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# Child and Adolescent Obesity

## Position Statement

The Child and Adolescent Obesity Task Force includes professionals representing a variety of agencies that work with Iowa youth, ages 0-21, and encourages Iowans to address the problem of obesity. The Task Force proposes reversing the upward trend in childhood obesity prevalence by:

- Increasing awareness of obesity as a public health issue that seriously impacts children's quality of life.
- Promoting education for parents and professionals regarding prevention and appropriate intervention.
- Encouraging parents and caregivers to choose and model healthy lifestyles.
- Encouraging communities to mobilize resources, creating opportunities for children and families to choose healthy lifestyles.

## Introduction

Childhood obesity is a major concern in the United States and in Iowa. The National Health Examination Surveys (NHES) and National Health and Nutrition Examination Surveys (NHANES) monitored obesity for children based on a Body Mass Index[1] for age and sex at or above the $95^{th}$ percentile. The prevalence of obesity increased from 5.2% to 10.9% for children ages 6 to 11 between 1963 and 1991. Similar increases were noted in the 12 to 17 year old age group, with obesity prevalence rising from 5.2 to 10.8% (1). In Iowa, ongoing surveillance of children ages 0 to 5 participating in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC Program) demonstrates a steady increase of overweight at the $95^{th}$ percentile weight for height from 7.6 percent in 1985 to 10.1percent in 1999 (2). In 1999, 34.2 percent of Iowa youth participating in the Youth Risk Behavior Survey (YRBS) "thought they were overweight" (3). Self reported data in the YRBS may over report the prevalence of overweight.

Studies have documented that between 25 percent and 50 percent of obese adolescents remain obese into adulthood (4). The risks of obesity in children and adults include early maturation, hyperlipidemia, Type 2 diabetes and cholelithiasis as well as increased risk for sleep apnea, orthopedic complications, pseudotumor cerebri and polycystic ovary disease (5). An association between overweight in childhood and adult weight increases with the age of obesity onset (6). The earlier the age of onset of obesity, the greater the likelihood and severity of obesity and it's long-term health complications (7). Psychological concerns include preoccupation with body image, disordered eating practices, lack of self-confidence, lower self-concept, depression, and peer rejection (8, 9, 10).

Childhood obesity is a complex disorder involving both genetic and environmental factors (11). The success of treatment is dependent on a number of factors. While research holds promise for improving the outcomes of treatment (12), prevention is the preferred option.

Prevention avoids the pitfalls of dieting in children: possible negative impact on growth and development, body image distortion, learning restrictive eating practices, eating disorders and inappropriate control by adults to a child's intake (13, 14). Prevention efforts can be incorporated into home, health care, child care, school and community settings and include healthy eating, appropriate physical activity, providing nurturing environments and fostering a healthy body image.

## What is Obesity?

Obesity is a chronic disease defined as the presence of excess adipose tissue (15). Body Mass Index (BMI) is currently the preferred standard for evaluating weight status in children(16). A BMI greater than the 95$^{th}$ percentile for age is strongly indicative of obesity in children and adolescence. Children with a BMI between the 85$^{th}$-95$^{th}$ percentile and those who exhibit an excess rate of weight gain are considered at high risk for developing obesity (13). BMI scales and standardized growth charts are available to compare children's size and growth patterns to standards (see appendix E). Growth charts showing weight for height are used for children up to two years of age and BMI for age is used for children ages 2 through 20.

Children with a positive family history for obesity and those with a chronic illness or disability are at high risk for development of obesity (17). Risk of obesity crosses all social-economic and ethnic groups, but is slightly more prevalent in low income groups, Native American, Hispanic and African American populations (18, 19).

## Prevention of Obesity

Parents, schools and the community should model, support and ensure access to the components of a healthy lifestyle as described below. Each of the following principles is equally important.

**A positive and healthy emotional lifestyle**. Obesity prevention places emphasis on developing healthy lifestyles and creating a positive environment, rather than attaining an ideal body weight. All children are recognized for their successes regardless of body shape and individual differences are accepted. Interventions consider the psychological impact on the child and the child's body image.

**Self reliance.** Children need guidance in developing social competency to meet needs, deal with stress, accept themselves for their strengths and weaknesses, and recognize how media and popular culture influence their decisions. Children who feel secure will be less likely to use food to meet emotional needs and are more resistant to societal pressures to diet or become obsessed with body weight.

**Division of responsibility.** Parents/caregivers have unique and separate responsibilities in feeding. Primary caregivers are responsible for providing healthy foods in a pleasant

setting at consistent meal and snack times. Children are responsible for deciding how much they will eat and whether or not they will eat. Respecting these responsibilities ensures that the child may choose from a variety of healthy foods while learning to follow internal cues for hunger and eating to meet their nutritional needs (20).

**Physical activity.** Regular physical activity burns calories and increases metabolism. Physical activity can help control weight, reduce body fat, build healthy bones and muscles, improve cardiovascular endurance, and increase muscle strength. Developing skills and enthusiasm to participate in physical activity over a lifetime is important to children's future. Increasing levels of fitness appears to lower health risk despite body fatness in adults (21).

**Diet based on the Food Guide Pyramid**. Foods should be selected for nutritional value following the Food Guide Pyramid to ensure adequate intake of vitamins and minerals. Particular attention should be given to increasing consumption of fruits and vegetables and whole grains. Water is preferred for thirst.

**Regular meals.** Consuming three meals a day and planning for healthy snacks avoids extremes of hunger which can lead to overeating later in the day. Foods high in fat or simple carbohydrates are readily available in the marketplace and attractive when hunger occurs.

**Reasonable portion sizes.** By age 5, children are more likely to eat the amount of food that they are served, regardless of their appetite (22). The current trend to sell "super size" portions in restaurants and fast food outlets distorts perceptions of reasonable portion size and encourages overeating.

## Status of Iowa's Children

The Youth Risk Behavior Survey conducted cooperatively by the Iowa Department of Education and the Centers for Disease Control and Prevention, provides a picture of the physical activity patterns of Iowa youth. The 1997 YRBS reports that 67 percentof Iowa youth participated in at least 20 minutes of vigorous physical activity on three or more days in a week. Seventy three percent of youth watched two or more hours of television per day (23). Physical activity decreased with age (3). The Iowa Association of Physical Health Education and Recreation and Dance reports in the Shape of Iowa that only 56 percent of Iowa boys and 61 percent of Iowa girls attained the recommended health standards for cardio-respiratory fitness as measured by the 1 mile run/walk test (24, 25). Children are less active today due to increased use of television and computer games, use of the automobile, and lack of safe places for children to play outside. Children spend an average of 3 hours per day watching television according to a 1998 A.C. Nielsen study (26). The prevalence of obesity increases with time spent viewing television (27, 28, 29). General dietary recommendations include increasing consumption of fruits and vegetables and decreasing fat intake to less than 30 percent of calories. Yet, the 1997 Iowa YRBS reports that only 29 percent of Iowa youth in grades 9 through 12 reported consuming 5 or

more servings of fruits and vegetables per day in the week preceding the survey. Forty percent reported consuming more than two servings of foods typically high in fat content (23). National data indicates that youth are replacing healthy beverages such as milk and natural fruit juice with sweetened beverages such as pop and fruit drinks.

Obsession with weight has not escaped Iowa youth. The Iowa 1999 YRBS reports that 34 percent of adolescents consider themselves overweight, while self reported height and weight data indicates that about 8 percent are actually overweight. Forty three percent of respondents on the YRBS are dieting to lose weight, suggesting that many normal weight teens are dieting (3).

