BODY BASICS

An Adolescent Provider Toolkit

Illustrations by Jordan Zioni, 17

HOW TO OBTAIN A COPY OF THIS TOOLKIT

The Body Basics Module can be downloaded from the following website:

Adolescent Health Working Group -- www.ahwg.net

Additional copies of the Toolkit may be requested via mail, telephone, fax or e-mail from:

- Adolescent Health Working Group
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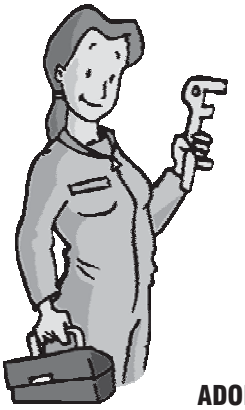
  San Francisco, CA 94102
  Telephone: (415) 576-1170
  Fax: (415) 576-1286
  E-mail: info@ahwg.net

- Email: swillia8@dhs.ca.gov
  Telephone: (916) 440-7616



ADOLESCENT HEALTH WORKING GROUP

The Adolescent Health Working Group (AHWG) was formed in 1996 when adolescent health providers, administrators, and youth advocates in San Francisco became concerned about Medicaid managed care's impact on young people's access to youth-sensitive, comprehensive health care. Today, the mission of the AHWG is to significantly advance the health and well-being of young people by applying the collective wisdom, resources, and energy of individuals and agencies that care for and support young people. The AHWG's activities include community-level research, public policy/advocacy, training, and community outreach and education. Members of the AHWG include representatives of youth agencies, public and private primary care, behavioral health clinics and program, academic institutions, health plan, school, social service and advocacy organizations, and youth and parents.

SUGGESTED CITATION

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Adolescent Health Working Group
San Francisco, CA

California Department of Health Services

SAN FRANCISCO HEALTH PLAN
Here for you

Dear Colleagues:

We are pleased to present to you the fifth module of the *Adolescent Provider Toolkit: A Guide for Treating Teen Patients*, entitled *Body Basics.* This project has been made possible through the generous support of the Center for Health Care Strategies and the California Department of Health Services' California Obesity Prevention Initiative. The production of the *Body Basics* module is the result of a collaborative effort between the Adolescent Health Working Group; San Francisco Health Plan; California Department of Health Services Office of Clinical Preventive Medicine, California Obesity Prevention Initiative, and the Medi-Cal Managed Care Division.

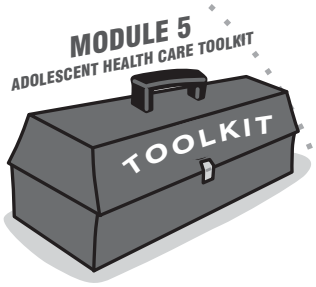
Designed for busy providers, the Toolkit includes materials that you are free to copy and distribute to your adolescent patients and their families or to hang in waiting and exam rooms. This module takes a closer look at the specifics of nutrition, physical activity, body image, overweight, and eating disorders among teenagers and includes:

- Screening and assessment tools
- Brief office interventions and counseling guidelines
- Information and tip sheets
- Health education materials for teens and their adult caregivers
- Resources and referrals

Please take the time to review this resource, designed by and for adolescent health care providers. If you have questions regarding the Toolkit or its accompanying resources, please call the Adolescent Health Working Group at (415) 576-1170. We also encourage you to visit our web site, *www.ahwg.net,* for free downloadable versions of the *Body Basics* module, the accompanying *Adolescent Provider Toolkit: A Guide for Treating Teen Patients*, and for additional tools and resources. Since the evidence and best practices regarding nutrition, exercise, and overweight are constantly evolving and changing, we hope to post updated information and developments on our website as well. In the future, we plan to develop and distribute additional modules which address behavioral health and youth with special health care needs.

Regards,

Janet Shalwitz, MD
Director
Adolescent Health Working Group



ACKNOWLEDGMENTS

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AHWG would also like to thank the youth from the UCSF WATCH Clinic, Treasure Island Job Corps, Ernest Ingold Boys and Girls Club, and Young Community Developers who participated in focus groups and discussion sessions. All of the youth provided AHWG with insightful feedback which enabled us to improve and modify the patient educational materials.

THE ADOLESCENT PROVIDER TOOLKIT ADVISORY COUNCIL

We would like to extend our sincerest thanks to members of the Toolkit Advisory Council for their time, energy, dedication and unwavering commitment to the health of adolescents. Special thanks to Dr. Seleda Williams for her guidance, enthusiasm, and vision throughout the development of *Body Basics*!

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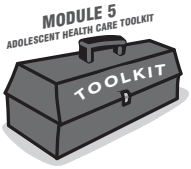


MODULE FIVE: BODY BASICS

A. FOR PROVIDERS/CLINICS

1. General Assessment, Counseling, and Treatment Tools

2. Overweight: Further Evaluation

3. Eating Disorders

B. FOR PARENTS/ADULT CAREGIVERS

Please print and distribute these tip sheets to the parents and adult caregivers of your teen patients

C. FOR YOUTH

Please print and distribute these tip sheets to your teen patients and parents/adult caregivers

D. RESOURCES AND REFERENCES

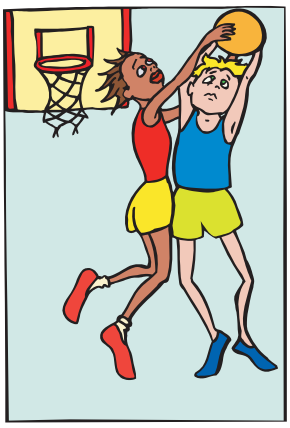
* Available in Spanish, Chinese and Vietnamese at www.ahwg.net

Nutrition, Physical Activity, Overweight and Eating Disorders

FAST FACTS!

NUTRITION AND DISEASE

- Unhealthy diet and physical activity patterns account for at least 400,000 deaths among adults in the U.S. each year.[1]
- Almost 80% of young people do not eat the recommended number of servings of fruits and vegetables.
- A Center for Disease Control study estimated that one in three American children born in 2000 will develop type 2 diabetes in their lifetime.[2]



PHYSICAL ACTIVITY

- Participation in physical activity declines as children get older.[3]
- Nearly 70% of 9th graders and 55% of 12th graders participate in sufficient vigorous physical activity on a regular basis.[4]
- Physical inactivity increases the risk of dying prematurely, developing heart disease, type 2 diabetes, colon cancer, and high blood pressure.[5]
- In 2003, 38% of 9th graders and 18% of 12th graders attended a daily physical education class.[6]
- In 2003, only 25% of students in grades five, seven and nine passed the annual California Fitnessgram, which assessed students in six major fitness areas.[7]

OVERWEIGHT

- Almost 9 million children and adolescents aged 6-19 years in the U.S. are overweight.[8]
- While the prevalence of overweight and obesity has increased in all segments of the U.S. population, it is particularly common among minority groups and those with a lower family income.[9]

EATING DISORDERS AND DIETING

- In the U.S., estimates indicate that after puberty, 5-10 million females and 1 million males struggle with eating disorders including anorexia, bulimia, binge eating disorder, and/or borderline conditions.
- The average American woman is 5'4" tall and weighs 140 pounds. The average American model is 5'11" tall and weighs 117 pounds.[10]
- 25% of American men and 45% of American women are on a diet on any given day.[11]
- A large number of high school students use unsafe methods to lose or maintain weight. A nationwide survey found that during the 30 days preceding the survey, 13% of students went without eating for one or more days; 6% had vomited or taken laxatives; and 9% had taken diet pills, powders, or liquids without the advice of a health care provider.

[1,2,7,9] U.S. Department of Health and Human Services Centers for Disease Control and Prevention, Division of Adolescent & School Health. Nutrition and the Health of Young People. May 2004, www.cdc.gov/HealthyYouth/Nutrition

[3,4,5,6] U.S. Department of Health and Human Services Centers for Disease Control and Prevention, Division of Adolescent & School Health. Physical Activity and the Health of Young People. May 2004, www.cdc.gov/HealthyYouth/PhysicalActivity

[7] California Department of Education. State Schools Chief O'Connell Announces 2003 Physical Fitness Results for California Students. November 6, 2003.

[10] National Eating Disorders Association. Statistics: Eating Disorders and Their Precursors. 2002, www.NationalEatingDisorders.org

[11] Smolak, L. National Eating Disorders Association/Next Door Neighbors Puppet Guide Book. 1996.

Body Basics Annual Screening Tool

Every year a teenager should undergo a comprehensive preventive health visit. As part of that visit, nutrition, physical activity, body image, disordered eating, and BMI should be assessed and discussed. The preventive health visit is reviewed in detail in the Adolescent Health Care 101 Module of the Adolescent Provider Toolkit. Additionally, during your visits with adolescents, the questions found below are recommended for inclusion in your preventive health visits.

RELATED SCREENING QUESTIONS FROM ADOLESCENT HEALTH CARE 101*

NUTRITION

- Do you drink milk, eat yogurt or cheese at least 3 times per day? (B-2)
- Do you eat at least 5 servings of fruit and vegetables each day? (B-2)
- Do you try to limit the amount of fried or fast foods you eat? (B-2)

PHYSICAL ACTIVITY

- Number of hours watching TV, computer, video games. (B-1)
- Weekly physical activities. (B-1)
- Do you exercise or play an active sport 5 days a week? (B-2)

BODY IMAGE/DISORDERED EATING

- Food binging/purging. (B-1)
- Body image. (B-1)
- Do you think you need to lose or gain weight? (B-2)

BMI

$$\frac{\text{Weight (kg)}}{\text{Height}^2\ (\text{meters}^2)} \quad \textbf{OR} \quad \frac{\text{Weight (pounds)} \times 703}{\text{Height}^2\ (\text{inches}^2)}$$

- Height/Weight/BMI. (B-1)

B-1: Initial/Annual Comprehensive Adolescent 11-18 year visit from Adolescent Health Care 101.

B-2: Adolescent Staying Healthy Assessment Questionnaire from Adolescent Health Care 101.

ADDITIONAL SCREENING QUESTIONS:

NUTRITION

- What are your favorite foods?
- How many times a day do you drink milk (regular, soy, Lactaid) or eat yogurt or cheese?
- How many times a day do you eat fruits and vegetables?
- How often do you eat fried or fast foods?
- How often do you drink soda, juice, or sports drinks?
- What do you usually eat for snacks?
- How many meals do you eat and/or cook at home every week?
- Do you read food labels?

PHYSICAL ACTIVITY

- How many hours a day do you spend watching TV, playing video games, or sitting at a computer?
- What do you do for exercise? For how long at a time? How hard do you work out on a scale from 1-10? How many times per week?
- Do you have a place where you can safely and comfortably exercise?

BODY IMAGE/DISORDERED EATING

- How do you feel about the way you look?
- How do you feel about your weight?
- Are you trying to change your weight? How? Have you been on a diet recently?
- Do you ever fast, vomit, take laxatives or diet pills to control your weight?
- Do you ever binge (eat lots of food in one sitting)?
- How does your eating change (if at all) when you are excited, nervous, stressed, or unhappy?
- How much and why do you exercise?

See E-4 for additional questions and responding suggestions

*Adolescent Health Care 101 is the 2nd module of the Adolescent Provider Toolkit, available online at www.ahwg.net

Communication Guidelines to Promote Health Behavior Change

ASK PERMISSION

Would you be willing to spend a few minutes discussing your weight?
Would you like to talk about different ways to exercise and eat?

SHARE BMI (OPTIONAL)

Your BMI is at the 92nd percentile.
The target BMI for someone your age is less than the 85th %ile.
Ask for the patient's interpretation: *"What does this mean to you?"*
Add your own interpretation or advice as needed ***after*** eliciting the patient's/parent's response.

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

OFFER OPTIONS

There are a number of ways to achieve a healthy weight.

- ❖Exercise and be physically active
- ❖Cut back on TV, video games, and computer time
- ❖Eat 5 helpings of fruits and vegetables a day
- ❖Cut down on soda, juice, and sports drinks

Is there any one of these you'd like to discuss further today? Or perhaps you have another idea that I didn't mention?

ASSESS READINESS

On a scale of 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?*

0	1	2	3	4	5	6	7	8	9	10

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 think are important about or that you like about _____?*
- ❖*What are the problems, or things, you don't like about _____?*

Step 2: Summarize ambivalence
- ❖Ask: *Did I get it all?* or *Did I get it right?*

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 needs to be different for you to consider making 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 can you deal with that?* • *How might you reward yourself along the way?*

CLOSE

Summarize
Show appreciation. Acknowledge willingness to discuss change.
Offer advice, emphasize choice, establish realistic goals, and express confidence.
Confirm next steps and arrange for follow-up.

Tips for Interviewing and Counseling Teens and Parents

NUTRITION

ASK	SUGGEST
ADOLESCENT: • Which meals do you usually eat each day? • Do you skip breakfast or other meals? How many times a week?	• Eat 3 meals a day and always eat breakfast. • Breakfast helps to increase energy, concentration, and grades in school.
ADOLESCENT: • How many servings of milk and other dairy products did you have yesterday?	• Eat 3 servings of dairy or mild alternatives a day. • There are lots of ways to increase calcium intake such as soy milk, nonfat/lowfat yogurt, cottage cheese, Lactaid, calcium fortified foods (check food labels!) and/or supplements (recommended dosage per day=1,300 mg).[1]
ADOLESCENT: • How many fruits did you eat yesterday? • And vegetables? • What fruits and vegetables do you eat regularily?	• Increase fruits to at least 2 servings a day and vegetables to at least 3 servings a day. • Try a new fruit and/or vegetable. Check out a local farmer's market for new ideas. • Eat fruit for snacks and/or dessert.
ADOLESCENT: • How often do you drink soda, fruit drinks, and/or sports drinks?	• Cut down on fruit drinks, soda, and sports drinks. • Drink water (lots of it!), tea, nonfat/lowfat milk, and diet soda. • Carry a water bottle with you and fill it up often.
ADOLESCENT: • What snacks do you usually eat? • What do you eat and drink between meals?	• Snack when hungry. • Choose healthy snacks (see *"Healthy Eating & Snacking"* handout, E-22). • Decrease junk food, soda, fruit juice, and sports drinks.
ADOLESCENT: • How often do you eat fast food for meals or snacks each week?	• Decrease the amount of fast food. • Choose healthier fast food options. • Increase the number of meals cooked at home.
ADOLESCENT: • Do you use any weight gainers, herbal supplements, vitamins, weight loss products, or energy boosters?	• Be aware of the possible risks associated with nutritional supplements and performance enhancers (see *Potential Adverse Effects of Ergogenic Aids,* E-8*)*. • Use healthy training techniques.
ADOLESCENT: • Are there any foods you will not eat? If so, which ones? Why?	• Eat a balanced diet, rich in protein, calcium, iron and fiber. • Try healthy alternatives to the foods you don't enjoy.
ADOLESCENT: • What changes would you like to make in the way you eat?	• Watch portion sizes, increase water intake, and eat a balanced diet. • Substitute baked, grilled, or steamed foods for fried foods.
ADOLESCENT AND PARENT(S): • Who usually purchases the food you eat? • Who prepares it?	• Shop for and prepare meals together. • Cook meals at home instead of eating out. • Turn off the TV while eating.
PARENT(S): • Do you have any concerns about your son/daughter's eating behaviors?	• Model healthy eating behaviors for your teen. • Support your teen's willingness to try new ways of healthy eating.
PARENT(S): • What changes would you like to see in how your teen eats?	• Cook, food shop, and eat with your teen. • Try new, healthy recipes. • Provide healthy after-school snacks.

[1] The National Academy of Sciences. Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. 1997. Recommendations based on 9-18 year old age range.

