neurotransmitters norepinephrine and serotonin. Side effects include dry mouth, headache, constipation, insomnia, and a slight increase in average blood pressure. In some patients it causes a higher blood pressure increase.

Sleep apnea: A serious, potentially life-threatening breathing disorder characterized by repeated cessation of breathing due to either collapse of the upper airway during sleep or absence of respiratory effort.

Small intestine: Also known as the small bowel, the small intestine is responsible for most digestion and absorption of food—protein, vitamins, minerals, and essential fats. The mixture of digestive juices helps break down the food so that it can be absorbed through the walls of the small intestine and into the bloodstream. The small intestine is divided into 3 sections: the duodenum—the first section and attached to the stomach; jejunum—the middle section responsible for most of the digestion and absorption of food; and the ileum—the third section and attached to the large intestine.

Social pressure: A strategy used in behavior therapy in which individuals are told that they possess the basic self-control ability to lose weight, but that coming to group meetings will strengthen their abilities. The group is asked to listen and give advice, similar to the way many self-help groups, based on social support, operate.

Stomach: This organ is considered the food 'reservoir'—storing food and sending it slowly to the small intestine. In the stomach, protein, fats and carbohydrates are partially digested into smaller portions. As food leaves the stomach through another one-way valve, it empties into the small intestine. Normally, the stomach can hold about three pints of food after a single meal.

Stomach stapling: A general, generic term that is not used by bariatric surgeons because it tends to be too nonspecific. Many types of bariatric operations involve stapling the stomach.

Glossary (continued)

Stroke: Sudden loss of function of part of the brain because of loss of blood flow. Stroke may be caused by a clot (thrombosis) or rupture (hemorrhage) of a blood vessel to the brain.

Submaximal heart rate test: Used to determine the systematic use of physical activity. The submaximal work levels allow work to be increased in small increments until cardiac manifestations such as angina pain appear. This provides a more precise manipulation of workload and gives a reliable and quantitative index of a person's functional impairment if heart disease is detected.

Systolic blood pressure: The maximum pressure in the artery produced as the heart contracts and blood begins to flow.

Trans-fatty acids: (trans fats) A fat that is produced when liquid fat (oil) is turned into solid fat through a chemical process called hydrogenation, such as when vegetable oil becomes margarine or shortening. Trans-fatty acids also occur in milk fat, beef fat, and lamb fat. These fatty acids have been associated with increased blood cholesterol levels.

Triglyceride: A lipid carried through the blood stream to tissues. Most of the body's fat tissue is in the form of triglycerides, stored for use as energy. Triglycerides are obtained primarily from fat in foods.

Type 1 diabetes: Previously known as "insulin-dependent diabetes mellitus," (IDDM) or "juvenile diabetes." Type 1 diabetes is a life-long condition in which the pancreas stops making insulin. Without insulin, the body is not able to use glucose (blood sugar) for energy. To treat the disease, a person must inject insulin, follow a diet plan, exercise daily, and test blood sugar several times a day. Type 1 diabetes usually begins before the age of 30.

Type 2 diabetes: Also known as "noninsulin-dependent diabetes mellitus" (NIDDM) or "adult-onset diabetes." Type 2 diabetes is the most common form of diabetes mellitus. About 90 to 95 percent of people who have diabetes have type 2 diabetes. People with type 2 diabetes produce insulin, but either do not make enough insulin or their bodies do not use the insulin they make. Most of the people who have this type of diabetes are overweight. Therefore, people with type 2 diabetes may be able to control their condition by losing weight through diet and exercise. They may also need to inject insulin or take medicine along with continuing to follow a healthy program of diet and exercise. Although type 2 diabetes commonly occurs in adults, an increasing number of children and adolescents who are overweight are also developing type 2 diabetes.

Unsaturated fat: A fat that is liquid at room temperature. Vegetable oils are unsaturated fats. Unsaturated fats include polyunsaturated fats, and monounsaturated fats. They include most nuts, olives, avocados, and fatty fish, like salmon.

Vertical-banded gastroplasty: A surgical treatment for extreme obesity; an operation on the stomach that involves constructing a small pouch in the stomach that empties through a narrow opening into the distal stomach and duodenum.

Very-low-calorie diet (VLCD): The VLCD of 800 (approximately 6–10 kcal/kg body weight) in adults or fewer calories per day is conducted under physician supervision and monitoring and is restricted to severely obese persons.

Very-low-density lipoprotein (VLDL): The lipoprotein particles that initially leave the liver, carrying cholesterol and lipid. VLDLs contain 10 to 15 percent of the total serum cholesterol along with most of the triglycerides in the fasting serum; VLDLs are precursors of LDL.

Visceral fat: One of the three compartments of abdominal fat. Retroperitoneal and subcutaneous are the other two compartments.

Waist circumference: To define the level at which the waist circumference is measured, a bony landmark is first located and marked. The subject stands, and the technician, positioned to the right of the subject, palpates the upper hip bone to locate the right ileum. Just above the uppermost lateral border of the right ileum, a horizontal mark is drawn and then crossed with a vertical mark on the midaxillary line. The measuring tape is then placed around the trunk, at the level of the mark on the right side, making sure that it is on a level horizontal plane on all sides. The tape is then tightened slightly without compressing the skin and underlying subcutaneous tissues. The measure is recorded in centimeters to the nearest millimeter.

Waist-hip-ratio (WHR): The ratio of a person's waist circumference to hip circumference. WHR looks at the relationship between the differences in the measurements of waist and hips. Most people store body fat in two distinct ways, often called the "apple" and "pear" shapes, either the middle (apple) or the hips (pear). For most people, carrying extra weight around their middle increases health risks more than carrying extra weight around their hips or thighs. Overall obesity, however, is still of greater risk than body fat storage locations or WHR.

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