There is clearly room for improvement in promoting healthy lifestyles with Iowa youth. Supplements to this position paper address action that can be taken to prevent obesity in the home, child care, school, community and health care settings. Specific recommendations for action are included in the next section.

## Action Plan for Preventing Child and Adolescent Obesity

Effectively preventing child and adolescent obesity in Iowa will require a unified effort from public and private groups. After considering the current environment in Iowa and expertise from a variety of sources, the following recommendations are proposed to promote healthy lifestyles in Iowa.

1. Develop data collection systems to monitor the prevalence, geographical distribution and epidemiological factors relating to obesity in children and adolescents in Iowa.
    - Expand use of the Pediatric Nutrition Surveillance System (PedNSS) for voluntary monitoring of height and weight data from schools and medical institutions in Iowa.
    - Encourage including an evaluation component in programs intended to prevent obesity by health agencies, community groups, schools, physicians offices or other entities.
    - Offer technical assistance to health agencies, community groups, schools, physician's offices or other entities in identifying and collecting baseline data to evaluate interventions to prevent obesity.
    - Continue ongoing monitoring of the prevalence of obesity in children and adolescents and health related behaviors of Iowa youth through the Youth Behavior Risk Factor Surveillance System conducted by the Iowa Department of Education.
    - Continue ongoing monitoring of the prevalence of obesity in children through PedNSS collected by the Iowa Department of Public Health.
    - Determine the availability of data on obesity in children and adolescents through major insurance companies covering Iowans.

2. Ensure that families have the skills, resources and knowledge to offer healthy food choices to children.

- Offer cooking classes and food shopping classes that demonstrate planning and preparing healthy foods through community nutrition programs at hospitals, supermarkets, and Iowa State University Extension.

3. Ensure that families have parenting skills to create a nurturing environment through healthy eating, active lifestyles and healthy feeding relationships.
   - Provide information to prospective parents through programs serving pregnant women including the WIC Program, HOPES, Healthy Start, hospitals and Storks' Nest.
   - Provide information through programs funded to provide parenting education in Iowa, including Early Head Start, Healthy Start, HOPES, Shared Visions Parent Support and Iowa State University Extension.
   - Offer training to staff of the above mentioned programs on preventing child obesity.

4. Increase the number of day care homes enrolled in the Child and Adult Care Food Program.

5. Ensure that child care providers are prepared to encourage healthy eating and physical activity in children and to work with parents to improve parenting skills.
   - Encourage preservice professional preparation for child care providers.
   - Provide ongoing training through the Child Care Resource and Referral agencies and Iowa State University Extension and the Iowa Association of Education for Young Children (IAEYC).
   - Encourage participation in the Iowa Association for Education of Young Children.

6. Establish a nutrition consultant position at the Iowa Department of Education and at the Area Education Agencies to provide technical assistance to schools in selecting and implementing nutrition education curricula and to incorporate nutrition into comprehensive school health programs.

7. Include information on developing a healthy body image in growth and development or health classes
   - Provide resources for promoting a healthy body image through a statewide lending library, such as Iowa Substance Abuse Information Center (ISAIC) or Area Education Agencies (AEAs).

8. Ensure quality of time and experience in physical education in Iowa elementary, middle and high schools.
    - Recognize physical education as an essential component of all students' education and require participation.
    - Encourage school districts to develop curriculum that incorporate physical activity with adequate duration and types of activities that improve students' health and promote an active lifestyle for all students.
    - Mandate that physical education instructors have appropriate certification for the grade level taught.
    - Require that physical education curriculum include all students regardless of physical, mental or behavioral disabilities.

9. Strongly recommend that post secondary schools include physical education in their core curriculum.

10. Encourage schools to adopt a comprehensive school health approach in delivering nutrition services.
    - Encourage schools to participate in the Team Nutrition program, which includes a comprehensive nutrition education curriculum, school food service training, and community, family and media activities.
    - Develop school nutrition policies that address the use of fast food vendors, school snacks and access to vending machines during school hours.
    - Provide training for teachers, school nurses and key decision makers in the school community to address basic principles of nutrition, recognizing sound nutrition information or misinformation and to establish a common message regarding childhood obesity.

11. Provide part time availability of a licensed dietitian in school based youth services.

12. Increase the number of after school programs available to children. Incorporate healthy activity and provide healthy snacks to children during these programs.
    - Seek reimbursement through the Child and Adult Care Food Program for after school programs which in turn can promote physical activity and increase the range of healthy food experiences of children.
    - Use snacks to encourage older children to participate in after school programs.

13. Increase the availability of recreational facilities in the community.
    - Plan for community infrastructure that will facilitate active lifestyles such as hiking and biking paths, parks and community swimming pools.
    - Provide incentives to developers to design neighborhoods conducive to walking, including such features as sidewalks and availability of services within walking distance.

- Develop cooperative plans with community schools and colleges, city park and recreation programs, neighborhood associations, Department of Natural Resources, hospitals and other organizations to promote year round physical activity, with consideration to the availability of year round facilities and varying family schedules.
- Ensure safety for children in outdoor play.

14. Utilize available resources to fund recreational opportunities in communities.
    - Encourage communities to apply to the Resource Enhancement and Protection Program (REAP) through the Department of Natural Resources to develop community recreation areas.
    - Encourage communities to work with the Iowa Department of Transportation to develop local alternatives to motorized transportation such as hiking/biking trails.

15. Ensure nutritional adequacy of meals served to all children living in institutions or shelters under the supervision of the Department of Human Services.
    - Provide meals planned and/or approved by a registered and/or licensed dietitian.
    - Ensure that nutrition monitoring and counseling is available for residents of shelters.

16. Ensure that children living in institutions or shelters under the supervision of the Department of Human Services have access to facilities for physical activity and supervision that encourages physical activity.

17. Provide a seamless system for assessment and treatment of childhood obesity.
    - Encourage physicians to identify and initiate early intervention.
    - Encourage the HAWK-I Board to allow reimbursement for nutrition services.
    - Encourage private and public insurance and health maintenance organizations to reimburse for obesity assessment and treatment.

18. Increase the frequency with which primary care physicians assess children's growth patterns after age five.
    - Survey family physicians and pediatricians on preferred methods of receiving information/training.
    - Based on results of survey, provide training on treatment of child obesity at conferences, through publications available to Iowa physicians, a web site or through direct mailings to offices.
    - Obtain the financial and staff support of health care organizations in Iowa to develop and provide training to community physicians.
    - Provide physician training on body weight assessment and appropriate intervention methods for excess body weight through continuing education efforts and medical school training.
    - Educate physicians on resources that are available for management and treatment.

19. Develop and sustain programs for the evaluation and treatment of obesity.
   - Pursue research funds to further the effectiveness of intervention programs.
   - The University of Iowa Hospitals and Clinics with University Hospital School will model comprehensive, interdisciplinary evaluation and intervention services for obese children and adolescents.
   - Establish a multilevel care network with an emphasis on prevention, early identification and treatment for childhood obesity.
   - Encourage referrals to comprehensive programs for obesity when identified.

The Child and Adolescent Obesity Task Force recommends that concepts and recommendations presented in this paper be discussed in educational settings with all professionals and paraprofessionals who work with children. Institutions and programs currently providing services to children with weight problems need to be strengthened to deal with the issue of healthy weights and healthy lifestyles.

Guidelines for preventing obesity in the home, child care setting, schools, community and health care settings are included in supplements A through E.

## Bibliography


1. Troiano, R. & Flegal, K. , Kuczmarski, R., Campbell, S. and Johnson, C. Overweight Prevalence and Trends for Children and Adolescents. Archives of Pediatrics & Adolescent Medicine. 149:1085-1091, 1995.