Tips for Interviewing and Counseling Teens and Parents

PHYSICAL ACTIVITY

ASK	SUGGEST
ADOLESCENT: • What sports or physical activities do you usually do during the week? • What do you do when you have free time?	• Walk or bike to school with a friend or in a group. • Take the stairs and move around when talking on the phone. • Join a school or community sports team, league, or club. • Participate in a variety of physical activities that are enjoyable and that can be continued over time. • Set a goal to be physically active every day for 30-60 minutes.
ADOLESCENT: • What sport or physical activity would you like to do that you are currently not doing? • How/when can you start a new physical activity?	• Try new physical activities that are enjoyable. • If you haven't been exercising, start small and build-up over time. • Use physical activity for stress reduction and to boost self-confidence. • Schedule time for exercise. • Exercise with a friend or family member.
ADOLESCENT: • How much time do you spend each day watching television, videotapes/DVDs, and playing on the computer?	• Decrease TV, video games, and computer time to less than two hours a day. • Don't mix junk food with TV/computer time. • Exercise when watching TV: run in place, do squats, sit-ups, and/or jump rope. • Try exercise videos/DVDs if being indoors is preferred.
PARENT(S): • What physical activities do you enjoy? • What type of sports and/or activities does your son/daughter participate in? How often? • What activities do you do together as a family?	• Be physically active with your teen and incorporate physical activity into family time. • Be a role model to your teen: exercise regularly and often. • Encourage your teen to be physically active every day for at least 30-60 minutes.

BODY IMAGE

ASK	SUGGEST
ADOLESCENT: • How do you feel about and in your body?	• Gain comfort and confidence in and about your body and decrease time spent worrying about food, weight, and calories. • Walk proudly. • Exercise! It's great for your mind and body!
ADOLESCENT: • How do you see yourself when you look in the mirror?	• Form a clear, true perception of your shape, and appreciate your natural body shape and your unique ethnic and racial qualities. • Emphasize assets and abilities.
ADOLESCENT: • Do you have an "ideal" weight, shape, or appearance?	• Encourage size and shape acceptance and positive body image. • Remind your patient that media (teen magazines, advertisements, TV shows, etc.) has a big role in influencing behavior and standards in the U.S. • Encourage your patients to question media and see how it targets teens and instills negative and unrealistic body image.
ADOLESCENT: • How often do think about food?	• Eat when you are hungry. • Enjoy food and take pleasure in the process of eating without feeling guilty or stressed about eating.
PARENT(S): • How does your teen feel about his or her body?	• Encourage your teen to be confident and proud of his or her natural size and talents. • Avoid criticizing your own and others' bodies. • Remember that if you need help and/or support, it is available.

Assessment of BMI in Adolescents

ANNUALLY

- Measure height and weight
- Determine BMI
- Plot BMI-for-age on gender-specific charts (E6 for females, E7 for males)
  - ❖ *Online BMI calculator at*: http://www.cdc.gov/nccdphp/dnpa/bmi/calc-bmi.htm
  - ❖ *Download a calculator for Palm Pilot at*: http://hin.nhlbi.nih.gov/bmi_palm.htm

BMI = kg/m^2 or lb (703)/in^2

BMI 95th percentile:

Overweight

→ **IN-DEPTH MEDICAL ASSESSMENT (E-9)**

BMI between 85th and 95th percentile:

At risk for overweight

ASSESS FOR:

- Patient/family concern about weight
- Large increase in BMI in past year (3 units)
- Hypertension
- Binging/purging behavior
- Family history of:
  - DM
  - Eating disorders, frequent dieting
  - Early onset CV disease (<55 y)
  - Hypertension
  - High cholesterol
  - Overweight/underweight

LABS:
Total Cholesterol

→ **IF ANY POSITIVES**

→ **IF ALL ARE NEGATIVE**

BMI between 5th and 85th percentile:

Normal Weight

- Provide anticipatory guidance in nutrition, body image, tobacco use and physical activity
- Counsel for healthy lifestyle, nutrition, exercise
- Screen and counsel again in one year

BMI 5th percentile:

Underweight

- Assess for disordered eating (E-16)
- Rule out underlying conditions for underweight, paying particular attention to linear growth and menstrual history
- Obtain pertinent family history

Sources:
1) Barlow SE, Dietz DH. Obesity Evaluation and Treatment: Expert Committee Recommendations.....
2) Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Overweight Children and Adolescents: Recommendations to Screen, Assess and Manage. www.cdc.gov/nccdphp/dnpa/growthcharts/training/modules/module3/text/into.htm

Girls BMI for Age Percentile Chart

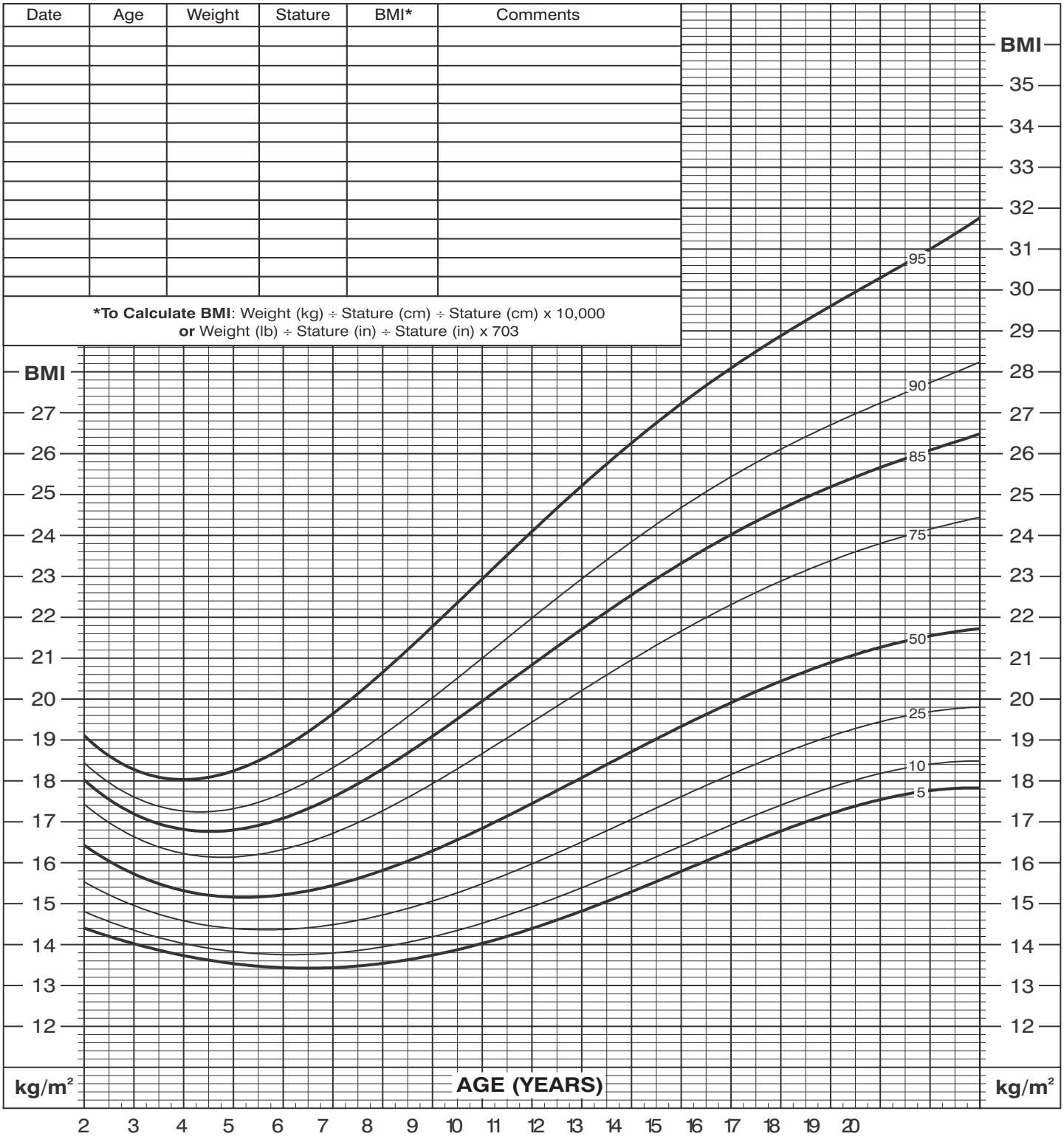
2 to 20 years: Girls
Body mass index-for-age percentiles

NAME _____

RECORD # _____

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



Published May 30, 2000 (modified 10/16/00).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

CDC
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Boys BMI for Age Percentile Chart

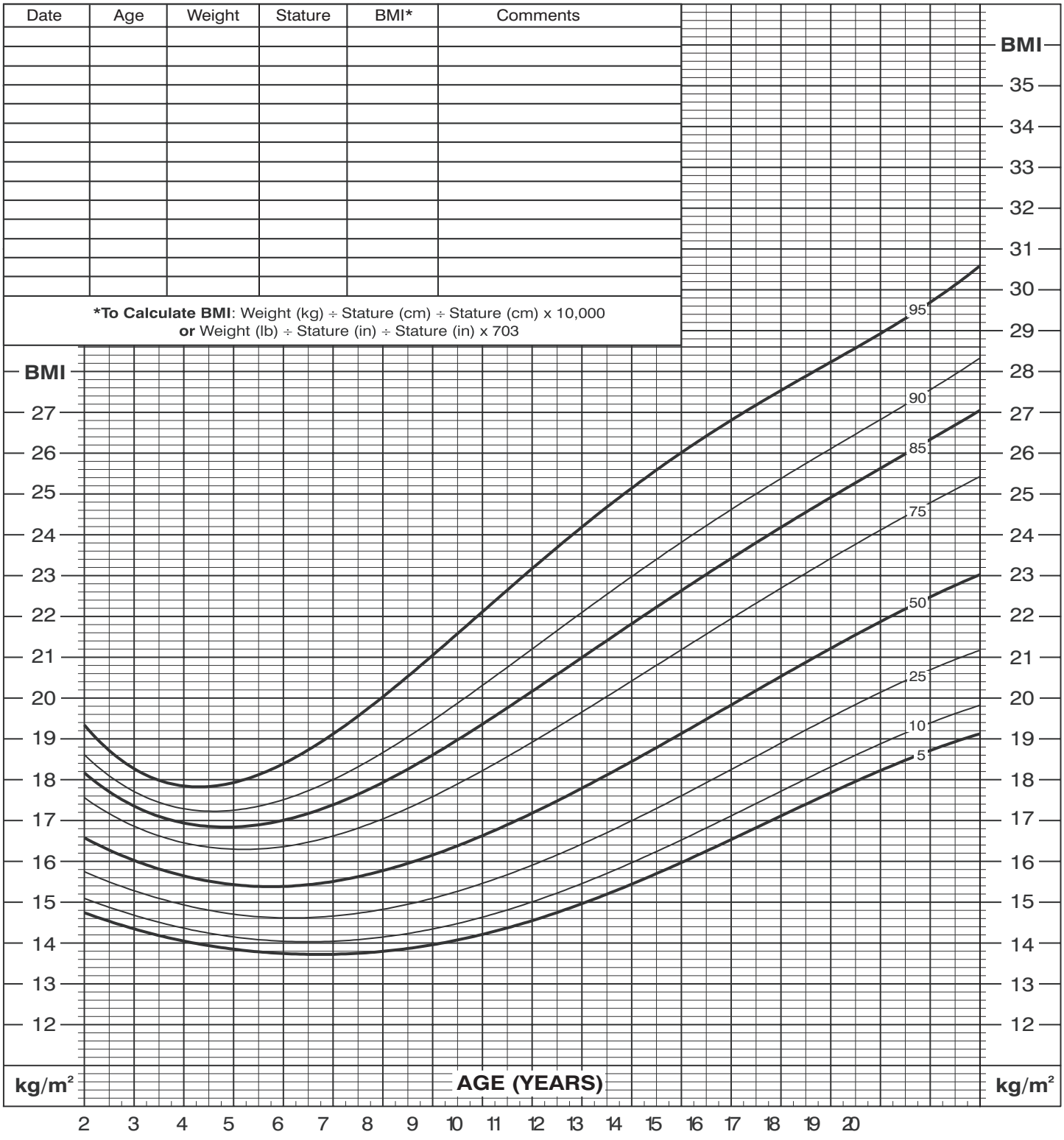
2 to 20 years: Boys
Body mass index-for-age percentiles

NAME _____

RECORD # _____

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



Published May 30, 2000 (modified 10/16/00).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

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Potential Adverse Effects of Ergogenic Aids on Adolescents

ANDROSTENEDIONE

Decreased testosterone.

CREATINE

Muscle cramping, muscle strains, dehydration, kidney stones, diarrhea.

NARCOTICS

Respiratory depression, sedation, nausea, constipation, urinary retention, flushing, pruritis, urticaria, withdrawal symptoms after habitual use.

HUMAN GROWTH HORMONE

Acromegalic syndrome, Creutzfeldt-Jakob disease, hypothyroidism, high blood pressure, increased tendency to sweat, excessive hair growth.

STIMULANTS (AMPHETAMINES, CAFFEINE, EPHEDRINE, SYMPATHOMIMETIC AMINES)

Restlessness, insomnia, anxiety, tremor, palpitations, tachycardia, cardiac arrhythmia, hypertension, disruptions in thermoregulation.

BETA-2-AGONISTS

Tremor, palpitations, tachycardia, cardiac arrhythmia, anxiety, insomnia, headache, nausea.

ANABOLIC STEROIDS

Testicular atrophy, clitoral hypertrophy, menstrual irregularities, gynecomastia, hirsutism, hepatocellular toxicity, hepatocellular carcinoma, hypertension, acne, alopecia, lipid abnormalities, premature epiphyseal closure, mood swings.

VITAMIN A

• Moderate amounts (including Accutane)[1]	• Excessive amounts (>300% of the RDA[2])
None	Fatigue, irritability, increased intracranial pressure, gastrointestinal upset, hepatocellular toxicity, bone and joint pain, hypercalcemia, skin and nail abnormalities.

VITAMIN B_6

• Moderate amounts	• Excessive amounts (>2500% of the RDA)
None	Headache, nausea, sensory neuropathy, hepatocellular toxicity.

NIACIN

• Moderate amounts	• Excessive amounts (>300% of the RDA*)
None	Flushing, pruritis, gastrointestinal upset, skin abnormalities, glucose intolerance, hyperuricemia, hepatocellular toxicity.

AMINO ACID AND PROTEIN SUPPLEMENTS

• Moderate amounts (i.e. <2g/kg body mass/day)	• Excessive amounts (i.e. >2g/kg body mass/day)
None	Dehydration, gastrointestinal upset, hepatotoxicity, renal toxicity, hypercalciuria, gout, impaired essential amino acid absorption.

[1] Accutane side effects not listed here. Because Accutane is a derivative of Vitamin A, providers should be aware of the potential risks if dosage is too high.
[2] RDA: Recommended Daily Allowance

Adapted from: *Bright Futures in Practice: Physical Activity*. National Center for Education in Material and Child Health. 2000; 130-131. Used with permission.

In-Depth Medical/Psychosocial Assessment and Treatment Guidelines for At Risk or Overweight Adolescents

(1) BMI >95th %ile **OR** (2) BMI between 85-95th percentile with risk factors (see E-5)

F AMILY HISTORY

- Obesity/overweight
- Hypertension
- Cardiovascular disease especially 55 year
- Eating disorders
- Dyslipidemia
- Gall bladder disease
- Type 2 diabetes or gestational onset diabetes

P SYCHOSOCIAL EVALUATION

- Patient's and parent/caregiver's concern about weight
- Family dynamics
- Mental health
- Teasing/peer rejection
- Tobacco, alcohol and drug use/abuse
- Self-esteem
- History of abuse (physical, sexual, and emotional)
- Disordered eating (see Algorithm, E-16)
- Patient's and parent/caregiver's readiness to change (E-3)

C URRENT HEALTH HABITS

- Physical activity (active play, sports) on teams in community
- Sedentary time (TV, video games, computer)
- 24-hour and 3-day dietary recall (E-10)
- Eating habits (meal skipping, family meals, binging/purging)
- Nutrition (soda/juice, fast food, fruits/vegetables, calcium, portion sizes, school lunches/breakfasts)

L ABORATORY TESTS

Fasting lipid profile, plasma glucose and insulin, HgA_{1c} and comprehensive chemistry panel including liver function tests. Other tests based on history and PE such as thyroid screen, ECG, sleep study, hip x-rays, chemistry panel.

REVIEW OF SYSTEMS

FINDING	POSSIBLE INDICATIONS (see E-11)
Developmental delay	Genetic disorders
Poor linear growth	Hypothyroidism, Cushing's syndrome, Prader-Willi syndrome, pseudohypoparathyroidism
Headaches	Pseudotumor cerebri
Nighttime breathing difficulty/snoring	Sleep apnea, obesity hypoventilation syndrome
Daytime somnolence	Sleep apnea, obesity hypoventilation syndrome
Enuresis	Sleep apnea
Worsening grades	Sleep apnea
Abdominal pain	Gall bladder disease
Hip or knee pain or waddling gait	Slipped capital femoral epiphysis or Blount Disease
Oligo/amenorrhea or hirsutism	Polycystic ovary syndrome
Polyuria, polydipsea, weight loss/gain	Diabetes Mellitus

PHYSICAL EXAMINATION in addition to height, weight, BP (with proper cuff size), BMI, and Tanner Stages

FINDING	POSSIBLE INDICATIONS (see E-11)
Truncal obesity	Cushing's syndrome, risk of cardiovascular disease
Dysmorphic features	Genetic disorders, including Prader-Willi syndrome
Acanthosis nigricans	Type 2 diabetes, insulin resistance
Hirsutism	Polycystic ovary syndrome, Cushing's syndrome
Violaceous striae	Cushing's syndrome
Papilledema	Pseudotumor cerebri
Enlarged tonsils	Sleep apnea
RUQ abdominal tenderness	Gall bladder disease
Undescended testes (penis buried in fat tissue may appear small)	Prader-Willi syndrome
Delayed puberty	Endocrine disorders
Limited hip range of motion	Slipped capital femoral epiphysis
Lower leg bowing	Blount's disease

Refer to Pediatric Obesity Specialist (see Weight-Control Information Network, www.niddk.nih.gov/health/nutrit/win.htm) when a youth has complications of obesity requiring rapid weight loss. Severe complications include pseudotumor cerebri, sleep apnea, obesity hypoventilation syndrome, and orthopedic problems. Youth with massive overweight, without complications, will also benefit from referral to or consultation with a pediatric obesity treatment center for more aggressive therapy than outlined in following treatment plan.

Treatment Approach for At Risk or Overweight Adolescents

It is critical that clinicians empathize with the patient and family, refrain from criticism and be attentive and sensitive to the economic, cultural and environmental issues and concerns that will influence the teen and family's motivation and ability to engage and participate in the treatment process and plan.

1. Assess for readiness to make changes

Educate youth and family about the medical complications of obesity.
Provide motivational counseling to youth and/or family members who are not ready for change.
Refer teen and family to a therapist with experience in eating disorders to assess the need for individual counseling or family treatment, especially if a parent has an eating disorder.
Provide information to teen and family on community resources for youth development and physical activities and group educational, support, and counseling programs.

2. When ready to initiate a plan of action, establish treatment goals with the teen and family using Communication Guidelines to Promote Health Behavior Change (E-3). Goals may include:

Develop awareness of current eating habits, physical activity, and parenting behavior.
Identify problem behaviors such as consumption of high-calorie foods, eating patterns, and/or barriers to participating in physical activity.
Modify current behaviors and situations by starting with a few small, doable and gradual changes and then add further plans when previous changes are in place.

- Increase activity level and decrease sedentary time.
- Reduce calorie intake by emphasizing a well-balanced healthy food plan with gradual reduction or elimination of specific high calorie foods.
- Stop cigarette smoking and alcohol intake.

Monitor eating and physical activity and associated problems over time by teen and family.
Improve or resolve medical complications such as hypertension, elevated cholesterol and exercise intolerance.

3. Assist parents/adult caregivers so that they have the skills and confidence to support and guide their teen. Suggested parenting skills include:

Praise teen and acknowledge attributes and successes.
When necessary, criticize behaviors, not teen.
Use alternative rewards other than food.
Establish healthy and regular family meals and physically active outings.
Remove temptations.
Be a role model.
Be consistent.

4. Establish continued contact and encouragement with youth and parents over time to praise successes, review progress, identify and create strategies to overcome challenges in order to strive for the following outcomes:

More physically active lifestyle that emphasizes personal choice and enjoyment. Improved physical fitness is associated with lower risk for DM and fewer CHD risk factors, independent of weight status.
Improved body image and self-acceptance (including acceptance of individual differences in body size and shape).
Increase in teenager's responsibility for healthy diet and physical activity choices.
More healthy eating pattern.
Improved ability to deal with teasing and negotiate pressure from peers, family, and others.
Increased ability to talk about feelings.
Normalization of medical indicators (blood pressure, lipid panel, etc.)
Weight stabilization or decreased rate of weight gain.
Improved self-esteem.

Sources:
1) Barlow SE, Dietz DH. Obesity Evaluation and Treatment: Expert Committee Recommendations. The Maternal and Child Health Bureau, Health Resources and Services Administration, Dept. of Health and Human Services. *Pediatrics,* 1998; 102(3):29. Available at: http://www.pediatrics.org/cgi/content/full/102/3/e29
2) Brown WM, Sibille K, Phelps L, McFarland KJ. Obesity in Children and Adolescents. *Clinics in Family Practice,* 2002; 4(3).
3) Styne DM. Childhood and Adolescent Obesity Prevalence and Significance. *Pediatric Clinics of North America*, 2001; 48(4): 823-853.

FOR PROVIDERS: 24-HOUR FOOD RECORD FOR YOUTH

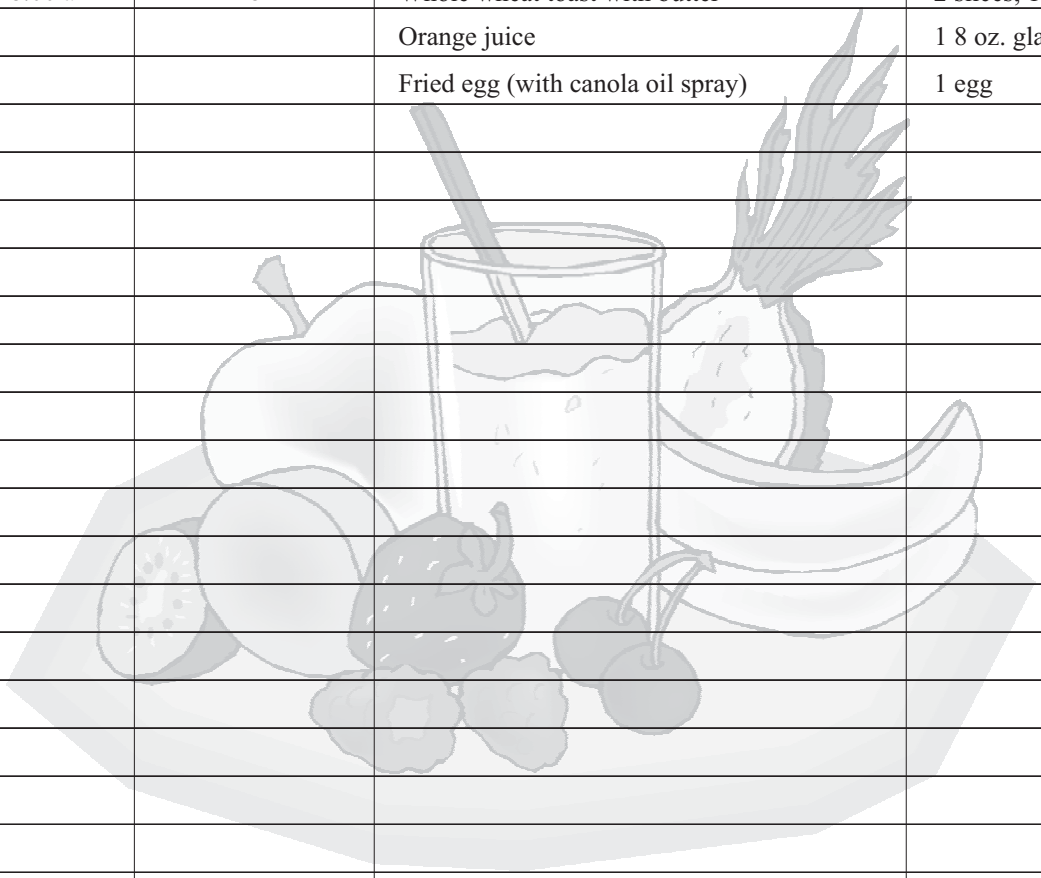
Instructions: ***Fill in all of the foods and drinks you ate in the last 24 hours. Try to add as many details as you can. If you can't remember something, don't worry, just complete as much as possible.***

Name: _____

Date: _____

Water (glasses?) 1 2 3 4 5 6 7 8
Fruits (servings?) 1 2 3 4 5
Veggies (servings?) 1 2 3 4 5

WHERE	TIME	HUNGER LEVEL 1 (NOT) TO 10 (VERY)	WHAT (FOOD/DRINK)	HOW MANY and SIZE OF SERVINGS
Home	8:00 am	8	Whole wheat toast with butter	2 slices; 1 pat
			Orange juice	1 8 oz. glass
			Fried egg (with canola oil spray)	1 egg



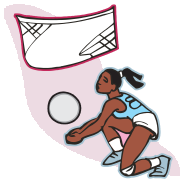
Don't forget to mention as many details as possible, such as:

- **Preparation Method:** fried, battered, baked, steamed, boiled, dried, salted
- **Dairy:** nonfat, 1% (lowfat), 2%, whole, soy, Lactaid
- **Bread/Grains/Tortillas:** white, wheat, whole grain, brown, corn
- **Soup**: veggie, chowder, cream of mushroom, tortilla, chili
- **Beans**: red, lima, black, pinto, garbanzo, refried, lentils
- **Extras**: mayonnaise, mustard, salsa, sour cream, butter, cream cheese, peanut butter, jam, jelly, mustard, honey, vinegar, oil (vegetable, olive, sunflower), gravy

FOR PROVIDERS: 3-DAY PHYSICAL ACTIVITY RECORD

Instructions: ***Fill in your physical activities for the last 3 days. Don't forget to include walking up and down stairs, cleaning around the house, and dancing!! If you can't remember something, don't worry, just complete as much as you can.***

Name: _____ Date: _____



WHEN	WHAT ACTIVITY	INTENSITY	HOW LONG
7:30 am Monday	Walked (uphill) to school	Fast (I was sweating!)	30 minutes
4:00 pm Tuesday	Soccer practice	Moderate	2 hours
5:00 pm Wednesday	Exercise video	Low (pretty easy!)	40 minutes

Overweight Causes and Comorbidities

GENETIC CAUSES

- **Prader -Willi**
  - Presents with growth delay, hypogonadism, mental retardation, small hands and feet.
- **Bardet-Biedl**
  - Presents with growth delay, hypogonadism, polydactyly.
- **Cohen syndrome**
  - Presents with mental retardation, hypotonia, abnormal facies, narrow hands and feet.

REFER TO A GENETICIST

ENDOCRINE CAUSES

- **Hypothroidism**
  - Presents with delayed linear growth or delayed puberty.
  - Evaluate with thyroid function tests (TSH, free T4).
- **Cushing's Syndrome**
  - Presents with delayed linear growth or delayed puberty, hirsutism, truncal obesity, prominent violaceous striae.
  - Evaluate with urine free-cortisol or dexamethasone suppression test.

REFER TO/CONSULT WITH A (PEDIATRIC) ENDROCRINOLOGIST

PHARMACOLOGIC CAUSES

- **Tricyclic antidepressants:** amitriptyline, clomipramine, desipramine, nortriptyline.
- **Antipsychotics:** clozapine, lithium, olanzapine, quetiapine, risperidone, ziprasidone.
- **Anticonvulsants:** valproic acid.
- **Corticosteroids**

REFER TO/CONSULT WITH THE PRESCRIBING SPECIALIST TO CONSIDER ALTERNATIVE MEDICATIONS/LOWER DOSES

PSYCHOLOGIC CAUSES and COMORBIDITIES

- **Eating Disorders:**
  - Screen annually at preventive health visits.
  - Assess thoroughly according to guidelines (E-16) if screening is positive.
  - Refer to therapist and multidisciplinary team with experience in eating disorders for further evaluation and treatment. Do not begin a weight control program without therapist approval.
- **Depression:**
  - Screen annually at preventive health visits.
  - Assess for sleep abnormalities, appetite changes, hopelessness, sadness, suicidal thoughts/plan.
  - Refer to a mental health specialist for psychological evaluation and treatment. Weight management program may be ineffective in the absence of treatment for depression.
- **Low Self-esteem, Teasing and Bullying:**
  - Screen annually at preventive health visits.
  - Assess for social withdrawal, depression, and feelings of self-worth.
  - Refer to a therapist for psychologic evaluation and treatment.
  - Contact school to ensure youth's safety and well-being.

CARDIOVASCULAR COMORBIDITIES

- **Hypertension:**
  - Screen annually at preventive health visits and all overweight adolescents.
  - Refer to E-12 for classification of blood pressure levels and management.
- **Hyperlipidemia:**
  - Screen all overweight adolescents for serum cholesterol and/or fasting serum lipid levels per risk factors.
  - Refer to E-14 for classification and management.

ORTHOPEDIC COMORBIDITIES

- **Slipped Capital Femoral Epiphysis:**
  - Presents with hip or knee pain, limited range of hip motion, and difficulty walking.
  - Confirm with antero-posterior and lateral hip radiographs.
  - Refer to an orthopedic surgeon if positive.
- **Blount's Disease (Tibia vara):**
  - Presents with lower leg bowing.
  - Confirm with radiographs.
  - Refer to an orthopedic surgeon if positive.

NEUROLOGIC COMORBIDITIES

- **Pseudotumor Cerebri:**
  - Presents with a gradual onset of headaches, dizziness, diplopia, unsteadiness, and possible papilledema on eye exam.
  - Refer to a (pediatric) neurologist for further evaluation.

RESPIRATORY COMORBIDITIES

- **Obstructive Sleep Apnea (OSA)/Obesity Hypoventilation Syndrome:**
  - Presents with daytime somnolence, difficulty breathing/habitual snoring during sleep (as reported by family members), restless sleep. Possible physical findings include growth abnormalities, signs of nasal obstruction, adenoidal facies, enlarged tonsils, increased pulmonic component of second heart sound.
  - Refer to a sleep disorders specialist for a sleep study.

ENDOCRINE COMORBIDITIES

- **Polycystic ovarian syndrome (PCOS):**
  - Presents with oligomenorrhea/amenorrhea, hirsutism and acne.
  - Refer to/consult with endocrinologist.
- **Type 2 Diabetes:**
  - Presents with acanthosis nigricans, glycosuria with possible ketonuria, and a likely family history of type 2 diabetes.
  - Refer to E-15 for screening and diagnostic guidelines.
  - Treatment guidelines, refer to: American Diabetes Association. Type 2 Diabetes in Children and Adolescents. *Diabetes Care.* 23:381-389. 2000. (Available at http://www.diabetes.org)

GASTROINTESTINAL COMORBIDITIES

- **Gallbladder Disease:**
  - Presents with right upper quadrant abdominal pain and tenderness (less common in overweight adolescents than overweight adults).
  - Confirm with abdominal ultrasound and possible elevated levels of alkaline phosphatase, bilirubin, AST and ALT, and white blood cell count.
- **Non-alcoholic Steatohepatitis:**
  - Presents with a histologic picture similar to alcoholic hepatitis. Hepatic enzymes and liver size normalize with weight reduction.
  - Confirm with ALT and AST levels and ultrasound.

Sources:

1) Barlow, SE and Dietz, WH. Obesity Evaluation and Treatment: Expert Committee Recommendations. *Pediatrics.* 1998; 102(3).

2) Styne, DM. Childhood and Adolescent Obesity Prevalence and Significance. *Pediatric Clinics of North America.* August 2001; 48(4).

Management of Pre and Stage 1 Hypertension in Adolescents

- Key elements of BP measurement in adolescents include: BP should be measured at least annually; preferred method is by auscultation; cuff must be appropriate to the patient's upper arm size; elevated BP must be confirmed on at least 3 repeated visits before making a hypertension diagnosis; BP measurements >90th %ile obtained by oscillometric devices should be repeated by auscultation.