2. Iowa WIC Program, Pediatric Nutrition Surveillance: Federal Fiscal Year 1998 Report.

3. Veale, J.R. 1999 Iowa YRBS. Youth Risk Behavior Survey – Regular High Schools. Iowa Department of Education, February, 2000.

4. Dietz, W. & Robinson, T. Assessment and treatment of childhood obesity. Pediatrics in Review. 14(9):337-344, 1993.

5. Dietz, W. Health consequences of obesity in youth: Childhood predictors of adult disease. Pediatrics. 101:518-525, 1998.

6. Guo, S.S., Roche, A.F., Chumlea, W.C., Gardner, J.D. and Siervogel,R.M.. The predicative value of childhood body mass index values for overweight at age 35 y. Am. J. Clin. Nutr. 59:810-819, 1994.

7. Must, A.,. Jacques, P.F., Dallal, G.E., Bajema, Cl.J., Dietz, W.H. Long-term morbidity and mortality of overweight adolescents: A follow up of the Harvard Growth Study of 1922 to 1935. The New England Journal of Medicine. 327(19), 1350-1355, 1992.

8. Strauss, C., Smith, K., Frame, C., & Forehand, R. Personal and interpersonal characteristics associated with childhood obesity. Journal of Pediatric Psychology. 10: 337-343, 1985.

9. Counts, C.,R., Jones, C., Frame, C., Jarvie, G. & Strauss, C. The perception of obesity by normal-weight versus obese school-age children. Child Psychiatry and Human Development. 17:113-120, 1986;.

10. Wadden, T.A. & Stunkard, A.J. Social and psychological consequences of obesity. Am J. Intern Med 103:1062-1067, 1985.

11. Rosenbaum, M. and Leibel, R.L. The Physiology of body weight regulation: Relevance to the etiology of obesity in children. Pediatrics. 101 (3, suppl), 549-553, 1998.

12. Epstein, L.H., Valoski, A., Wing, R.R., McCurley, J. Ten Year Outcomes of Behavioral Family-Based Treatment for Childhood Obesity. Health Psychology. 13(5):373-383, 1994

13. Barlow, S.E. and Dietz, W.H. Obesity evaluation and treatment: Expert committee recommendations. Pediatrics. 102(3), 1998.

14. Pyle, R.L., Mitchell, J.E., Eckert, ED.. Bulimia: A report of 34 cases. J. Clin Psychiatry. 42:60-64, 1981.

15. Guillaume, M. Defining obesity in childhood: Current practice. American Journal of Clinical Nutrition. 70(suppl):126S-130S, 1999.

16. Willett, W.C., Dietz, W.H., Colditz, G.A. Guidelines for a health weight. New England Journal of Medicine. 341(6):427-434, 1999.

17. Whitaker, R.C., Wright, J.A., Pepe, M.S., Seidel, K.D., Dietz, W.H. Predicting obesity in young adulthood from childhood and parental obesity. The New England Journal of Medicine. 337(13), 869-873, 1997.

18. Troiano, R. & Flegal, K.M. Overweight Children and Adolescents: Description, Epidemiology, and Demographics. Pediatrics. 101(3): 497-504, 1998.

19. Goodman, E. The role of socioeconomic status gradients in explaining differences in U.S. adolescents health. American Journal of Public Health. 89(10): 1522-1528, 1999.

20. Johnson, S.L. and L.L. Birch: Parent's and Children's Adiposity and Eating Style. Pediatrics. 94(5), 653-661, 1994.

21. Lee, C.D., Jackson, A.S., Blair, S.N. U.S. weight guidelines: Is it also important to consider respiratory fitness? International Journal of Obesity. 22, Suppl 2, S2-S7, 1998.

22. Rolls, BJ et al. Serving portion size influences 5 year old but not 3 year old children's food intakes. 2000. Journal of the American Dietetic Association. 100:232-234.

23. Centers for Disease Control and Prevention. CDC Surveillance Summaries: Youth Risk Behavior Surveillance – United States, 1997. August 14, 1998. MMWR 1998; 47(No.SS-3).

24. Iowa Association for Health, Physical Education, Recreation and Dance and the Iowa Department of Education, Shape of Iowa Report, 1994.

25. Hensley, L.D. Evaluating the fitness of Iowa children: Findings of the Iowa Youth Fitness Project. SHAPE of Iowa Report, 1994.

26. Nielsen Media Research, 1998.

27. Dietz, W.H. & Gortmaker, S.L. Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. Pediatrics. 1985:75(5):807-812.

28. Jeffrey, R.W. & S.A. French. Epidemic obesity in the United States: Are fast foods and television contributing? American Journal of Public Health. 1988:88(2),277-280.

29. Anderson, R.E., Crespo, C.J., Bartlett, S.J., Cheskin, L.J., Pratt, M. Relationship of physical activity and television watching with body weight and level of fatness among children. Journal of the American Medical Association. 279(12), 938-942, 1998.

**Additional References**

Centers for Disease Control and Prevention. Guidelines for School and Community Programs: Promoting Lifelong Physical Activity, US Department of Health and Human Services, March, 1997.

Centers for Disease Control and Prevention. Guidelines for School Health Programs to Promote Lifelong Healthy Eating. Morbidity and Mortality Weekly Report. 1996; 45: No.RR-9.

Erickson, S.J., Robinson, T.N., Haydel, F., Killen, J.D. Are overweight children unhappy? Body mass index, depressive symptoms and overweight concerns in elementary school children. Arch. Pediatr. Adolesc.Med. 154:931-935, 2000.

Position of the American Dietetic Association, Society for Nutrition Education and America School Food Service Association. School Based Nutrition Programs and Services. Journal of the American Dietetic Association. 1995; 95(3):367-369.

Sallis, J.F. and Patrick, K. Physical Activity Guidelines for Adolescents: Consensus statement. Pediatric Exercise Science, 1994(6):302-314.

# Supplement A.
# Promoting Healthy Lifestyles at Home

Parents are their children's first teachers. The family meal atmosphere contributes significantly to the child's emotional and physical development. Many significant interactions between parent and child take place during family meals. Children will adopt healthy eating behaviors and be physically active in a supportive environment.

Planning, preparing and serving regular meals consisting of a variety of foods in an attractive manner and a pleasant setting is key to children developing healthy food patterns. Adults are role models in establishing healthy choices. Children follow and adapt, although not always in a predictable course. Children experience variations in appetite, explore new foods, experience phobia about trying new foods and may assert their independence using food. Parents can learn to expect and accept changes in food behavior, but can foster healthy eating by consistently preparing and serving healthy meals in a relaxed, positive and pleasant atmosphere (1).

Parents have more control over the nutritional content of meals prepared at home, but can also become informed about making healthy choices in restaurants. Caretakers who have the ability to cook have more choices and control over the family's meals as well.

Parents can ensure that healthy meals are served at child care and schools by keeping informed about the meals that are served, observing the eating environment and providing input into the policies affecting food choices at special events, vending machines and outside food vendors.

As children grow, their independence in making food choices increases. Easy availability of fast food and snack items and affluence contribute to children's ability to purchase food on their own. Food choices are one avenue in which independence is sought early by children and needs to be acknowledged by parents, while trying to set guidelines.