CLASSIFICATION	BP %ILE
Normal	<90th
Prehypertension	90-95th OR >120/80 mm Hg
Stage 1 Hypertension	>95th-99th %ile plus 5 mm Hg
Stage 2 Hypertension	>99th %ile plus 5 mm Hg

- The definition of hypertension in adolescents is based on BP percentile for age, gender, and height. (see E-13).
- As with adults, adolescents with BP 120/80 mm Hg should be considered prehypertensive.
- White coat hypertension occurs when a patient's BP is > 95th %ile in the medical setting, yet 90th %ile outside of the clinical setting. Ambulatory BP monitoring (ABPM) over 24 hours is useful in the evaluation of this clinical condition.
- In an adolescent population, essential hypertension is a diagnosis of exclusion and secondary causes of hypertension should be ruled out.

  R/O renal causes with CBC (anemia associated with renal disease), UA and serum BUN/creatinine. If lab results suggest renal dysfunction, obtain a renal ultrasound.

  R/O use of substances such as steroids and stimulants that may elevate blood BP.

  Screen and evaluate for hyperlipidemia, type 2 diabetes, sleep disorders and left ventricular hypertrophy (LVH) and other cardiac conditions.
- Adolescents with primary or essential hypertension are usually overweight and have high resting pulse rates, moderate BP elevations with great variability, and family history of hypertension or CV disease.
- Hypertensive adolescents are at serious risk of end organ damage; LVH is the most prominent clinical evidence of target-organ damage caused by hypertension in children and adolescents.

FOR PREHYPERTENSIVE ADOLESCENTS

- **Recommended Lifestyle Changes:** Increase weight reduction, aerobic exercise, intake of fruits, vegetables, fiber and nonfair dairy/milk alternatives and water; decrease sedentary activities, intake of fat, cholesterol and salt; limit/stop use of stimulants, alcohol and tobacco; get plenty of sleep. Encourage family-based interventions.
- **Consider Diagnostic Workup and Evaluation for Target-Organ Damage** if overweight or comorbidity exists, with fasting lipid panel, fasting glucose level, and HbA_{1c}.
- **Recheck BP in 6 months.**

FOR STAGE 1 HYPERTENSIVE ADOLESCENTS

- **Recheck BP over 3 visits** and monitor more closely than prehypertensive patients.
- **Conduct Diagnostic Workup for Evaluation of Target-Organ Damage.**
- **Recommend Lifestyle Changes:** per prehypertensive adolescents (above).
- **Initiate medication if behavioral interventions do not lead to significant BP improvement** within 6-12 months. Start with a single medication with a goal of reducing BP to < 95th %ile or < 90th %ile in patients with chronic renal disease, diabetes, or hypertensive target-organ damage.

MEDICATION

(Note: Make sure to check and use current recommendations as they change frequently!)

- **ACE inhibitors** have been studied in children and have been effective with few side effects. Use caution in patients with suspected renal artery stenosis. ACE inhibitors are teratogenic.
- **Diuretics,** while frequently prescribed for adults, they have not been well studied in adolescents. The side effect of frequent urination may be embarrassing to adolescents and lead to noncompliance. They also cause dehydration and hypokalemia, which can be problematic in athletic youth.
- **Angiotensin receptor blockers (ARBs)** have been studied in children 6 years. Reserve them for use in adolescents who do not tolerate ACE inhibitors. They are contraindicated in pregnancy.
- **Beta blockers** are useful in adults for their cardioprotective effects. However, most hypertensive adolescents do not have ischemic or congestive cardiac disease, and there are many contraindications and side effects (bronchospasm, diabetes mellitus, exacerbation of asthma and depression, decrease exercise performance).
- **Calcium channel blockers** have been shown to be safe and efficacious in most pediatric populations. Common side effects that are problematic in adolescents include hypotension, tachycardia, lower extremity edema, flushing, and headache.

Sources:
1) Pappadis, SL and Somers, MJG. Hypertension in Adolescents: A Review of Diagnosis and Management. *Curr Opin Pediatr,* 2003; 15:370-378.
2) The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents, *Pediatrics.* 2004; 114 (2) 555-576.

Blood Pressure Tables: 50th, 90th, 95th and 99th Percentiles

Classification based on three or more separate seated measurements

Females (11-17 years)

Age	BP percentile	Systolic BP (mmHg) by height percentile							Diastolic BP (mmHg) by height percentile						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
11	50th	100	101	102	103	105	106	107	60	60	60	61	62	63	63
	90th	114	114	116	117	118	119	120	74	74	74	75	76	77	77
	95th	118	118	119	121	122	123	124	78	78	78	79	80	81	81
	99th	125	125	126	128	129	130	131	85	85	86	87	87	88	89
12	50th	102	103	104	105	107	108	109	61	61	61	62	63	64	64
	90th	116	116	117	119	120	121	122	75	75	75	76	77	78	78
	95th	119	120	121	123	124	125	126	79	79	79	80	81	82	82
	99th	127	127	128	130	131	132	133	86	86	87	88	88	89	90
13	50th	104	105	106	107	109	110	110	62	62	62	63	64	65	65
	90th	117	118	119	121	122	123	124	76	76	76	77	78	79	79
	95th	121	122	123	124	126	127	128	80	80	80	81	82	83	83
	99th	128	129	130	132	133	134	135	87	87	88	89	89	90	91
14	50th	106	106	107	109	110	111	112	63	63	63	64	65	66	66
	90th	119	120	121	122	124	125	125	77	77	77	78	79	80	80
	95th	123	123	125	126	127	129	129	81	81	81	82	83	84	84
	99th	130	131	132	133	135	136	136	88	88	89	90	90	91	92
15	50th	107	108	109	110	111	113	113	64	64	64	65	66	67	67
	90th	120	121	122	123	125	126	127	78	78	78	79	80	81	81
	95th	124	125	126	127	129	130	131	82	82	82	83	84	85	85
	99th	131	132	133	134	136	137	138	89	89	90	91	91	92	93
16	50th	108	108	110	111	112	114	114	64	64	65	66	66	67	68
	90th	121	122	123	124	126	127	128	78	78	79	80	81	81	82
	95th	125	126	127	128	130	131	132	82	82	83	84	85	85	86
	99th	132	133	134	135	137	138	139	90	90	90	91	92	93	93
17	50th	108	109	110	111	113	114	115	64	65	65	66	67	67	68
	90th	122	122	123	125	126	127	128	78	79	79	80	81	81	82
	95th	125	126	127	129	130	131	132	82	83	83	84	85	85	86
	99th	133	133	134	136	137	138	139	90	90	91	91	92	93	93

Males (11-17 years)

Age	BP percentile	Systolic BP (mmHg) by height percentile							Diastolic BP (mmHg) by height percentile						
		5th	10th	25th	50th	75th	90th	95th	5th	10th	25th	50th	75th	90th	95th
11	50th	99	100	102	104	105	107	107	59	59	60	61	62	63	63
	90th	113	114	115	117	119	120	121	74	74	75	76	77	78	78
	95th	117	118	119	121	123	124	125	78	78	79	80	81	82	82
	99th	124	125	127	129	130	132	132	86	86	87	88	89	90	90
12	50th	101	102	104	106	108	109	110	59	60	61	62	63	63	64
	90th	115	116	118	120	121	123	123	74	75	75	76	77	78	79
	95th	119	120	122	123	125	127	127	78	79	80	81	82	82	83
	99th	126	127	129	131	133	134	135	86	87	88	89	90	90	91
13	50th	104	105	106	108	110	111	112	60	60	61	62	63	64	64
	90th	117	118	120	122	124	125	126	75	75	76	77	78	79	79
	95th	121	122	124	126	128	129	130	79	79	80	81	82	83	83
	99th	128	130	131	133	135	136	137	87	87	88	89	90	91	91
14	50th	106	107	109	111	113	114	115	60	61	62	63	64	65	65
	90th	120	121	123	125	126	128	128	75	76	77	78	79	79	80
	95th	124	125	127	128	130	132	132	80	80	81	82	83	84	84
	99th	131	132	134	136	138	139	140	87	88	89	90	91	92	92
15	50th	109	110	112	113	115	117	117	61	62	63	64	65	66	66
	90th	122	124	125	127	129	130	131	76	77	78	79	80	80	81
	95th	126	127	129	131	133	134	135	81	81	82	83	84	85	85
	99th	134	135	136	138	140	142	142	88	89	90	91	92	93	93
16	50th	111	112	114	116	118	119	120	63	63	64	65	66	67	67
	90th	125	126	128	130	131	133	134	78	78	79	80	81	82	82
	95th	129	130	132	134	135	137	137	82	83	83	84	85	86	87
	99th	136	137	139	141	143	144	145	90	90	91	92	93	94	94
17	50th	114	115	116	118	120	121	122	65	66	66	67	68	69	70
	90th	127	128	130	132	134	135	136	80	80	81	82	83	84	84
	95th	131	132	134	136	138	139	140	84	85	86	87	87	88	89
	99th	139	140	141	143	145	146	147	92	93	93	94	95	96	97

Source:
The Fourth Report on the Diagnosis Evaluation and Treatment of High Blood Pressure in Children and Adolescents. *Pediatrics.* 2004; 114(2) 555-576.

Blood Pressure Tables: For patients age 18 and older (male and female)

Classification based on the average of 2 seated BP measurements taken at 2 separate occasions)

BP Classification	Blood Pressure (mmHg)		Lifestyle Modification	Initial Drug Therapy (if no diabetes mellitus)	Initial Drug Therapy (with DM)
Prehypertension	SBP: 120-139	Or DHP: 80-89	Yes	No	Yes
Stage 1 Hypertension	SBP: 140-159	Or DHP: 90-99	Yes	Yes	Yes
Stage 2 Hypertension	SBP: 160	Or DHP: 100	Yes	Yes	Yes

Source:
The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. May 2003. http://www.nhlbi.nih.gov/guidelines/hypertension/express.pdf Refer to website for medication treatment guidelines.

Hyperlipidemia in Adolescents

SCREEN TEENS WITH THE FOLLOWING

- Parent or grandparent <55 years of age with a history of premature cardiovascular risk disease per diagnostic tests, clinical diagnosis, cardiac procedure.
- Parent with a total cholesterol level 240 mg/dL.
- Risk factors for coronary heart disease due to obesity, cigarette smoking, hypertension, diet, physical inactivity, diabetes mellitus.

SCREENING TESTS

1. Non-fasting total cholesterol with parental high cholesterol 240 mg/dL or in teens with CHD risk factors.
2. 12-hour fasting lipoprotein analysis in a teen with:
   - Positive family history of premature cardiovascular disease
   - Two total cholesterol measurements that average out to 170 mg/dL.
   - BMI between 85th and 95th percentile for gender and age with hypertension, >3 unit increase in BMI over the last year or cigarette smoking.
   - BMI 95th percentile for age and gender.

CLASSIFICATIONS	Total Cholesterol (mg/dL)	LDL Cholesterol (mg/dL)	HDL Cholesterol (mg/dL)
Desirable	<170	<110	>45
Borderline	170-199	110-129	34-45
High	200	130	<35 (low)

MANAGEMENT

1. **Desirable**
   - Provide routine annual preventive health screening and counseling.
   - Repeat screening in five years.
2. **Borderline**
   - Counsel for healthy lifestyle regarding nutrition (diet low in fat, saturated fats and cholesterol), physical activity and cigarette smoking.
   - Provide education about risk factors for cardiovascular disease.
   - Reevaluate in one year.
3. **High**
   - Counsel for healthy lifestyle regarding nutrition (diet low in fat, saturated fats and cholesterol), physical activity and cigarette smoking.
   - Strongly encourage increasing physical activity and reduction of sedentary activities.
   - Assess for secondary causes including hypothyroidism, diabetes mellitus, corticosteroids, anabolic steroids, certain oral contraceptives, anorexia nervosa, pregnancy and familial disorders.
   - Screen family members.
   - Recheck one-two months after initial consultation.
   - If lipid levels have not improved or dietary goals have not been reached, try more intensive counseling and strongly consider referrals to dietician and specialist(s) with expertise and experience in evaluating and treating adolescents with familial lipid disorders, significant family history of premature heart disease and high cardiovascular disease risk.

Source:
1) *Bright Futures in Practice: Nutrition*. National Center for Education in Maternal and Child Health, Georgetown University, 2002; 183-187.
2) American Academy of Pediatrics, Committee on Nutrition, Cholesterol in Childhood, *Pediatrics.* 1998; 101(1) 141-147.

Type 2 Diabetes in Adolescents

TESTING

1) Criteria
   - Overweight (BMI >85th percentile for age and gender, weight for height >85th percentile, or weight >120% of ideal for height).

PLUS

   - Any two of the following risk factors:

     Family history of type 2 diabetes in first- or second-degree relative.
     Belong to certain racial/ethnic groups (Native American, African American, Latino/Hispanic, Asian American, Pacific Islander).
     Signs of insulin resistance or conditions associated with insulin resistance (acanthosis nigricans, hypertension, dyslipidemia, or polycystic ovary syndrome).

2) Testing initiation age: 10 years or at onset of puberty, if puberty occurs at a younger age.

3) Frequency: every two years.

4) Test: Fasting plasma glucose (FPG) preferred.

NOTE: Clinical judgment should be used to test high-risk patients who do not meet these criteria.

DIAGNOSTIC CRITERIA

1) Symptoms of diabetes plus casual or random plasma glucose concentration 200 mg/dl (11.1 mmol/l). Casual is defined as any time of day without regard to time since last meal. Typically, children/youth with Type 1 are not overweight and have unexplained weight loss, polyuria and polydipsea. Most with Type 2 are overweight or obese at diagnosis and present with glycosuria, without ketonuria, no or mild polyuria and polydipsia and little or no weight loss.

OR

2) FPG 126 mg/dl (7.0 mmol/l). Fasting is defined as no caloric intake for at least 8 hours.

OR

3) 2-h PG 200 mg/dl (11.1 mmol/l) during an oral glucose tolerance test. The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water (not recommended for routine clinical use).

NOTE: In the absence of unequivocal hyperglycemia with acute metabolic decompensation, these criteria should be confirmed by repeat testing on a different day.

There is an intermediate group whose glucose levels, although not meeting criteria for diabetes, are nevertheless too high to be considered altogether normal. This prediabetes group is defined as having FPG levels 100 mg/dl but <126 mg/dl. Thus, the categories of FPG values are as follows:

- FPG <100 mg/dl = normal fasting glucose;
- FPG 100 mg/dl and <126 mg/dl = IFG (Impaired Fasting Glucose);
- FPG 126 mg/dl = provisional diagnosis of diabetes (with confirmed diagnosis as above).

Type 2 Diabetes Treatment Guidelines

1 GOALS OF TREATMENT

- Normalization of blood glucose and HbA_{1c}. For every 1% reduction in HbA_{1c}, the risk of developing microvascular diabetic complications (eye, kidney, nerve) is reduced by 40%.
- Control of associated comorbidities (e.g. hypertension, hyperlipidemia).
- Decrease risk of acute and chronic complications.
- Weight loss or cessation of further weight gain and continued normal linear growth.

2 INITIAL TREATMENT

- For patients who are not ill at diagnosis, initial treatment can be medical nutrition therapy and exercise. However, most patients will eventually require medication.
- Indications for initial treatment with insulin: dehydration, ketosis/ketoacidosis, or markedtly elevated blood glucose levels 250 mg/dl).
- For less ill patients, initial treatment should include dietary and exercise modifications in addition to an oral agent.
- For all patients, identify and treat comorbid conditions (overweight, hyperlipidemia, hypertension).
- For all patients, involve the family and refer to an interdisciplinary pediatric diabetes mellitus management program (pediatric endocrinologist, nurse, dietician, social worker, mental health specialist).

3 ONGOING CARE AND LIFESTYLE CHANGES

- Teach self-monitoring of blood glucose and refer to diabetes self-management program for diabetes education, meal planning, exercise guidelines and blood glucose self-monitoring.
- Diet: Eating meals and snacks at consistent times each day, consistent amount of carbohydrate at each meal/snack, identifying food groups and portion sizes, recognition and treatment of low blood glucose. Refer to dietician with experience in nutritional management of adolescent diabetics.
- Increase exercise and physical activity and decrease sedentary activities.
- Engage and involve family to provide support and healthy role modeling.
- Successful treatment with diet and exercise modifications is defined as: cessation of weight gain with normal linear growth, fasting blood glucose (<126 mg/dL), HbA_{1c} <7%).
- Conduct annual preventive health visits to assess and counsel and for psychosocial assets and risk/problems; monitor diet, exercise, sedentary behavior, BMI, BP, HbA_{1c}, lipid levels (every 2 years if WNL); update immunizations per CDC.
- Encourage annual dental visits at least twice yearly.

4 ORAL AGENTS

- First-line medication: metformin (may normalize ovulatory abnormalities in females with PCOS and increase risk of unplanned pregnancy).
- Do not use any oral agent during pregnancy. All heterosexually-active adolescent females must be using effective contraceptives while on oral agents.
- If adequate glycemic control is not achieved within three to six months, a second agent should be added.

5 MONITORING FOR COMPLICATIONS

- Annual dilated eye exams.
- Annual screening for microalbuminuria (ACE inhibitors are the preferred treatment agents).
- Annual foot exams and advise patient to practice healthy foot care (foot inspections, nail care, footwear, socks).

EDUCATIONAL MATERIALS

American Diabetes Association
http://www.diabetes.org/for-parents-and-kids.jsp

American Dietetic Association
http://www.eatright.org/Public/NutritionInformation/92_11722.cfm

Sources:
1) American Diabetes Association. Consensus Statement: Type 2 Diabetes in Children and Adolescents. *Diabetes Care*. 2000; 23:381-389.
2) Diabetes Coalition of California and California Diabetes Prevention and Control Program. *Basic Guidelines for Diabetes Care*. 2003-2004. www.caldiabetes.org
3) Centers for Disease Control and Prevention. National Diabetes Fact Sheet, 2003. Rev ed. Atlanta, GA: US Dept. of Health and Human Services, CDC 2004.
4) An Update on Type 2 Diabetes in Youth from the National Diabetes Education Program. *Pediatrics*. 2004; 114(1): 259-263.

Eating Disorder Algorithm for Assessment and Intervention

Screen Again at Next Annual Health Visit

1. Ask primary screening questions during annual health visit (E-2).
2. Look for signs of eating disorders (E-17).
3. Determine BMI.

Are any of the above results and responses suggestive of an eating disorder? (see page E-17)

YES

NO

Screen again at next annual health visit

Are responses to secondary screening questions suggestive of an eating disorder? (E-17)

Secondary Screening

- Minimum/maximum weights (with heights)
- Patient's perception of ideal weight
- Current dietary practices
  - 24-hour nutrition and 3-day physical activity record
  - calorie and/or fat gram counting
  - restrictions/taboo foods
- Binging/purging history
- Exercise practices (swimmers, divers, gymnasts, wrestlers, and runners are at increased risk)
- Family history
  - obesity; thinness
  - eating disorders
  - depression/mental illness
  - substance abuse
- Substance use
- Sexual history
- History of physical, sexual, or emotional abuse
- Menstrual history
- Mental health history
- Review of systems
  - Dizziness, syncope, weakness, fatigue
  - Pallor, easy bruising or bleeding
  - Cold intolerance
  - Hair loss, lanugo, dry skin
  - Vomiting, diarrhea, constipation
  - Fullness, bloating, abdominal pain, epigastric burning
  - Muscle cramps, joint pains
  - Palpitations, chest pain
  - Symptoms of hyperthyroidism, diabetes, malignancy, infection, inflammatory bowel disease

YES

IF UNCERTAIN

Rule out other causes with (see E-18 for differential)

- ESR (erythrocyte sedimentation rate)
- Radiographic studies of brain, upper GI system, and/or lower GI system

If no other causes found, continue with full evaluation

NO

Give nutritional, physical activity and body image counseling. Consider scheduling a 6-month follow-up visit

CONDUCT FULL EVALUATION

Assess Medical and Nutritional Status

- Plot height/weight/BMI on growth charts
- Vital signs (including orthostatic BP & pulse)
- Labs: CBC, electrolytes, TSH, LFTs
- **With (+) amenorrhea, consider:**
  - urine pregnancy test
  - serum hormone levels (LH, FSH, prolactin, estradiol)
- **With amenorrhea >6-12 months:**
  - Bone densitometry
- **With bradycardia or electrolyte abnormalities:**
  - EKG

Psychosocial Evaluation

(consult with mental health and/or eating disorder specialist)

Part 1: (Must be conducted at initial visit)
Assess suicidality: *Is patient a danger to himself?*

Part 2: (Conduct at a second visit, if necessary)
Assess for:

- Degree of obsession with food and weight
- Understanding of diagnosis and current health status
- Willingness to receive help
- Functioning at home, in school, and with friends
- Depression, anxiety, obsessive-compulsive disorder (can all be causes, co-morbidities, or consequences)
- History of abuse/violence
- Parents' reaction to illness

Are any criteria for hospitalization present?

NO

- **Refer to or consult with multidisciplinary team for care planning (including dietitian and mental health and/or eating disorder specialist)**
- **Establish plan for follow-up**
- **Remain involved in patient's care**

YES

Admit to hospital

Criteria for Hospital Admission*

- **Hypotension:** B/P <90/45
- **Orthostasis:** (from lying to standing) Drop in systolic BP >10mmHg or increase in pulse >35
- **Severe malnutrition:** Weight <75% of ideal body weight
- **Bradycardia:** Daytime heart rate <50; Nighttime heart rate <45
- **Hypothermia:** Daytime temperature <36.3° C; Nighttime temperature <36.0° C
- **Hypokalemia:** Potassium <3.0 mEq/L
- **Suicidality:** Patient is a danger to him/herself
- **Arrythmias, including prolonged QTc interval**
- **Intractable vomiting or hematemesis**
- **Refusal to eat**
- **Failure to respond to outpatient treatment**

*Source: American Academy of Pediatrics Committee on Adolescence. Identifying and Treating Eating Disorders. *Pediatrics,* 2003, 111(1); 204-211.

Adolescents with Eating Disorders: Definitions, Physical Exam Findings and Differential Diagnosis

DSM-PC DEFINITIONS

Anorexia Nervora (AN) - 307.1

- Refusal to maintain body weight at or above minimally normal weight for age and height.
- Weight loss leads to body weight being maintained at less than 85% of that expected.
- Amenorrhea in females after menarche (the absence of at least three consecutive menstrual cycles).
- Intense fear of gaining weight or becoming fat.
- Distorted perception of own body size or shape and/or denial of the seriousness of current low body weight
- Classified as either the "restricting type" or the "binge-eating/purging type".

Bulimia Nervosa (BN) - 307.51

- Recurrent episodes of binge eating and inappropriate compensatory behaviors to prevent weight gain that occur at least twice a week for three months.
- Preoccupation with body shape and weight.
- Lack of control during binge eating episodes.
- Classified as either the "purging type" (self-induced vomiting or the misuse of laxatives, diuretics, or enemas) or the "non-purging type" (fasting or excessive exercise).

Eating Disorder, Not Otherwise Specified (NOS) - 307.50

- All criteria for anorexia nervosa are met except that the female has regular menses.
- All anorexia nervosa criteria are met except current weight is in the normal range, despite significant weight loss.
- All of the criteria for bulimia nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for a duration of less than three months.
- Regular use of inappropriate compensatory behavior (fasting and/or excessive exercise) by an individual of normal body weight after eating small amounts of food.
- Repeatedly chewing and spitting out, but not swallowing, large amounts of food.
- Binge eating disorder: recurrent binge eating episodes without regular use BN compensatory behaviors.

Refer to the DSM-PC for additional diagnostic criteria for Purging/Binge-Eating Variation (V65.49), Purging/Binge-Eating Problem (V69.19), Dieting/Body Image Variation (V65.49), and Dieting/Body Image Problem (V69.1). Refer to Neinstein page 722 for "Activity Disorder or Compulsive Exercising".

NOTE: An eating disorder can be present in the absence of the established diagnostic criteria. Consider an eating disorder diagnosis when a teen demonstrates obsessive thinking about food, weight, shape or exercise, shows potentially unhealthy weight-control procedures, and/or is unable to attain or maintain a healthy height, weight, BMI, or stage of sexual maturation for gender and age.

PHYSICAL FINDINGS

ANOREXIA NERVOSA (AN)		BULIMIA NERVOSA (BN)	
▸ Bradycardia	▸ Orthostatic by pulse or BP	▸ Sinus bradycardia and other cardiac arrythmias	▸ Orthostatic by pulse or BP
▸ Hypothermia	▸ Cardiac murmur (1/3 MVP*)	▸ Hypothermia	▸ Cardiac murmur - MVP*
▸ Lanugo	▸ Dull, thinning scalp hair	▸ Hair without shine	▸ Russell's sign (callous on knuckles or back of hands from purging)
▸ Atrophic breasts (postpubertal)	▸ Atrophic vaginitis (postpubertal)	▸ Parotitis	▸ Palatal scratches
▸ Pitting edema in extremities	▸ Cold extremities, acrocyanosis	▸ Mouth sores	▸ May look entirely normal or overweight
▸ Flat affect	▸ Emaciated, may wear oversized clothes	▸ Dental enamel erosions	**MVP - Mitral valve prolapse*

DIFFERENTIAL DIAGNOSIS OF EATING DISORDER

- Malignancy, central nervous system tumor.
- Gastrointestinal system: inflammatory bowel disease, malabsorption, celiac disease.
- Endocrine: diabetes mellitus, hypothyroidism, Addison's disease.
- Depression, obsessive-compulsive disorder, psychiatric diagnosis.
- Other chronic disease or chronic infections.
- Superior mesenteric artery syndrome (can also be a consequence of an eating disorder).

Sources:
1) American Academy of Pediatrics, Committee on Adolescence. Identifying and Treating Eating Disorders (2003). *Pediatrics,* 111(1), 204-211.
2) AAP. Diagnostic & Statistical Manual for Primary Care (DSM-PC) Child & Adolescent Version. 1996.
3) Golden, NH., Eating Disorders in Adolescents: Position Paper of the Society for Adolescent Medicine, *Journal of Adolescent Health.* 2003; 33:496-503.
4) Neinstein, Lawrence S., *Adolescent Health Care A Practical Guide*. Philadelphia, PA: Lippincott Williams & Wilkins; 2002.

FOR ADOLESCENTS <5TH PERCENTILE BMI-FOR-AGE

If there are signs/symptoms of disordered eating or other medical conditions, and the patient wishes to gain weight, then encourage weight gain with the following tips:

- ☑ Eat a healthy well-balanced and nutritious diet and exercise regularly.
- ☑ Eat three meals a day plus three to four snacks each day.
- ☑ Increase portion sizes of foods.
- ☑ Choose nutritious foods and beverages with concentrated calories. Examples include: shakes, milk, juice, trail mix, peanut butter, avocados, cheese with crackers, granola, nuts, seeds, and dried fruits.
- ☑ Add healthy carbohydrates and protein to food such as honey, jam, nonfat dried milk powder, wheat germ, soy protein powder.
- ☑ Consider a strength-training routine to help build lean body mass.
- ☑ Eat a healthy snack after physical activity. Try a bagel with peanut butter or hummus, a bag of dry cereal mixed with nuts and dried fruit, instant potato or split-pea soup, bananas or apples, chili with beans, bean and avocado burrito, turkey sandwich, salad with beans and croutons, steamed rice and stir-fry vegetables (in canola or olive oil).
- ☑ Avoid nicotine and caffeine in coffee and sodas.

FACTS

Tips

- **Every teen needs to know that he or she is accepted, loved, and appreciated at any and all weights. The best way to do this is to focus on a teen's health and positive qualities, not on his or her weight.**
- **Focus on slowly improving your entire family's physical activities and eating habits. It helps teens when the entire family is involved and supportive.**
- **A healthcare provider can help with information on how to improve your teen's physical activity, healthier eating, and body image.**

Facts about WEIGHT in teens

- **Adolescent overweight is usually caused by physical inactivity (including watching television and playing computer/video games) and/or unhealthy eating habits. Children (especially girls) become less active during adolescence.**
- **According to overweight teens, the main problem of overweight is social discrimination. Overweight is related to low self-esteem and depression.**
- **Overweight teenagers often realize that they are overweight. As with all teens, they need support, acceptance, and encouragement from their parents and adult caregivers.**
- **Staying at a healthy weight as teens is important because overweight teens have higher rates of type 2 diabetes and a greater risk for developing heart disease than those who are within a healthy weight range.**
- **Overweight teens have a 70-80% chance of being overweight adults.**
- **Doctors and health care professionals are the best people to decide if your teenager is at a healthy weight. They will consider his/her weight, height, age, gender, growth patterns, and general health.**

Facts about WEIGHT LOSS in teens

- Overweight teenagers who are still growing in height may not need to lose weight. If they keep their weight steady or slow down their weight gain, they can "grow into" their weight.
- Any weight loss program for teens should be supervised by a doctor or other health care professional. He or she will help you and your teen plan a safe and nutritious diet.
- Weight loss should be gradual, even with extremely overweight children.
- Crash diets and diet pills can slow growth in height and are not recommended.
- Weight lost during a diet is often gained back unless teens continue eating well and exercising on a regular and ongoing basis.

Adapted from: http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_adolescents.htm

* Available in Spanish, Chinese and Vietnamese at www.ahwg.net

Helping Your Teen Feel Better About Themselves

Caring parents and adult caregivers are the most important role models and teachers that teens have! You have a big role in your teen's health. These seven tips can help your teen as well as your entire family. Check off the ones you will try.

Make family meals an enjoyable and guilt-free experience. Schedule regular mealtimes and snacks. Encourage your teen to help plan, shop, and prepare meals and snacks. Turn off the TV during meals and check in with each other.

Encourage your teen to eat breakfast. Teens that eat breakfast are more successful in school. They behave and concentrate better, score higher on tests, and remember things better than teens that don't eat breakfast. The nutrients missed by skipping breakfast are not made up in other meals later in the day. Good breakfast ideas include fruit, whole grain toast, eggs, oatmeal, and nonfat/lowfat milk. Try to avoid sweetened cereals and white bread.

Set a good example. Shop for and eat healthy foods (fruits and vegetables, whole grains, nonfat/lowfat dairy, and meats that have extra fat or skin removed) and read food labels to make sure you choose foods that are low in saturated and trans fats. Be physically active for at least 30 minutes most days of the week. Be active with your teens by including physical activity in your family routine. Start by walking together at a park, school track, mall, or farmer's market.

Encourage physical activity. Physical activity helps bones grow larger and stronger. Focus on its benefits for health, energy, and stress reduction rather than on exercising to lose weight or burn calories. Your teen should be involved in enjoyable and different kinds of physical activity for 30-60 minutes every day.

Accept people of all body shapes and sizes. Discourage criticism and negative remarks about others. Avoid critical remarks about your own or your teen's body, and don't allow others to criticize or tease.

Help your teen feel good and positive about him or herself. Express the pride and love you have for your teen and admire and value his or her skills, talents, creativity, intelligence, and successes.

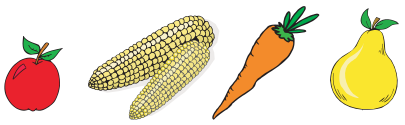
Be aware of dangerous problems. A teen's concern about sports or weight may sometimes lead to problems. Teens involved in activities requiring weight management (ballet, wrestling, swimming, running, and gymnastics) may be at greater risk for an eating disorder (anorexia nervosa or self-starvation). Also, teen athletes may be pressured to use steroids or other muscle and energy boosters, which can be harmful. Overweight kids can be picked on and teased resulting in pain and hurt feelings.