Lifestyle choices also contribute to obesity. Children who spend time alone after school may be prone to unplanned eating. Participation in after school sports and other activities may interfere with family mealtimes and acceptable alternatives need to be planned. It is often difficult to provide healthy meals and meet the demands of an active lifestyle. Establishing a foundation of healthy meal patterns when children are young helps them appreciate healthy foods in their teen years. For older children, both the family and the community can consider ways to structure an environment which supports healthy food choices and ensures that the child is actively engaged in healthy activities during after school hours.

Parents are role models for activity patterns and provide opportunities for children to participate in recreational exercise. Taking time as a family to play catch, learn to ride a bicycle, go to the park or to a swimming pool, or play active games ensures the child finds physical activity fun, rewarding and allows for future social involvement in physical

activity with peers. The American Academy of Pediatrics recommends children spend no more than one to two hours daily watching television programs (2). Reducing daily "screen time" (television and computer games) will encourage children to become engaged in other activities and could have a significant impact on preventing excessive weight gain (3).

## Promoting Physical Activity

Physical activity burns calories and increases metabolism, builds healthy bones and muscles, improves cardiovascular endurance, and increases muscle strength. Children concentrate better and sleep better when they have opportunities throughout the day to be physically active.

- Include physical activity in family outings on a regular basis, even if only for short periods of time. Take children for walks, go to a park, go biking, swimming, fishing or play catch with your children.
- Be a role model for children by including physical activity in daily routines.
- Provide children with simple, inexpensive toys that encourage physical activity: balls, frisbees, jump ropes, hula hoops, balloons, bubbles, push or pull toys for toddlers, or rubber ball and glove for older children.
- Play active games with young children: identifying body parts, movement to music, make believe games (walk like an elephant, gallop like a horse, etc.).
- Limit sedentary activities, such as television or computer time, to 1 to 2 hours per day.
- Seek after school programs that emphasize active play for children.
- Give children chores that are physically active, such as raking leaves, mowing and vacuuming, gardening or weeding, and picking up toys.

## Promoting Healthy Eating

Eating a variety of healthy foods is necessary for optimal growth and development, protects against disease and provides energy to play, explore and learn.

- Start early to establish healthy eating practices in the home. Young children are quick learners.
- Be a role model for healthy eating. Children will want to follow their parent's example.
- Offer a variety of foods, using the Food Guide Pyramid.
- Plan healthy snacks. Snacks are needed to meet a child's nutritional needs, add variety and satisfy hunger between meals without spoiling a child's appetite. Be wary of continuous snacking, which may lead to overeating.

- Foster preferences for low fat foods in childhood. Note the following:
  - *Fat should not be restricted for children under two years of age. For example, children under two years of age should receive whole milk instead of skim or low fat milk.*
  - For children over two years of age: Limit fat by serving skim or low fat milk, low fat meats, poultry without the skin and using less fat in food preparation. Other sources of fat include salad dressing, butter and margarine, mayonnaise, gravy and sauces, many baked items, chips and candy.
  - Some fat is needed to make food taste better and give young children enough calories for growth and development. Too restrictive of a diet regimen can lead children to overeat when they have a chance.
- Recognize that all foods can fit – even those high in fat, sugar or salt – when used in moderation.
- Give children no more than 4 to 8 ounces of 100 percent juice daily. Over consumption of juice, even unsweetened natural juice, may lead to obesity in some children and growth stunting in others (4).
- Offer water for thirst between meals in place of sweetened beverages. Carbonated beverages, Kool Aid® or fruit "drinks" interferes with a child's appetite and may cause dental problems.

Children develop good attitudes towards eating when:

- Families eat meals together and all members of the family participate in conversation.
- The "Division of Responsibility" is followed: the parent decides which foods to serve and has the responsibility of serving them in an appetizing manner; the child decides whether to eat a food and how much to eat (1).
- Children are involved in shopping and preparing meals. This provides an opportunity for parents to learn about foods the child likes and to give children a sense of accomplishment. Children are more willing to try foods that they choose or help prepare.
- Children have plenty of time to eat. A child can detect hunger or fullness better when eating slowly. It may take a child 20-30 minutes after eating to feel full.
- Meals or snacks are eaten in a room designated for eating, such as the kitchen or dining room, and the television is off. Eating while watching TV often leads to overeating.
- Food is not used to punish or reward children. Instead, favorite activities or time with parents are rewards. Withholding food causes a child to fear hunger and overeat at a later time. Sweet foods appear more attractive to children when they are used as a reward.
- Children are allowed to refuse to eat a new food, but the parent serves the food again. Repeated exposures to a food usually result in a child accepting new foods.
- Parents refuse to prepare additional foods for a child who chooses not to eat. If the child chooses not to eat, the parent respects the child's wish and does not attempt to convince the child to eat.
- Healthy and equal choices are offered whenever possible. A choice between an apple and a candy bar is not equal. Choices give children a feeling of independence and control within structure set by adults.

## Promoting a Healthy Body Image

A child learns to master his body and appreciate it by learning to act on messages of discomfort, such as hunger or fullness, developing skills to meet needs and recognizing that the body is good. A healthy body image can be fostered with the following guidelines.

Show respect for a child's ability to determine how much he or she needs to eat.

- Avoid restricting food to keep a child's weight down. This can lead to conflicts during meals

Create an environment of acceptance for all children regardless of body size.

- Recognize that children may be healthy at a variety of weights.
- Provide praise and positive comments to children that focus on their strengths and do not refer to body size either as a strength or weakness.
- Never tease a child about his or her body size.
- Recognize that a child's body shape will change as he or she grows. A short stocky child at age nine may grow to be tall and lanky.
- Parents should avoid talking about their own body faults.

Discuss body image issues with older children.

- Discuss how the media uses unrealistically thin models to sell their products.
- Openly discuss any concerns children express about their body size.

The patterns of a healthy lifestyle are established early in life. The following resources can provide more information to help parents provide a healthy environment for children to grow.

## Resources

Books

Satter, Ellyn. **How to Get Your Kid to Eat…But Not Too Much.** Palo Alto, CA: Bull Publishing Co., 1987.

Satter, Ellyn. **Secrets of Feeding a Healthy Family**. Madison, WI: Kelcy Press, 1999.

Judith Levine & Linda Bine. **Helping Your Child Lose Weight the Healthy Way: A Family Approach to Weight Control.** Order from: Judith Levine, R.D., M.S., 56 Linares Avenue, San Francisco, CA 94116. $22.45 (includes shipping & handling)

Povis Alleman, Gayle. **Save Your Child from the Fat Epidemic: 7 Steps Every Parent Can Take to Ensure Healthy, Fit Children for Life**. Rocklin, CA: Prima Publishing. 916-632-4400; www.primalifestyles.com

Pamphlets

**Helping Your Overweight Child.** 16 page 5 ½ x 8 ½" booklet for parents published by the Weight-Control Information Network (WIN). Reading Level: 11th grade. NIH Publication No. 97-4096, January, 1997. Order through WIN, 1 WIN WAY; Bethesda, MD 20892-3665; 301-570-2177 or 1-800-946-8098; fax 301-570-2186; WIN@matthewsgroup.com; www.niddk.nih.gov/Nutrition Docs.html.

**If Your Child Is Overweight.** 34 page 9 x 6" booklet for parents by the American Dietetic Association, 1993. Reading Level: 6th –7th grade. Single copies are free: 1-800-366-1655.

**University of California Cooperative Extension:** ANR Publications, Division of Agriculture and Natural Resources, 6701 San Pablo Avenue, Oakland, CA 94608-1239; 415-642-2431.