MANY PARENTS AND ADULT CAREGIVERS ASK THE FOLLOWING QUESTIONS ABOUT FOOD AND EXERCISE

QUESTION	ANSWER
I think my teen is too heavy. What's the best way for my teen to lose weight?	Check with your teen's medical provider to find out if your teen is overweight. Encourage your teen to become involved in sports and enjoyable physical activity as a great way to maintain or lose weight. Limit TV, computer, and video game time to less than two hours a day and encourage water rather than soda, sports drinks, and juice drinks.
My teen has become a vegetarian and will not eat meat. What should I do?	Encourage your teen to include whole grains in combination with high protein and high calcium foods in his/her diet. These include yogurt, cheese, milk, soy milk, eggs, beans, spinach, broccoli, and tofu. Taking a multi-vitamin is also recommended to supplement your teen's food choices.
I'm worried my teen has an eating disorder and/or has a negative body image. What are the signs I should be looking for?	Signs of a teen with negative body image and/or an eating disorder are: (1) self-esteem or self-worth based mostly on body size/shape, (2) focus on weight and weight loss, (3) frequent and/or strenuous exercise routine to lose weight, (4) food habits or behaviors that concern you, (5) discomfort around food/meal times, (6) unhappiness with weight and wants a different body. If you notice these things, get help from your medical provider.
I want to help my teen, but my other family members want to eat food that my teen shouldn't eat. What should I do?	That's a great question! The challenge is to get everyone involved in healthy cooking and eating. Try different ways to make family favorites. Some food preparation tips are: choose low or nonfat milk, cheese, or yogurt; broil, grill, bake, steam, or boil food rather than frying; trim the fat from meat and remove the skin from chicken and turkey; use lots of fresh, frozen or canned fruits and vegetables; cook with less fat by using cooking spray or a little vegetable oil; serve fruit for dessert; use herbs, salsa, garlic, chilis, or mustard to spice things up; serve small portions of favorite foods a few times a week. Drink lots of water and save the money you would have spent on sodas, sports drinks and fruit juices for a family event or treat.

Remember to write down your questions and discuss them with your own and your teen's medical provider!

* Available in Spanish, Chinese and Vietnamese at www.ahwg.net



What Is a Single Serving?

Your body needs different servings (or helpings) of food groups. This chart outlines what a single serving looks like in each group.

FOOD	SINGLE SERVING	LOOKS LIKE	SERVINGS PER DAY
VEGETABLES			
Chopped	1/2 cup	1/2 baseball or size of an ice cream scoop	3-5
Raw Leafy Vegetables (such as lettuce)	1 cup	1 baseball/tennis ball or average adult fist	
Vegetable Juice	1/2 to 3/4 cup		
FRUIT			
Whole/pieces	1 medium fresh piece or 1/2 cup chopped, canned, or frozen	1 tennis ball	2-4
Juice	½ cup	1 scoop ice cream	
Dried	1/4 cup	1 golf ball	
GRAINS			
Pasta, Rice, Bread, Hot Cereal (such as oatmeal)	1/2 cup of cooked cereal, rice or pasta	1/2 baseball	6-11
	1 medium potato	Computer mouse	
	1 slice of bread	Hockey puck	
	2 handfuls of baked chips or pretzels		
Cold Cereal	1 oz., which varies from 1/4 cup to 1¼ cup (check label)	*(Note: Most bagels sold in stores are equal to about 5 slices of bread—equals 4-6 servings!!)*	
MEAT/PROTEIN			
Meat, Chicken or Fish	3 oz. (boneless, cooked weight from 4 oz. raw)	Deck of cards or a checkbook	2-3 (for a total of 6-7 ounces)
Tofu	3 oz.	Deck of cards	
Beans (kidney, white, split, blackeye)	1/2 cup cooked (about 5 tablespoons)*	1/2 baseball or small handful	
Nuts and Seeds	2 tablespoons peanut butter* or 1/3 cup nuts	A golf ball	
Eggs	1 egg*	*(Limit egg yolks to 4 a week)*	
DAIRY *(Choose nonfat or lowfat)*			
Milk	1 cup (8 oz. glass)	1 small yogurt container	2-3
Cheese	1½ ounces	1 oz. looks like four dice put together	
Yogurt	1 cup	2 scoops of ice cream	

* equals 1 ounce meat

Adapted from:
1) Severson, Kim. The Obesity Crisis, Perils of portion distortion: Why Americans don't know when enough is enough. San Francisco Chronicle. 3.7.04.
2) Recommendations per Dietary Guidelines for Americans, 2000. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, The Food Guide Pyramid, Home and Garden Bulletin Number 252, 1996.

* Available in Spanish, Chinese and Vietnamese at www.ahwg.net

HEALTHY EATING & SNACKING TIPS

✔ Check out the **FOOD LABEL** so you know what you are eating!

How many servings are you eating?

How many calories are you eating?

Get *ENOUGH* vitamins and minerals!
*5% or less is low
*20% or more is high for 1 serving

Nutrition Facts

Serving Size: 1/4 Recipe (188g)
Servings Per Recipe: 4

Amount Per Serving		
Calories 199	**Cal. from Fat** 45	
		% Daily Value*
Total Fat 5g		**8%**
Saturated Fat 1g		**4%**
Cholesterol 0mg		**0%**
Sodium 245mg		**10%**
Total Carbohydrate 31g		**10%**
Dietary Fiber 8g		**35%**
Sugars 0g		
Protein 10g		

Vitamin A	75%	Vitamin C	40%
Calcium	10%	Iron	20%

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

Get *LESS* saturated fat!
*5% or less is low
*20% or more is high for 1 serving

Use the % daily value (DV) to select foods high in fiber, vitamins and minerals (calcium and iron) and low in fats, cholesterol and sodium.

✔ Before you snack or eat, think about if you're *really* hungry. ***If you're not, hold off!***
✔ Take your time when you eat. Wait 15-20 minutes before eating second helpings. It takes about 15-20 minutes for your stomach to tell your brain that you are full.
✔ Switch to whole grain bread, cereal, pasta, and rice instead of white bread, white rice, and sugar cereal.
✔ Cut back on soda, sports drinks, and juice. Instead try water (eight glasses a day), flavored water, natural tea, lowfat/nonfat milk, and diet soda (if you must have soda!).
✔ Fill up half of your plate with salad or vegetables.
✔ Try fruit for snacks and dessert instead of candy and cookies. If you are going to have sugary foods, sweets, desserts, or candy, eat only a small serving at the end of the meal or share a portion with someone else.

WHAT ABOUT FAST-FOOD RESTAURANTS?

Fast foods can be okay, but watch out for portion sizes, how they're made (baked, grilled, fried, etc.) and toppings.

WHAT ABOUT SNACKS?

There are a lot of healthy snacks, just remember to pay attention to serving sizes!

- A handful of pretzels
- A handful of dried fruit
- Frozen 100% juice bars
- Microwave low fat popcorn
- Rice cakes
- Cup of soup
- Nuts/trail mix
- Half a sandwich
- Cut up vegetables - plain or with low fat dressing
- Low sugar cereal (plain or with low/nonfat milk)
- Fruit (fresh, frozen, or canned in juice/light syrup)
- Low fat or nonfat yogurt or cottage cheese

*Can you believe the difference in the calories?**

Instead of ...	Calories	Go for ...	Calories
Big Mac	590	A regular hamburger	310
Whopper	760		
Quarterpounder	530		
Large fries	520	Small fries (or share a large size with a friend!)	220
Large shakes (32 oz.)	1120	Small shakes (12 oz.)	430
Large sodas (32 oz.)	310	Small sodas (12 oz.)	110
Fried/fillet chicken sandwich or nuggets	510	Grilled chicken sandwich	400
Hamburger with secret sauce, cheese, and mayo	530	Hamburger with lettuce, tomato, ketchup, and mustard	400
One slice of deep dish pizza with pepperoni	275	One slice of thin crust pizza with veggies	142
Small french fries	220	Side salad with light dressing	70

* Calories measure the amount of energy your body gets from food. You need energy to be physically active and for your body to grow and function. The current daily recommended teen calorie levels are: 2500 for males 11-14 years, 3000 for males 15-18, and 2200 for females 11-18.

Building Your Plate for a Better Meal

DAIRY & MILK ALTERNATIVES

Nonfat and lowfat
Milk, yogurt and cottage cheese
Soy milk

WHOLE GRAINS

Whole grain bread
Whole wheat pasta
Brown rice
High-fiber cereal
Whole wheat tortillas
Whole wheat soba noodles
Rice wheat buns

PROTEINS

Fish
Tofu
Eggs
Seeds
Lean meat
Poultry
Beans
Nuts

Vegetables and Salads — Lettuce, collard greens, bok choy, watercress, coriander, bamboo shoots, baby corn, kale, mustard greens, Mexican cactus, yams, chilies, squash, jicama, sweet potatoes, carrots, green peppers, broccoli, cauliflower, eggplant, zucchini, green beans, mushroom, spinach, corn, and potatoes (reduce or avoid french fries)

Fruits — Apple, banana, strawberry, orange, kiwi, mango, grape, pineapple, watermelon, peach, pear, guava, cherimoya

FRUITS & VEGETABLES

Essential fats
Use olive or canola oil for cooking and dressing on salad

Adapted from the UCSF Watch Clinic. Garber, A., Drohr, D. (2003)

* Available in Spanish, Chinese and Vietnamese at www.ahwg.net

Healthy Weight

▶ Why is staying at a healthy weight good for you?

A healthy weight means that you feel healthy in your body and mind, and that you are decreasing your chance of getting diseases such as heart disease, diabetes, and high blood pressure. A healthy weight allows you to be physically active so you can run up and down hills, participate fully in sports and P.E., and help out with family chores. Staying at a healthy weight as a teen will improve the way you feel about yourself and your body and help you manage your weight for life.

▶ How can you get to or stay at a healthy weight?

If you want to lose some weight, try being more active and eating fewer calories each day. Here are some things to try:

✔ Be active almost every day to burn extra calories and get fit.

Play sports, walk to school in a group or with a friend/family member, rollerblade, and ride a bike instead of playing video games and watching TV. Being active doesn't mean you have to exhaust yourself—it's about moving around for 30-60 minutes everyday. Exercise with friends and try different and enjoyable physical activities.

✔ Cut down on calories.

Some simple ways to cut calories include:

1. Drink water instead of soda, juice, or sports drinks. You can cut 100-150 calories every time you do this..
2. Eat a piece of fruit instead of a candy bar or junk food. You will cut about 200 calories or more.
3. Eat smaller portions of food and drink lots of water with meals and snacks.
4. Try some of the ideas in this chart:

❑ **Drink a lot of water throughout your day.** Try to drink at least four 16 oz. bottles of water each day. This will help you digest food.	❑ **Cut down** on foods that are fried, battered and covered in sauces and gravies.
❑ **Drink nonfat/lowfat milk and eat nonfat/lowfat dairy products (cheese, yogurt)** rather than whole milk dairy products.	❑ **Cut back on watching TV, playing video games, and sitting at the computer** to no more than one or two hours per day. Pick a few favorites and skip the rest.
❑ **Increase your intake of fiber-rich foods.*** They are filling and easily digested.	❑ **Avoid eating in front of the TV or computer.** While watching TV, you may keep eating, even when you're not hungry.
❑ **Eat when you are hungry.** Refusing to eat when you are hungry can lead to binging/overeating later. So have a healthy snack if you're hungry, but WATCH PORTION SIZE. Or, share a snack with a friend.	❑ **Don't eat when you're not hungry.** If you feel like munching but you're not really hungry, do something else like go for a walk, call a friend, or read a book. If you really want to snack, eat cut-up vegetables or a piece of fruit.
❑ **Eat slowly.** Stretch your meals to at least 20 minutes. It takes 20 minutes for your brain to recognize that you are full.	❑ **Walk and talk!** When you're talking on the phone, walk around, do squats, sit-ups, or run in place.

*Some examples of fiber-rich foods include:

- **Cereals:** raisin and other bran cereals, shredded wheat, frosted mini-wheats, oatmeal, and puffed wheat.
- **Breads and Grains:** corn tortillas, brown rice, graham crackers, brown bread, dark rye bread, multi-grain, whole grain, brown and rye breads.
- **Vegetables:** carrots, broccoli, peas, lettuce, spinach, sweet potatoes (with skin), string beans, corn, jicama, turnips, lima beans, brussel sprouts, swiss chard, kale, collards, winter squash.
- **Fruits:** apples (with skin), berries, raisins, apricots, oranges, figs, blackberries, prunes, pears (with skin), tangerines.
- **Beans, nuts, and seeds:** almonds, cashews, chestnuts, peanuts, filberts, sesame and sunflower seeds, walnuts, yams, lentils, black, garbanzo (chickpeas), kidney, pinto, split, white (such as great northern and navy) and soy beans.

Adapted from: www.weight-loss-information.featherish.com

Myths and Facts of Dieting

MYTHS	FACTS
1. Fad diets work for permanent weight loss.	**Fact:** Fad diets are not the best ways to lose weight and keep it off. These diets often promise quick weight loss, but this often happens by cutting out important nutrients from your diet. **Better Idea:** To safely lose weight, improve your eating habits and increase your physical activity.
2. Skipping meals is a good way to lose weight.	**Fact:** Your body needs a certain amount of calories and nutrients each day. Skipping meals can cause increased snacking or overeating at the next meal. **Better Idea:** Eat 3 small meals and 2-3 small snacks throughout the day that include a variety of nutritious, low fat, and lower calorie foods. Drink 8 glasses of water every day!
3. I can lose weight while I eat anything I want.	**Fact:** It is *possible* to eat any kind of food you want and lose weight, but you still need to limit the amount of foods AND calories you eat on a daily basis. **Better Idea:** Burn up more calories than you take in by being active and exercising.
4. Eating after 8 p.m. causes weight gain.	**Fact:** It doesn't matter what time of day you eat. It is about how much you eat during the whole day and how much exercise you get that makes you gain or lose weight. **Better Idea:** Try not to snack when doing other activities, like while watching television, playing video games, or using the computer.
5. Certain foods, like grapefruit, celery, or cabbage soup, can burn fat and make you lose weight.	**Fact:** No foods can burn fat. **Better Idea:** The best way to lose weight is to cut back on the number of calories you eat and increase your physical activity.
6. Nuts are fattening and you shouldn't eat them if you want to lose weight.	**Fact:** Nuts are high in calories and fat, but they are also low in saturated fat (the fat that can lead to high cholesterol and increased risk of heart disease). **Better Idea:** Nuts are a good source of protein and fiber, and don't have any cholesterol. In small amounts, nuts can be a part of a healthy weight-loss program.
7. Eating red meat is bad for your health and will make it harder to lose weight.	**Fact:** Red meat contains some saturated fat and cholesterol but also has nutrients like protein, iron, and zinc. **Better Idea:** Eat lean meat (meat without visible fat on it) in small amounts.
8. Fresh fruits and vegetables are more nutritious than frozen or canned.	**Fact:** Most fruits and vegetables are naturally low in fat and calories. Frozen and canned fruits and vegetables can be just as nutritious as fresh. **Better Idea:** Eat lots of fruit and veggies but avoid cream sauces or sugary syrups.
9. Fast foods are always unhealthy and shouldn't be eaten when dieting.	**Fact:** It is possible to make healthy choices at fast food restaurants. **Better Idea:** Choose salads and grilled and baked foods. Use small amount of dressings and condiments.
10. High protein, low carbohydrate diets are a healthy way to lose weight.	**Fact:** In such a diet, most calories come from protein foods (like meats, eggs, cheese) and few from carbohydrates (pasta, bread, fruits, vegetables, rice). These diets can lack important nutrients and the fatty foods in this diet, like bacon and cheese, can cause increased blood cholesterol levels. **Better Idea:** Exercise and eat well-balanced and nutritious meals and snacks.
11. Becoming a vegetarian means you are sure to lose weight and be healthier.	**Fact:** Vegetarian diets can be healthy because they are often lower in saturated fat and cholesterol and higher in fiber. Yet, some vegetarians can eat large amounts of bread and pasta, junk food and snacks. **Better Idea:** Work with your healthcare provider to be sure you are getting all of the necessary nutrients throughout the day and don't forget to exercise.
12. Low fat, reduced fat, and lite all mean the same thing.	**Low Fat:** Three grams of fat or less per serving. **Reduced Fat:** At least 25% less fat per serving than the original food. **Lite:** At least 50% less fat per serving than the original food. **Better Idea:** Check out food labels!
13. Dairy products are high in fat and should be avoided.	**Fact:** Dairy products are your main source of calcium, which is needed to help your bones grow. **Better Idea:** Have 2-3 dairy servings a day. Low or nonfat milk, soy milk, cottage cheese, and yogurt are great dairy options which are low in fat and high in calcium.

Exercise Pyramid

Exercise keeps your body and mind healthy and strong. It can also help you feel better, relax, and sleep well. There are many different ways to be active — you don't have to play a sport or go to the gym to be physically active.

Check out the pyramid for ideas!

HAVE FUN!
Aim for 30-60 minutes a day!

Cut Down On Sedentary (Couch Potato) Activities:

Watching/playing TV, videos/DVDs, computer games, surving the net, sitting for more than 30 minutes at a time

2-3 Times a Week (at least):

Strength and Flexibility
Pull-ups/push-ups/sit-ups, yoga, ballet/dance, karate, tae bo, pilates, weight lifting

3-5 Times a Week (at least):

Aerobic
(at least 20 minutes)
Biking, swimming, jump rope, skating, jogging, hiking, aerobics, exercise videos

Recreation Activities
(at least 20 minutes)
Basketball, soccer, skiing, volleyball, capoeira, skating, dancing, tennis

Every Day (as much as possible):

Take the stairs instead of the elevator, ride your bike or walk to school/the store/a friend's house

Throw a frisbee, walk your or your neighbor's dog, play basketball/softball, help clean up and/or garden at home or in your community

Ways to Increase Your Physical Activity

- ***Add an activity***. Find a new activity that you enjoy.
- ***Replace inactive time with active time***. For example, take a walk instead of watching TV.
- ***Do more of what you are already doing.*** For example, walk for 30 minutes instead of 20.
- ***Work a little harder.*** Turn your walks into power walks or jogs. Walk up and down the stairs instead of riding the elevators and escalators.

Exercising with Asthma

- Talk to your medical provider to figure out what exercises and medications are best for you.
- Always have your inhaler nearby when you are exercising.
- Do not begin exercising when you have asthma symptoms. Always stop if you feel bothered by your asthma.
- Use extra caution when you have a cough, cold, or allergy symptoms.
- Take extra time to warm up and cool down.
- Cover your mouth and nose with a scarf when exercising in cold weather. Breathing cold air can make asthma worse.
- Exercise for short amounts of time and more often. Non-stop activities are more likely to affect asthma.
- Take a warm bath or shower after exercising. This may help post-exercise attacks.

What is Body Image?

BODY IMAGE IS ...

- How you see yourself when you look in the mirror or when you picture yourself in your mind.
- How you feel about your body and appearance, including your height, weight, and shape.
- How you feel *in* your body, not just *about* your body.

Do You Respect Your Body? (circle True or False)

1.	True	False	I often talk negatively about my body.
2.	True	False	I weigh myself more than once a week.
3.	True	False	I would exercise less if appearance did not matter.
4.	True	False	I often compare my looks or body to others.
5.	True	False	I often feel guilty or anxious after eating a high fat food.
6.	True	False	I cannot accept a compliment about my appearance.
7.	True	False	If I had to, I would do unhealthy things to change my weight (such as fasting, taking laxatives, throwing up, or excessive exercising).
8.	True	False	I feel unhappy or discontent with my life at this time.
9.	True	False	I would panic if I gained a few pounds.
10.	True	False	I am dissatisfied with my current body shape and size.

Count the number of questions you answered FALSE and read below to see if you respect your body.

POSITIVE BODY IMAGE IS ...

- A clear, true idea of your shape—you can see your body as it really is.
- You feel comfortable and confident in your body and appreciate your unique physical qualities.

8-10 You seem satisfied with your body! Be a role model for others.

4-7 You may be too hard on yourself. Look below for ways to improve your body image. Or get more information from an organization near you, such as Body Positive. Visit www.bodypositive.com.

0-3 Are you having a rough time right now? Help is available. Find an adult that you trust to talk to about this, such as a doctor, school nurse, school counselor, or family member.

How Can You Improve Your Body Image?

1. **Focus your attention and energy on what you *can* do:**
   - ***Eat well and exercise!*** This will help you develop into your natural weight, and balance the natural chemicals in your brain to help you feel happy. It's never too late to start exercising and eating well.
   - Limit sedentary activity, such as watching TV and movies and playing video/computer games.
   - Choose realistic role models that allow you to feel good about yourself. Remember that advertisers spend tons of money to make you feel there is something wrong with you, so that you will buy their product to "fix" the problem.

2. **Accept what is not in your control.**
   - Understand that bodies develop in ways that you can't always control. However, having a healthy lifestyle will help your developing and changing body.

Eating, Exercise & Body Image Continuum

This continuum represents the range of eating and exercise behaviors and attitudes towards food and body image. The goal is to function in the *Concerned in a Healthy Way* category, which reflects good physical and emotional health. Throughout life, many people move in this continuum due to many factors such as family, culture, friends, school, sports, health, finances, the media, etc. No matter where you fit, there are resources for you.

☑ Check where you are today
◯ Circle where you want to be in the future

FOOD IS NOT AN ISSUE	*CONCERNED IN A HEALTHY WAY*	FOOD PREOCCUPIED/OBSESSED	DISRUPTIVE EATING PATTERNS	EATING DISORDERED
☐ I am not concerned about what or how much I eat.	☐ I pay attention to what I eat to have a healthy body.	☐ I think about food a lot.	☐ My food and exercise concerns interfere with my school, family, and social life.	☐ I worry about what I will eat and/or when I will exercise enough.
☐ I feel no guilt or shame no matter what or how much I eat.	☐ Food and exercise are important but not the major part of my life.	☐ I think and read a lot about dieting, fitness, and weight control.	☐ I use food to make myself feel better.	☐ I follow a strict eating plan and I always know how many calories, fat grams, and/or carbs I eat.
☐ Exercise is not really important to me.	☐ I enjoy eating, but I balance this with my concern for good health.	☐ I sometimes miss school, work, and having fun because of my diet or exercise schedule.	☐ I have tried fasting, diet pills, laxatives, vomiting, or extra time exercising to lose or maintain my weight.	☐ I feel a lot of guilt, shame, and anxiety when I break my diet.
☐ I choose foods based on cost, taste, and convenience.	☐ I usually eat 2-3 balanced meals daily, plus snacks, to get me through the day.	☐ I divide food into 2 categories: "good" and "bad".	☐ If I cannot exercise to burn off calories, I worry.	☐ I regularly stuff myself and then exercise, vomit, or use laxatives to get rid of the food.
☐ I don't worry about meals; I just eat whatever I can, whenever I can.	☐ I have realistic goals for eating well and being physically active.	☐ I feel guilty when I eat "bad" foods or when I eat too much.	☐ I feel strong when I can cut down on how much I eat.	☐ My friends and family tell me I am too thin, but I feel fat.
☐ I enjoy eating lots of tasty food when I have a chance.	☐ Sometimes I eat more (or less) than I really need, but mostly I listen to my body.	☐ I am afraid of getting fat.	☐ I feel out of control when I eat more than I want to.	☐ I am out of control when I eat.
		☐ I wish I could change how much I want to eat and what I am hungry for.		☐ I am afraid to eat in front of others.

BODY IS NOT AN ISSUE	*BODY ACCEPTANCE*	BODY PREOCCUPIED/OBSESSED	DISTORTED BODY IMAGE	BODY HATE - DISASSOCIATION
☐ I feel fine about my body.	☐ I pay attention to my body and my appearance because it is important to me, but it is not a huge deal.	☐ I weigh myself a lot.	☐ I spend a lot of time exercising and dieting to change my body.	☐ I often feel as if my body belongs to someone else.
☐ I don't worry about changing my body shape or weight.	☐ There are some things about my body that I would like to change, but I'm okay with my positive features.	☐ I spent a lot of time looking at myself in the mirror.	☐ My body shape and size keeps me from dating or finding someone who will treat me right.	☐ I hate my body.
☐ I hardly ever weigh or measure myself.	☐ My self-esteem is based on my abilities, talents, and relationships — not just my looks.	☐ I often compare my body to others.	☐ I would like to change my body shape and size by surgery.	☐ I often keep away from others.
☐ My feelings about my body are not influenced by the media or what others think of me.		☐ I have days when I feel fat.	☐ I wish I could change the way I look in the mirror.	☐ There's not much or nothing that's okay about my body shape and size.
☐ I know that my friends and family will always love me for who I am, not for how I look.		☐ I accept society's ideal body shape and size as okay.		☐ I don't believe others when they tell me I look okay.
		☐ I'd be more attractive if I were thinner and more muscular.		☐ I hate the way I look in the mirror.

Adapted from Smiley/King/Avey, 96

Sheri Barke, MPH, RD. COC Student Health & Wellness Center

Checklist for a Healthier Lifestyle

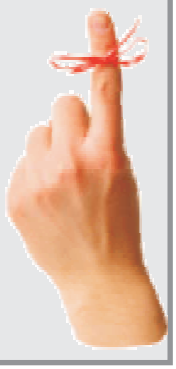
This is a list of suggestions you can use to try to improve your health habits.

Try the following: Choose two or three steps to focus on. Once those steps have become part of your daily life, add another new step.

- ❑ Drink lots (8 glasses a day) of water! Water is the fuel your body needs. Keeping bottles of water around the house and in your backpack makes this easier.
- ❑ Eat breakfast. Skipping breakfast tells your body to store calories as fat instead of burning them up. You definitely do better in school when you eat breakfast. Start your day with whole grain toast, hard-boiled eggs, nonfat or low fat yogurt or cheese, a piece of fruit, or oatmeal.
- ❑ Take your own lunch to school. Make your own lunch the night before. A simple sandwich (with lean deli meat, lettuce, and mustard) with a piece of fruit and/or some veggies and a bottle of water is nutritious and quick to make. Your own lunch can be healthier and better tasting than school lunches.
- ❑ Learn to make your own healthy snacks and meals. Help prepare meals with the person that does most of the cooking in your house This will give you some control over what you eat.
- ❑ Eat dinner with your family at a regular time. Studies show that families who eat together eat healthier. Remember to turn off the TV while at the dinner table. Instead, find out how everyone's day was.
- ❑ Eat more fiber. Eat whole grain bread and bran cereals instead of white bread and sugar cereals. Fiber helps you digest your food and it also makes you feel satisfied.
- ❑ Eat more fruits and vegetables. Have at least 3-5 servings of vegetables and 2-3 servings of fruit each day and eat whole fruit rather than drinking juice.
- ❑ Drink nonfat or 1% milk. Drinking milk builds strong bones (calcium and vitamins). If you are lactose intolerant, you can get just as much calcium by drinking lactose-free milk or soy milk, or taking Lactaid tablets when you eat dairy.
- ❑ Cut down on soda, juice drinks, sports drinks, chips, and candy. These are empty calories with no nutritional value. Did you know that a 20-oz. soda has almost 20 teaspoons of sugar? Too much soda can make your bones thinner and more breakable, and can cause dental cavities.
- ❑ Reduce fast food. If you want fast food, make it a special treat and don't "super size". Once you cut down on fast food, you'll find that you won't really miss it.
- ❑ Pick a new physical activity. It is important that you pick an activity that you enjoy. For example, join a sports team or league, go fast walking in a group every day, or rent and workout with an exercise video/DVD from the public library. Stick with it for 4-6 weeks because this is how long it takes to form a new habit. ***Remember: Exercise is as important as what you eat***.
- ❑ Cut back on TV/video game/computer time. Try to watch or play less than 1-2 hours of TV/computer/video games a day—even during holidays, weekends, and summer vacations. Get rid of your remote controls. *Every little bit helps!*
- ❑ Do fun things with your friends other than eating. Eating is a fun social activity but do other activities with your friends besides eating. Try walking to and from places together.
- ❑ Go food shopping. Once you learn how to make healthy food choices, go to the store and pick out nutritious foods. But remember: It is a bad idea to go food shopping when you are hungry. You'll be tempted to buy junk food.
- ❑ Notice what causes you to over or under eat or eat a lot of junk food. Try different ways of dealing with those situations such as calling a friend, talking to a trusted adult, exercising, listening to music, slow deep breathing, and taking a walk or running in place.
- ❑ Brush and floss your teeth. It's important to take good care of your teeth and gums. Try to brush at least two times a day and floss at least once a day.
- ❑ Make a list of 3-4 important food or activity reminders and put them up where you're most likely to see them, like the refrigerator, bathroom, or near your bed.

THINGS TO REMEMBER

- ▶ The goal is to be more active, have fun, feel good about yourself, and to eat well.
- ▶ Get friends and family to help. It definitely works better when you partner with someone else to make changes in the way you eat or exercise.
- ▶ **You are NOT on a diet!** A "diet" usually means only a short-term change and generally isn't something that is healthy.
- ▶ Limiting foods just doesn't work and causes you to crave "forbidden" food more often. The goal is to maintain healthy eating and exercise habits as a regular part of life. Avoid over and under eating and find a place somewhere in between.
- ▶ **Last BUT NOT least:** Avoid short-term goals because nothing changes overnight. There will be times when it will be rough to stick to the changes you've decided to make. This is okay. Lifestyle change is very difficult for everyone, so try to remain positive and congratulate yourself for the changes you make. ***Hang in there and take one day at a time!***[13]



[13] Adapted from Daniel Delgado, County of Santa Clara

LITERATURE REVIEW

Whitaker, RC. Obesity Prevention in Pediatric Primary Care, *Archives of Pediatric Adolescent Medicine,* August 2003; 157:731-732.

In this editorial, Whitaker addresses four target behaviors that should be discussed with families to help prevent pediatric obesity. Each behavior deals with energy balance, promotes other aspects of child health and well-being, and causes no harm. By *limiting television viewing,* Whitaker argues that weight gain can be affected and aggressive behavior may be reduced. When parents *encourage outdoor play*, they are also promoting social and cognitive development in their children in addition to the benefits of physical activity. Health care providers should *encourage breastfeeding*, since it has been shown to help with childhood obesity prevention, although the mechanism is not will understood. Finally, pediatricians are told to discuss *limiting the consumption of sugar-sweetened soft drinks* with families. The article stresses the importance of identifying the family's social and emotional context including their perceptions of overweight and obesity when discussing these topics. The physician may emphasize that the "prescription" is intended to promote a healthy lifestyle in addition to its goal of obesity prevention.

Gaesser, GA. Is It Necessary to be Thin to be Healthy? *Harvard Health Policy Review,* Fall 2003; 4(2).

This article addresses the questions: "Is weight loss necessary to improve weight-related health problems?" and "Should weight loss be the course of action for overweight and obese persons?" Gaesser argues that factors such as fitness levels, diet and dieting history, weight fluctuation, use of weight loss drugs, and less than adequate access to health care should be examined in studying mortality in obese persons rather than attributing mortality directly to obesity. He cites studies that suggest that aerobic fitness levels may determine most of the risk associated with body weight. The article proposes that high blood pressure, high cholesterol, and insulin resistance can be improved independently of weight loss by increased exercise and increased consumption of fruits and vegetables. In addition, it is suggested that lifestyle intervention may be as good as, or better than, pharmacotherapy. Gaesser puts forth the idea that a healthy lifestyle approach should be used in treating overweight individuals rather than a focus on reduction of body weight and body fat. With this approach, the concept that "fit and healthy bodies can come in all shapes and sizes" can be adopted.

Golden, NH., et al. Eating Disorders in Adolescents: Position Paper of the Society for Adolescent Medicine, *Journal of Adolescent Health, 2003;* 33:496-503.

This position paper deals with the diagnosis, nutritional disturbances, psychosocial and mental health disturbances, treatment guidelines, and barriers to care of eating disorders in adolescents. It also briefly addresses the harmful pro-anorexia and pro-bulimia websites available on the internet, as well as the directions in which future research should be focused. The article suggests that the diagnosis of eating disorders should be considered when a number of different presenting factors are present, even if the diagnostic criteria are not precisely met. Because these disorders have such a profound impact on the well-being of adolescents there needs to be a lower threshold of intervention in teens with potential eating disorders than in adults. Furthermore, appropriate nutritional management needs to take both the age and development of the adolescent into account. Mental health intervention is necessary, and family therapy is recommended. Treatment is most effectively achieved by an interdisciplinary team with experience in adolescent eating disorders. Some barriers to care include insurance coverage and reimbursement insufficiencies, limited access to appropriate care, and ambivalence o r resistance to diagnosis and/or treatment by the patient or family.

American Academy of Pediatrics Committee on Nutrition, Cholesterol in Childhood, *Pediatrics,* January 1998; 101(1).