- **If My Child Is Too Fat, What Should I Do About It?** 20 page 6 x 9" booklet for parents. Practical information in conversational style, sensitive to child's perspective, covers activity and diet. Publication #21455. 6th grade reading level. http://anrcatalog.ucdavis.edu/merchant.ihtml?pid=491&step=4
- **Children and Weight: What's a Parent to Do?** 12 page 8 ½ x 11" booklet. Publication #5367. 2nd grade reading level; also in Spanish. http://www.nal.usda.gov:8001/Training/c@aobe.pdf
- **Food Choices for Good Health** 8 page 8 ½ x 11" booklet. Publication # 5366. Lists 5 food groups and recommends eating them often, sometimes, and rarely. Very low reading level, also in Spanish.

**A Parent's Guide to Children's Weight.** North Central Regional Extension Publication 374. Local ISU Extension office or online at: http://www.extension.iastate.edu/Publications/NCR374.pdf.

**USDA Food Guide Pyramid for Young Children.** A booklet, *Tips for Using the Food Guide Pyramid for Young Children 2 to 6 Years Old*, a poster and an 8 ½ x 11 4 color graphic can be obtained through USDA's Center for Nutrition Policy and Promotion Internet home page (http://www.usda.gov/cnpp) or through the Government Printing Office for $5 each by calling 202-512-1800. Stock number 001-00004665-9.

**Kids in Action: Fitness for Children.** 12 page 5 ½ x 8 ½" booklet from the President's Council on Physical Fitness & Kellogg's Company. 1996. Reading Level 2nd grade for instructions. Clear graphics show physical activities that parents and young children can do together. Cost: 25 copies free; $.25/copy over 25. Order from Kellogg Company, Nutrition Education Materials, P.O. Box 3447, Battle Creek, MI 49017-3447; call 1-800-822-0221.

**Parent's Guide to Physical Play**. Provides ideas for parents to encourage physical activity with children from birth to five years of age. Graphics portray activities, rhymes included to accompany activity, lists of age appropriate activities and toys to encourage activity. Black and white. Reading Level: 6th grade. Order from Bureau of Nutrition & WIC. 1-800-532-1579.

**The Best Care for Young Children: Practical Advice from a Pediatrician.** 8 ½ x 11" trifold; covers parenting issues. Reading Level: 9th grade. Order from the Iowa Department of Public Health Healthy Families Line: 1-800-369-2229.

Videos

**Kids Module: Parents and Children Sharing Food Tasks**; program developed by the University of California Expanded Food and Nutrition Program includes leaders guide, videotape (in English and Spanish) and handouts is available for $60.00 from Rita Mitchell, 209 Morgan Hall, University of California, Berkeley, CA 94720-3104; 510-642-3080.

**Children and Weight.** Order from ANR Publications, 1441 Research Park Dr., room 100, Davis, CA 95616; 531-757-8930. Available in English (91-M) & Spanish (90-AB). $20. *(both of these videos can be borrowed from local WIC agencies or the Bureau of Nutrition & WIC, IDPH, 1-800-532-1579)*

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| Turning off the TV | **TV Turnoff Network.** 1611 Connecticut Ave, NW, Suite 31, Washington, DC 20009; 202-887-0436; www.tvturnoff.org> |
| Websites | **Nutrition activities & information.** www.nutritionforkids.com<br>**Playground safety.** www.uni.edu/playground<br>**Link to nutrition websites:** http://navigator.tufts.edu |

## References


1. Satter, Ellyn. How to Get Your Kid to Eat…But Not Too Much: From Birth to Adolescence. Palo Alto, CA: Bull Publishing Co., 1987.

2. American Academy of Pediatrics Committee on Communication. Children, Adolescents and Television. Pediatrics. 1995:96(4), 786-787.

3. Robinson, TN. Reducing children's television viewing to prevent obesity. Journal of the American Medical Association. 1999. 282:1561-1567.

4. Dennison, B.A. et al. Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity. Pediatrics. 1997; 99(1):15-22.

# Supplement B.
# Promoting Healthy Lifestyles and Preventing Obesity In the Child Care Setting

Child care settings can provide a healthy and supportive climate for children and their families. Child care policies and practices can address nutritional, physical and emotional needs of children and specify how child care staff can serve as role models for children and parents. Food related educational activities provide an opportunity for children to explore and expand their experience with food in a nurturing, positive atmosphere. Providing age appropriate equipment and expressive play opportunities such as music, dance and drama and ensuring that outdoor play areas are available encourages active play and large muscle development. Child care can play an active role in preventing obesity.

More women are in the workforce, therefore children are spending more of their daytime hours in child care settings outside their own homes. In Iowa, 79% of parents of young children are employed outside the home, the second highest in the nation. In a January, 1999 report The Iowa Child Care Resource and Referral Agency estimated that over 180,000 children are in some type of child care setting. Another 31,000 children participate in before and after school child care settings (1.). As such, many Iowa children spend major portions of their waking hours in child care settings which have a profound influence on the physical activity and dietary patterns of children.

Training to ensure quality experiences for children is available through the community colleges, Head Start, Iowa State University Extension, the Iowa Association for Education of Young Children (IAEYC) and Child Care Resource and Referral Agencies throughout the state. The National Association for the Education of Young Children (NAEYC) advocates for developmentally appropriate environments and practices and offers accreditation to early childhood child care and education centers. Only 13% of the 1,211 licensed child care centers and preschools in Iowa are accredited through NAEYC. The Child and Adult Care Food Program (CACFP) reimburses centers and day care homes for providing healthy meals and provides assistance in planning healthy meals for children. Participation in CACFP is voluntary and subject to income guidelines. Currently, 57% of the 3,680 state registered child care homes participate in the Child and Adult Care Food Program. Encouraging greater participation in these and other training programs will be a step toward ensuring healthy environments for children to grow and develop.

## Promoting Physical Activity

Physical activity burns calories and increases metabolism, builds healthy bones and muscles, improves cardiovascular endurance, and increases muscle strength. Children concentrate and sleep better when they have opportunities throughout the day to be physically active. Child care providers can encourage activity in a variety of ways.

- Model and provide lifelong activities for children by participating in activities such as walking, bicycling, or playing catch with children.
- Provide daily opportunities for large motor muscle activity daily through outdoor playtime or alternative activities during severe weather.
- Provide opportunities for children to enjoy a variety of physical activities, including games, sports and lifetime activities.
- Encourage physical play through expressive activities such as music, dancing and make believe.
- Play active educational games with young children: identifying body parts, movement to music, make believe games (walk like an elephant, gallop like a horse, etc.).
- Allow children to develop body mastery by encouraging them to feed themselves, use the toilet, skip, run, climb, and use balance in play activities.
- Provide simple play equipment that will encourage creative use of space and exploration, for example, supply cardboard boxes and chairs to make houses and trains.
- Limit time spent watching TV or videos to one hour or less a day.
- Provide children with simple, inexpensive toys that encourage physical activity: balls, jump ropes, hula hoops, balloons, bubbles, and push or pull toys for toddlers.
- Plant and tend a garden as a summer activity. Later, harvest and prepare the food.
- Engage children who tend to be sedentary in active play.

## Promoting Healthy Eating

Eating a variety of healthy foods is necessary for optimal growth and development, protects against disease and provides energy to play, explore and learn.

*Plan the mealtime experience around the needs of the child.*

- Create a pleasant mealtime setting.
- Provide meals and snacks at regular times and places.
- Provide serving sizes as suggested in the Child and Adult Care Food Program guidelines.