This statement by the Committee on Nutrition is a review of nutrient recommendations for children and adolescents to help lower blood cholesterol and therefore help reduce the risk of atherosclerosis. Clinical trials have suggested that there is a decrease in the incidence of coronary heart disease and in all causes of mortality when cholesterol levels are lowered. The article cites the Dietary Intervention Study in Children which found that a diet lower in saturated fats and cholesterol results in lower LDL levels. Because there is no long-term evidence that can compare the relationship between blood cholesterol levels in children and the atherosclerotic process, many convincing examples are provided which infer this relationship. Two different strategies for lowering cholesterol are presented: the population approach and the individualized approach. Further recommendations include who should be screened, what tests should be performed, how different severities of cholesterol levels should be managed, and indications and recommendations for drug therapy. A nutrient intake is delineated suggesting that saturated fatty acids should be <10% of total calories, total fat over several days should be no more than 30% of total calories and no less than 20% of total calories, and dietary cholesterol should be <300 mg per day.

Literature Review - cont'd

Pappadis, SL and Somers, M. Hypertension in adolescents: a review of diagnosis and management: *Current Opinion in Pediatrics,* 2003; 15:370-378.

This article deals with the diagnosis and management of hypertension in the adolescent population. Although hypertension is seen in only 1% of children and adolescents, identifying the cause of hypertension and treating it is important in reducing long-term risks such as cardiovascular morbidity and mortality. In order to determine hypertension in the adolescent, factors such as age, gender, height percentile, and blood pressure reading are needed. From this information, normative data charts can be used to determine the severeity of the hypertension. Blood pressure measurements can be affected by the type of meter, patient anxiety, position of the arm, size of the cuff, and observe error. Ambulatory blood pressure monitoring (ABPM) m ay be used if necessary. The article lists the different causes of hypertension in adolescents which include essential and secondary causes, and further addresses the specific causes. The correct techniques used to determine a potentially hypertensive teen are discussed, including physical exam tips, and suggestions for a urine sample, blood test, renal ultrasonography, and ECG. Treatment plans include lifestyle modification such as weight reduction, aerobic exercise, salt restriction, and cessation of tobacco and exogenous stimulants. Finally, the use of pharmacologic agents is addressed, with descriptions of the modes of action, efficacy, and side effects for diuretics, ACE-inhibitors, ARBs, beta-blockers, and calcium channel blockers.

Barlow, SE and Dietz, WH. Obesity Evaluation and Treatment: Expert Committee Recommendations, *Pediatrics,* September 2003; 102(3).

This comprehensive article discusses recommendations to healthcare providers in the evaluation and treatment of overweight children and adolescents. Barlow and Dietz recommend using a BMI to assess obesity. Specifically, a BMI of greater than or equal to the 95th percentile indicates the necessity to undergo in-depth medical assessment. A BMI between the 85th and 95th percentile indicates that evaluation is needed, especially for hypertension and dyslipidemias. Barlow and Dietz advise healthcare providers to use appropriate language when discussing overweight with adolescents and to attempt to understand each family's living situation, schedule, and values. In the initial medical assessment, one must look for any underlying causes of obesity such as genetic, endocrine, or psychological disorders. In addition, secondary complications should be screened for which include hypertension, dyslipidemias, orthopedic disorders, sleep disorders, gall bladder disease, and insulin resistance. Barlow gives recommendations for when referral to a pediatric obesity specialist is needed for optimal treatment. In the evaluation for treatment, assessments must be made as to the family's readiness to change, and the dietary intake and physical activity history of the patient. The article stresses that the goal of therapy should be healthy eating habits and an increase in activity level. Other tips include beginning lifestyle modifications early, involving the family, and instituting permanent changes in a stepwise manner.

American Diabetes Association. Type 2 Diabetes in Adolescents and Children, *Diabetes Care,* March 2000; 23(3).

This consensus statement written by a panel of experts in the various fields of diabetes and pediatric answers six specific questions about type 2 diabetes in children and adolescents. It addresses the criteria for the diagnosis and various etiological classifications of diabetes. Specifically, for non-immune mediated type 2 diabetes, patients are typically overweight or obese at the time of diagnosis, and may present with glycosuria, a family history of type 2 diabetes, and acanthosis nigricans or PCOS. Many different studies are cited to answer the question about the epidemiology of the disease in children. Most studies have found that there is an increasing trend of type 2 diabetes in younger children and this may be due to an increase in obesity and a decrease in physical activity. When discussing the pathophysiology, it is noted that both genetic and environmental factors are playing a role. Evidence in children and adolescents suggests that the initial abnormality is impaired insulin action, compounded later with beta-cell failure. It is also noted that growth hormone, puberty, and race/ethnicity may play roles during the onset of the disease as well. The article recommends that all obese children with a positive family history of type 2 diabetes or signs of insulin resistance be tested. The goal of treatment of these adolescents should be normalization of blood glucose values, control of hypertension and hyperlipidemia, and a reduction in the risk of the acute and chronic complications associated with diabetes. Finally the article discusses whether or not type 2 diabetes in adolescents can be prevented. The article suggests encouraging lifestyle modifications such as increasing physical activity, weight management, and improving dietary behaviors for all children and families.

California Resources

ORGANIZATION	RESOURCES AVAILABLE/DESCRIPTION	CONTACT INFORMATION
CA Dept. of Health Services	This website is designed to help you access many of the excellent publications produced by the California Department of Health Services in both print and electronic formats.	www.dhs.ca.gov/healthpubfinder/ email: healthpub@dhs.ca.gov
CA Dairy Council	▶ Lesson plans are available for all grades on nutrition and physical activity, including a kindergarten program. ▶ An interactive website with sections for kids/teens. ▶ Booklets with key health information in Spanish, Chinese, Korean, and other languages *(free for California)*.	(888)-868-3133 www.dairycouncilofca.org
CA Healthy Kids Resource Center	▶ Health education materials including curricula, books, and videos catalogued in a searchable database. ▶ All materials are loaned free of charge.	*Request materials via online catalog* www.californiahealthykids.org
CANFit (CA Adolescent Nutrition & Fitness)	▶ Provides a funding source for community-based projects focused on non-white youth. ▶ Summaries of successful community interventions. ▶ Lesson plans, curricula, posters and booklets *(medium cost)*.	(510)-644-1533 www.canfit.org
Center for Weight and Health, UC Berkeley	▶ Brochures for Parents: • *Children and Weight: What's a Parent to Do?* #5367ANR • *If My Child is Overweight, What Should I Do About It?* #21455 • *Children and Weight: What Health Professionals Can Do Training Kit #3416* ▶ Key Links to program summaries, literature reviews, current activities, community organizations, etc. *(high cost)*.	(510) 642-1599 (510) 642-4612 (fax) www.cnr.berkeley.edu/cwh/
The California Nutrition Network for Healthy Active Families	▶ Nutrition and Physical Activity Resource List: A list of nearly 200 nutrition and physical activity education materials compiled over the last seven years. ▶ Project Directory 2002-03: The annual compilation of *Network* funded projects that promote eating more fruits and vegetables and being physically active *(free)*.	www.dhs.ca.gov/ps/cdic/cpns/network/download/ResourceListWinter2004.pdf www.dhs.ca.gov/ps/cdic/cpns/network/download/proj_dir/All_Project%20Directory%202002-2003%20BW.pdf
California Diabetes Prevention and Control Program (DPCP), Dept. of Health Services	▶ Web site provides useful information for organizations working to prevent diabetes and its complications. ▶ Download the Basic Guidelines for Diabetes Care and patient educational resources in 14 languages. ▶ Join the mailing list to receive news on diabetes and resources in California	www.caldiabetes.org (916) 552-9988

ORGANIZATION	RESOURCES AVAILABLE/DESCRIPTION	CONTACT INFORMATION
Child Health and Disability Prevention (CHDP)	▶ Brochures and flyers. ▶ The CHDP program is a preventative health program which makes early health care available to Californian's children and youth.	www.dhs.ca.gov/pcfh/cms/chdp/publications.htm Order by fax: (909) 358-5885
California Dept. of Health Services Children's Medical Services	Forms and Publications Catalog for use by local California Children's Services (CCS) and Child Health and Disability Prevention Program (CHDP) programs *(free)*.	www.dhs.ca.gov/pcfh/cms/publications/pdf/catalog.pdf
Maternal Child Health Branch CA Dept. of Health Services	▶ Nutrition guidelines for adolescents. ▶ Cookbook for Teens: *Fast Meals and Quick Snacks (free)*.	www.mch.dhs.ca.gov/programs/aflp/NutServ.htm www.mch.dhs.ca.gov/documents/pdf/cookbook.pdf
PACE: Patient-Centered Assessment and Counseling for Exercise and Nutrition	▶ A comprehensive approach to brief physical activity and nutrition counseling. ▶ Physical activity and nutrition manual *(high cost)*.	5500 Campanile Drive San Diego, CA 92182-4720 (619) 594-5949 (619) 594-3639 (fax) project.pace@sdsu.edu www.paceproject.org
California County Food Assistance Binder, 2002	Rankings for each county within California relating to food security, hunger, use of federal food assistance programs, and body weight status of low-income children *(free)*.	www.dhs.ca.gov/ps/cdic/cpns/research/food_assist_02.htm
USDA's Community Nutrition Mapping Project (CNMap)	Includes information on nutrient intakes, physical activity and body weight, healthy eating patterns and food security *(free)*.	www.ba.ars.usda.gov/cnrg/index.html
California Department of Education	▶ School Nutrition: provides information about meal and milk programs offered at public and private schools and residential child care institutions. ▶ Educational Resources Catalog: page 12 has materials regarding nutrition *(free)*.	www.cde.ca.gov/re/pn/rc
California Project LEAN	▶ Educational materials. ▶ Research and policy papers. ▶ Interactive website for teens.	P.O. Box 997413 Sacramento, CA 95899-7413 (916) 552-9907 (916) 552-9909 (fax) www.californiaprojectlean.org

HEALTHY LIFESTYLES

www.cdc.gov/youth campaign
CDC Youth Media Campaign: VERB. It's what you do. VERB encourages youth 9-13 years (tweens) to be physically active everyday with specific web pages for tweens (very fun and interactive) and parents. In English and Spanish.

www.aap.org
American Academy of Pediatrics has information, education, resources, publications, and policy statements.

www.cspinet.org/smartmouth/
Center for Science in the Public Interest's interactive website, *Smartmouth,* features games, recipes, fast facts, and other fun things for kids and teens.

www.bam.gov/
BAM! Body and Mind is a CDC site designed for kids 9-13 with games and information on mental health, disease, and healthy life strategies.

www.girlpower.gov/girlarea/bodywise/index.htm
Girl Power! US Dept. of Health and Human Services targets health messages to the unique needs, interests, and challenges of girls 9-13 years. The Bodywise web page covers body image, eating right, feeling fit, eating disorders and health maintenance.

www.kidnetic.com/
Kraft Kidnetic ACTIVATE's interactive and fun site provides exciting examples of healthy games, activities, and recipes.

www.fns.usda.gov/eatsmartplayhard/
Eat Smart. Play Hard. US Department of Agriculture. A site to view and order resources about practical suggestions to help motivate children and their caregivers to eat healthy and be active.

www.cnpp.usda.gov/FoodPlans/TFP99/food$pdf.PDF
A 35-page USDA publication, *"Preparing Nutritious Meals at Minimum Cost",* is geared to families.

Keyword search: Dance Dance Revolution or DDR.
Popular, interactive video games which are fun and encourage physical activity.

www.teengrowth.com
Excellent website geared to teens with lots of information (by MDs) on puberty, family, friends, sex, emotions, nutrition and exercise and includes a BMI calculator.

www.eatright.org/Public/
American Dietetic Association is committed to helping people enjoy health and primarily focuses on obesity and overweight, aging, complementary care and dietary supplements, safe and nutritious food supply and human genome and genetics. Multiple fact sheets are available.

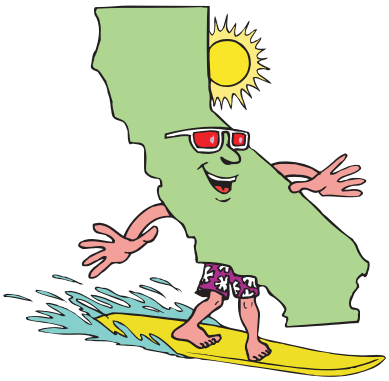
Healthy Lifestyles - cont'd

http://ucce.ucdavis.edu/files/filelibrary/2372/15849.pdf
A publication of University of California, this handout provides excellent information for youth on healthy eating and teaches the proper way to read the food label.

www.5aday.gov
The National Cancer Institute's Eat 5 To 9 A Day For Better Health offers recipes, food ideas and information and Body and Soul, a wellness program for African American churches.

www.about-face.org
A cheekier site, by About-Face, addresses body image and the media's influence.

www.kidshealth.org
Nemours Foundation's site has extensive adolescent health information for teens and parents in Spanish and English. A BMI calculator is in both the teen and parents websites.



OVERWEIGHT

www.kidsnutrition.org/bodycomp/energy/energyneeds_calculator.htm#bmi
Baylor College of Medicine Children's Energy (Calories) Needs Calculator. A site to calculate a child's energy/caloric needs and BMI. Explanations of results and extensive resources are provided.

www.cdc.gov/nccdphp/dnpa/growthcharts/training/modules/module1/text/mainmodules.htm
This CDC site provides step-by-step learning modules on how to access and use growth and BMI charts and screen, assess, and manage overweight in children and adolescents.

www.niddk.nih.gov/health/nutrit/win.htm
Weight Control Information Network (WIN), Nat'l. Institute of Diabetes and Digestive & Kidney Diseases provides extensive information on weight control, obesity, physical activity and related nutritional issues with teen specific information.

Overweight - cont'd

www.nhlbi.nih.gov/about/oei/index.htm
Obesity Education Initiative, National Heart, Lung, and Blood Institute provides extensive information for patients, families, providers, and researchers.

www.surgeongeneralgov/topics/obesity/
The Surgeon General's Call To Action to Prevent and Decrease Overweight and Obesity (2001) outlines strageties that communities can use to address overweight and obesity.

www.bodypositive.com
Body Positive! focuses on the steps and resources to improved self-image at any size or weight.

www.thebodypositive.org
The Body Positive produces educational materials, provides consultations and trainings to help young people adopt the Health at Every Size philosophy, to enjoy healthy eating and physical activity in one's natural body.

EATING DISORDER RESOURCES

www.somethingfishy.org/
An excellent site for support and information, directed towards people with eating disorders and their loved ones.

www.foodaddictsanonymous.org
This website introduces a method of defeating food addiction and supplies resources for such a method.

www.edreferral.com/
The International Eating Disorder Referral Organization's site has good general information on eating disorders and a nationwide search engine for referrals.

www.eatingdisorderscoalition.org/
The EDC's site mainly focuses on the importance and current events of eating disorders in the political sphere.

www.edap.org
The National Eating Disorders Association's site has a wide variety of comprehensive information (for men, women, parents, providers and in Spanish) and a referral list.

OTHER HEALTH CONDITIONS

www.nhlbi.nih.gov/health/public/heart/
National Heart, Lung, and Blood Institute has extensive prevention and treatment resources on high blood pressure, cholesterol, and cardiovascular diseases. There are materials specifically for women, African Americans and bilingual publications in Spanish, Vietnamese, Tagalog and English.

Other Health Conditions - cont'd

www.diabetes.org/home.jsp
American Diabetes Association funds research, publishes scientific findings, provides information and other services to people with diabetes, their families, health professionals, and the public. They have lots of information specifically for young teens (Youth Zone) and for a broad range of ethnic and racial groups in multiple languages.

www.ndep.nih.gov/
National Diabetes Education Program is a partnership of the NIH, CDC and more than 200 public and private organizations. This site has many great resources in Spanish and Asian languages. Download Tips for Kits with Type 2 Diabetes at 222.ndep.nih.gov/diabetes/pubs/Youth_Tips_Active.pdf

CULTURALLY SPECIFIC RESOURCES

www.semda.org
Southeastern Michigan Dietetic Association provides multiples ethnic food pyramids and excellent nutrition information.

www.omhrc.gov/OMHRC/
Office of Minority Health offers a number of databases, resources, and publications on health-related topics.

www.nal.usda.gov/fnic/etext/000010.html
Ethnic and cultural resources on disease, food habits, food pyramids, and cultural diversity and eating in America and throughout the world. Resources specific to Native Americans are also available. Provided is a wide array of linkages to multiple organizations and multi-lingual materials and resources.

www.americanheart.org
American Heart Association offers a free cookbook and information on healthy lifestyle options for families in English and Spanish.