*Plan meals that meet the child's needs for growth, energy and health.*

- Provide nutritious meals and snacks following the recommendations of the Food Guide Pyramid.
- Plan to include healthy snacks. Snacks are needed to meet a child's nutritional needs, add variety and satisfy hunger between meals without spoiling a child's appetite.
- Use a wide variety of foods in menus.
- Limit high sugar and high fat foods without being overly restrictive.
- Use fresh fruit, fresh and frozen vegetables, and whole grains in meals and snacks.
- Do not restrict the level of fat in meals for children under two years of age. Fat is necessary for brain development, provides adequate calories for growth and supplies the body with stored energy when a child is sick and not eating well. Children under 2 years of age get whole milk.

- Children over age 2: begin to use low fat or skim milk and reduce the fat content of the diet.
- Offer water for thirst between meals.
- Do not serve carbonated beverages or Kool Aid®. It is easy for a child to fill up on sweet beverages and consume more calories than the body requires. Heavy consumption of sweet beverages, including juice, may interfere with appetite for a larger variety of foods and lead to both growth stunting and overweight (2).
- Serve juice and milk only during meal times or planned snacks.

*Provide nutrition education*

- Provide opportunities for children to prepare foods and to serve themselves. Preparing food develops hand eye coordination, gives children a sense of mastery over their environment and establishes a creative outlet.
- Explore the shape, color and texture of food with children.
- Talk about and use food in special celebrations.
- Have children discuss food preferences and family food traditions.

*Children develop healthy attitudes towards eating when…*

- Children and adults eat together and eat the same foods.
- Adults eat the same foods as the children and model appropriate mealtime behavior and everyone is encouraged to participate in the conversation.
- Children have plenty of time to eat. A child can detect hunger or fullness better when eating slowly. It may take a child 20-30 minutes to feel full after eating.
- The "Division of Responsibility" is followed: the caretaker decides which foods to serve and serves them in an appetizing manner; the child decides whether to eat and how much to eat (3.).
- Food is not used to punish or reward children. Instead, favorite activities or time with adults are rewards. Withholding food causes a child to fear hunger and overeat at a later time. Sweet foods appear more attractive to children when they are used as a reward.
- Children are allowed to refuse to eat a new food, but the caretaker serves the food again. Repeated exposures to a food usually result in a child accepting new foods.
- Caretakers refuse to prepare additional foods for a child who chooses not to eat.
- Healthy and equal food choices are offered whenever possible. A choice between an apple and a candy bar is not equal. Choices give children a feeling of independence and control within structure set by adults.

Further information on standards for promoting healthy eating in the day care setting is available in *Position of the American Dietetic Association, Nutrition Standards for Child Care Program*, 1997 (4.).

## Promoting a Healthy Body Image

A child learns to master his body and appreciate it by learning to act on messages of discomfort, such as hunger or fullness, developing skills to meet needs and recognizing that the body is good. A healthy body image can be fostered with the following guidelines.

*Assist children in learning to respect their self and others.*

- Provide opportunities for the child to master skills using his or her body.
- Allow children to decide how much they need to eat. This teaches them to respect and trust their own body. Interfering with this process can lead to conflict at meals.
- Recognize that children may be healthy at a variety of weights.
- Provide praise and positive comments to children that focus on their strengths
- Do not refer to body size either as a strength or weakness.
- Avoid teasing a child about his or her body size.

The child care setting presents a rich opportunity for creating positive impressions for children of the components of a healthy lifestyle. The following resources may be beneficial.

## Resources

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| Books | **Am I Fat? Helping Young Children Accept Differences in Body Size** by Joanne Ikeda & Priscilla Naworski. Santa Cruz: ETR Associates, 1992. |
| Community Resources | **BASICS for Nutrition Grants.** Provides matching funds for community-based nutrition education and physical activity promotion with low income audiences. Contact Doris Montgomery at the Iowa Department of Public Health. 1-800-532-1579. A USDA Food Stamp Program. |
| Advisory Groups | **National Association for the Education of Young Children (NAEYC).** 1509 16th St., N.W., Washington, D.C. 20036; website:. Www.naeyc.org. |
| | **Iowa Association for the Education of Young Children (IAEYC).** Rhonda Bancroft, Business Manager, 206 3rd Ave, SE #2, Altoona, IA 50009. |
| | **Child and Adult Care Food Program.** Food and Nutrition Bureau, Iowa Department of Education, 400 E. 14th St., Des Moines, IA 50319. 515-281-5356. |
| | **Iowa Child Care and Early Education Network** 550 11th Street, Suite 204, Des Moines, IA 50309. 515-883-1206. Icceen@dwx.com. |

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| **Advisory Groups** | **Child Care Resources and Referral Agencies**<br>*Northwest*: Mid Sioux Opportunities, Inc., 418 Marion St., Remsen, IA 51050 712-786-2001 or I-800-859-2025.<br>*Northeast:* Exceptional Persons, Inc. 760 Ansborough, Waterloo, IA 50704 319-233-0804 or I-800-475-0804.<br>*Southwest*: West Central Development Corporation. 611 Court Street, Harlan, IA 51537; 712-755-7381 or 1-800-945-9778.<br>*Central*: Child Care Resource & Referral of Central Iowa. 1200 University, Suite H., Des Moines, IA 50314; 515-286-2004 or 1- 800-722-7619.<br>*Southeast*: Iowa East Central T.R.A.I.N. 2804 Eastern Avenue, Davenport, IA 52803; 319-324-1302 or 800-369-3778. |
| **Websites** | **Child Care That Works.** Www.extension.iastate.edu/Page/Families/life/CCTW/home.html<br>**Iowa Child Care Early Education Network.** http://users.dwx.com/icceen<br>**Kaboom!** www.Kaboom.org (promotes safe playgrounds)<br>**Links to Best Nutrition Sites:** http://navigator.tufts.edu<br>**Playground Safety.** Www.uni.edu/playground<br>**National Network for Child Care.** www.nncc.org |

Other resources are listed in the Promoting Healthy Lifestyles at Home and Promoting Healthy Lifestyles in the Community supplements.

## References


1. Iowa Child Care and Early Education Network, Data/Information Systems Committee. 1997-1998 Child Care Status Report. Child Care Resource and Referral, 1999.

2. Dennison, B.A. et al. Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity. Pediatrics. 1997; 99(1):15-22.

3. Satter, Ellyn. How to Get Your Kid to Eat…But Not Too Much: From Birth to Adolescence. Palo Alto, CA: Bull Publishing Co., 1987.

4. Position of the American Dietetic Association. Nutrition Standards for Child Care Programs. Journal of the American Dietetic Association. 1994; 94(3): 323-328.

# Supplement C.
# Promoting Healthy Lifestyles and Preventing Obesity In the School Setting

Schools have the opportunity to promote healthy lifestyles and prevent obesity through a team approach. The health promoting school team includes but is not limited to the school board, school administrators, school nurses, food service staff, classroom teachers, physical education teachers, health educators, students and their families, and health professionals from the community. The school health team conveys consistent messages, models appropriate behavior and works cooperatively to promote health and prevent obesity. School nutrition services comprised of school lunch and nutrition education teaches by example and providing information to promote making healthy food selections.

A quality physical education program promotes positive attitudes towards vigorous activity, improves health, develops leadership and teamwork skills and enriches quality of life. Physical education also contributes to cognitive, psychomotor, and emotional domains of learning. Lifelong participation in physical activity may be encouraged through positive experiences in physical education.

## Promoting Healthy Eating

The essential functions of the school health team and school nutrition program include (1):

- providing access to a variety of nutritious, culturally appropriate foods that promote growth and development, pleasure in healthy eating, and long term health, as well as prevent school day hunger and its consequent lack of attention to learning tasks;
- nutrition and physical education that empowers students to select and enjoy healthy food and physical activity;
- screening, assessment, counseling and referral for nutrition problems and the provision of modified meals for students with special needs; and
- systematically assessing the nutrition and physical activity needs of students and using the results to design new or enhanced opportunities.

***Providing access to a variety of nutritious, culturally appropriate foods***

There is no question that school meal programs can have a powerful influence on children's future food choices. More than one half of youth in the U.S. eat one of their three major meals in school and one in ten children and adolescents eats two of their three main meals in school. Moreover, recent breakfast studies point to improved learning and reduced discipline problems among students who ate breakfast at school (2). Children who come to school with a nourishing breakfast or who receive a breakfast at the school site are better prepared to concentrate on the morning's educational activities.

Adequate nutrition throughout the day plays an important part in performance at school and enables the child to make wise choices when eating. Children who go hungry or are only allowed a hurried meal through the morning or afternoon, are likely to arrive at home

after school extremely hungry. This can lead to overeating, particularly high fat, easy to prepare snack foods. This pattern of behavior, once learned, is difficult to change and can lead to obesity. Providing attractive healthy meals in a pleasant environment at school is an important part of obesity prevention.

A successful school food program meets the dietary guidelines and encourages children to try a variety of new foods. Dining room strategies include:

- *Monitoring of school menus and food preparation techniques to assure that meals meet the dietary guidelines*. USDA and the Iowa Department of Education have developed a variety of tools and programs to assist schools in evaluating their menu offerings.
- *Offering a variety of attractive, culturally diverse foods*. Food service staff are charged with preparing and providing appealing menus featuring a greater variety of foods, including fresh fruits and vegetables and whole grains and to offer menus lower in salt and fat. Menus can also be enhanced by introducing new foods, particularly foods that represent a variety of cultures. The Bureau of Food and Nutrition of the Iowa Department of Education offers summer short courses and periodic opportunities during the school year through the Team Nutrition program to train food service staff to meet these goals. The USDA School Food Program and the Food Guide Pyramid provide guidelines for healthy meals which can also be obtained through the Iowa Department of Education.
- *Linking classroom nutrition education lessons to food service activities such as menu planning, taste testing, new menu offerings, and cultural celebrations*. A list of ideas for linking the dining room and classrooms is on page 10 of this supplement.
- *Creating a positive environment for meals*. Suggestions that can improve the school lunch environment include:
    - Hold recess before lunch to allow children to take their time and eat, rather than hurry to finish so that they can play.
    - Stagger arrival times of each class to the lunch room to shorten waiting time.
    - Allow at least 15 to 20 minutes of actual seating time to eat.
    - Arrange to have an adult stay with the children until they are through the serving line.
    - Appoint dining room supervisors to encourage children to try foods, but not force them.
- *Carefully reviewing the impact of vending machines, franchised vendors and contracts with fast food vendors on the overall health environment of the school.*

*Nutrition education that empowers students to select and enjoy healthy food and physical activity.*

Well-designed and effective school-based nutrition education integrated throughout a sequential, coordinated school health program helps students improve their nutrition knowledge, attitudes, and behaviors. The Centers for Disease Control and Prevention identified characteristics of nutrition instruction that are most likely to be effective (36):

- behaviorally focused content that is developmentally appropriate and culturally relevant;
- active, participatory learning strategies;
- fun activities;
- repeated opportunities for students to taste foods that are low in fat, sodium, and added sugars and high in vitamins, minerals, and fiber;
- focuses on positive, appealing aspects of healthy eating patterns;
- emphasizes the benefits of healthy eating behaviors in the context of what is already important to students; and
- learning techniques including role modeling, incentives, self-confidence in making dietary changes, social resistance skills, overcoming barriers to change, and goal setting.

Clearly a comprehensive, targeted approach is required to promote healthy food and physical activity choices. A 1994 USDA comprehensive review of nutrition education programs for school-aged children concluded that successful programs shared key elements (3).

1. Focus on specific behavioral messages, e.g. eat more fruits and vegetables, rather than on general nutrition information;
2. Diet self-assessment, particularly among older students;
3. Family involvement, particularly for programs directed at elementary students;
4. Classroom education component (particularly when integrated into other subjects or into a coordinated school health programs); and
5. Community impact strategies.

Intensity and duration are also an issue. The USDA review also cited a study that showed that improvements in nutrition knowledge, attitudes and practice occur only when 50 hours of instruction are offered (4). Iowa has nutrition education programs in place upon which obesity prevention strategies could be built.

The USDA Team Nutrition program, implemented by some schools in Iowa, is designed to address the key elements found in the review. It includes a nutrition education curriculum that can be integrated into core curricular areas throughout the elementary and middle school years. The classroom lessons are also connected to cafeteria and school wide activities and include links to the home and community. The curriculum not only suggests activities for repeated taste testing in a variety of settings, but also builds on the notion of the dining room as a learning laboratory. The curriculum includes successful teaching strategies, such as goal setting, reinforcements and incentives.

A number of other programs have been tested in the classroom setting. Information on these is listed in the Resources section and research is covered in the bibliography (5-8).

***Screening, assessment, counseling and referral for nutrition problems***
School staff should be trained to recognize nutrition problems and be knowledgeable about community resources that can address them. Supplement D, Promoting Healthy Lifestyles to Prevent Obesity in the Community, suggests available resources.

Many schools routinely weigh and measure children. While this practice may provide for early identification of growth abnormalities, weight problems and eating disorders, it may also be disturbing to some children. When weights and heights are measured, they should be conducted in private and the information should be kept confidential.

***Systematically assess the nutrition and physical activity needs of students***
A variety of excellent tools are available to assist schools in evaluating their practices and policies related to nutrition and physical activity promotion. Schools should be diligent in reviewing their environments to determine whether changes are needed and whether new programs and policies are having their intended impact. Since school staff turnover is constant, these reviews should be institutionalized into the school improvement planning process to assure that programming improvements are not dependent on a particular set of staff members which may change substantially from one year to the next.

## Promoting Physical Education

While schools are seen as key to a national strategy of increasing physical activity, the state of Iowa only requires 50 minutes per week of physical education in high school. No time requirement is set for elementary and middle schools (9). The Shape of Iowa survey found that actual class time in elementary school averaged 31 minutes twice a week. Exemptions in physical education can occur for religious, medical, academic and athletic reasons and the policies vary at the local district level (10). Requiring all students to participate in physical education programs and developing curricula that take into account the limitations of students with physical or mental disabilities will enhance the health of all students. The following recommendations should be considered:

*Plan a physical education program that is inclusive, promotes lifelong physical activity, and is rewarding for all children.*

- Offer a variety of experiences including both team sports and individual activities.
- Expose children to lifetime recreational activities such as walking, biking, roller blading, swimming, fishing, and canoeing.
- Adapt physical education instruction for students with special needs; include special needs students in regular classes whenever feasible.
- Provide special classes for students who are severely handicapped or who are otherwise unable to participate in the regular program.
- Provide both indoor and outdoor facilities
- Maintain facilities and equipment to meet safety standards.
- Provide quality equipment and supplies in sufficient quantity to allow all students to participate.

*Recognize physical education as an important part of the total school curriculum.*
- Mandate that physical education instructors are certified for the grade level taught.
- Include physical education grades in the overall GPA.
- Disallow exemptions for students for participating in any curriculum or extra curricular activities.

*Allow adequate time for physical education.*
- Provide at least 30 minutes daily in Grades K-3 with 20 minutes spent in actual physical activity.
- Provide a minimum of 45 minutes daily for Grades 4-8.
- Require a minimum of 2 years in daily physical education for grades 9-12, with the option of taking an additional two years of physical education on an elective basis.
- Keep class size similar to other subjects in the school curriculum, preferably not more than 30 students.
- Establish minimum standards for physical education at state or local district levels to ensure equal benefits for all children.

Emphasize physical fitness, including concepts that will encourage the achievement of personal physical fitness, as a vital component of the curriculum at all levels.
- Conduct an annual fitness evaluation of all students and report results to their parents.
- Utilize the following criteria to ensure that the program provides opportunity for aerobic and/or skill building:
    - Three 10 minutes bouts of moderate to vigorous physical activity daily (5 school days each week).
    - Three or more 30 minute bouts of moderate to vigorous physical activity at least three days per week.
    - Three or more 30 minutes sessions of motor skill practice and/or development each week.

Recess and before and after school programs are important to a school's total physical activity program. Schools are encouraged to offer both structured and free time for physical activity. Accessible intramural, individual and team sports or social opportunities such as walk-a-thons promote increased physical activity.

## Promoting a Healthy Body Image

To ensure that children feel good about their bodies and to avoid the pitfalls of dieting or eating disorders, it is important that adults treat all children with respect and provide adequate information to children about growth and development and nutrition.
- Create an environment that helps children recognize their individual value by rewarding children for their accomplishments and ensuring that children of all body sizes receive recognition.
- Prepare students for anticipated body changes through human growth and development and health education classes.

- Discuss the social and emotional aspects of physical changes associated with maturation in human growth and development and health education classes.
- Increase awareness of how the media and advertising influences cultural norms.
- Encourage physical education instructors to be sensitive to ways in which body image can affect children's willingness to participate in physical education and activity. Changing clothes, showering, and the type of activity offered may deter children with body image problems from participating in and benefiting from physical activity.
- Coaches should be cautious when advising students to lose or gain weight to participate in a sport. Students may respond to criticism or comments about their bodies by engaging in destructive dieting.
- Consider body image and self-esteem issues when addressing weight concerns in children.
- Be alert to signs of eating disorders and refer appropriately.

The process of developing a healthy lifestyle is ongoing and has many components. The school setting can demonstrate the components of a healthy lifestyle and encourage children to eat healthy, be physically active and respect their bodies.

## Resources

Policy Guidance

**Centers for Disease Control and Prevention**

- **Guidelines for School Health Programs to Promote Healthy Eating.** Morbidity and Mortality Weekly Report, June 14, 1996, Vol. 45, No. RR-9. 41 page report for professionals. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; 202-783-3238 or see DASH website http://www.cdc.gov/nccdphp/dash.
- **School Health Index for Physical Activity and Healthy Eating**. Resources to assist schools in identifying strengths and weaknesses in the physical activity and nutrition policies and programs. Elementary and middle school components are available on the DASH website (see above), by telephone: 1-888-231-6405 or fax: 1-888-282-7681.
- **Implementing CDC School Health Guidelines.** http://eta.aed.org.
- **Division of Nutrition and Physical Activity website**: Professional and consumer information: http://www.cdc.gov/nccdphp/dnpa.

**United States Department of Agriculture**

- **Changing the Scene: Improving the School Nutrition Environment.** Provides resources, presentation materials (videotape & power point presentation) and handout materials to be used in developing school nutrition policies. Obtain from Child Nutrition Division, USDA, Food and Nutrition Service, 3101 Park Center Drive RM 1010, Alexandria, VA 22302-9943. Or on website: www.fns.usda.gov/tn

**The Center for Commercial Free Education**. Organization devoted to keeping advertisements out of public schools. Contact at 1714 Franklin St., Suite 100-307, Oakland, CA 94612; 510-268-1100; fax: 510-268-1277; unplug@igc.org. or www.commercialfree.org

**National Association of State Boards of Education**

- **Fit, Healthy and Ready to Learn: A School Health Policy Guide**. Features sample policy language on physical activity, healthy eating, and tobacco-use prevention, data to support policies and practical suggestions for implementation. Developed in partnership with CDC and in cooperation with the National School Board Association. Call NASBE at 1-1-800-220-5183 or download from: www.nasbe.org/healthyschools/fithealthy.html

**National School Boards Association School Health Resources Database**. Resources and links to other sites. Free service. Call 703-838-6722, mail: NSBA School Health Programs, 1680 Duke St., Alexandria, VA 22314. Http://www.nsba.org/schoolhealth.

Comprehensive School Health

Eva Marx, Susan Frelick Wooley & Daphne Northrop. **Health is Academic: A Guide to Coordinated School Health Programs.** New York: Teachers College Press, Columbia University, 1998.

Interdisciplinary Curriculum

**CATCH: Child and Adolescent Trial for Cardiovascular Health**. Comprehensive school nutrition and physical activity program for grades 3 to 5. Includes physical education activity boxes, classroom curriculum and school nutrition program guide. Request catalog, order complete program or individual components through Flaghouse at 1-800-793-7900; sales@flaghouse.com; fax: 201-288-7887. Training also available.

**Eat Well Keep Moving:** An interdisciplinary curriculum developed and tested for upper elementary grades; builds skills in nutrition and physical activity. For information: www.hsph.harvard.edu/prc/ewkm.html or order through NCES catalog 1-877-623-7266 or email at info@ncescatalog.com

**Planet Health:** Sixty-three lesson plans designed to increase physical activity, decrease television viewing and improve eating habits for 6-8th graders. See www.hsph.harvard.edu/prc/planet.html. Order from NCES catalog (see above).

**United States Department of Agriculture;** Contact the Bureau of Food and Nutrition, Department of Education, Grimes State Office Building, Des Moines, IA 50319. 515-281-4758.

- **Team Nutrition.** The Team Nutrition curriculum include modules for pre-K/K, 1st and 2nd grades, 3rd through 5th grades, and 6th through 8th grades. The curricula are available from the National Food Service Management Institute at 1-800-321-3054. Other Team Nutrition resources are described on the Team Nutrition Web Site: http://www.fns.usda.gov/tn

Food Service Personnel

**Healthy Cuisine for Kids**. Product of the National Food Service Management Institute (see “other organizations”).

**Healthy E.D.G.E. 2000: Eating, the Dietary Guidelines and Education**. School Food Service Foundation of the American School Food Service Association, 1600 Duke Street, 7th Floor, Alexandria, VA 22314-3436.

**Healthy School Meals**. http://schoolmeals.nal.usda.gov:8001

Resources for Iowa Communities

**BASICS for Nutrition Grants.** USDA Food Stamp Program provides matching funds to Iowa communities for community-based nutrition education and physical activity promotion to low income audiences. Contact Doris Montgomery at the Iowa Department of Public Health. 1-800-532-1579. dmontgom@idph.state.ia.us

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| Physical Activity Promotion | **Project Fit America** works with a school to obtain funding for a fitness course on the school grounds. The school and community commits to the Project Fit fitness program and a follow up evaluation. Contact Project Fit American, the Phelan Building, 760 Market Street, Suite 907, San Francisco, CA 94102.<br><br>**Sports, Play and Active Recreation for Kids (SPARK).** Physical education for K-6; inclusive, non-competitive, non-gender specific, active and fun. Can be taught by classroom teachers with training. Contact SPARK Physical Education, 6363 Alvarado Court, Suite 250, San Diego, CA 92120; 1-800-SPARK PE; www.sparkpe@mail.sdsu.edu<br><br>**Playground Safety:** Call the National Program for Playground Safety, 1-800-554-7529 or contact website: Www.uni.edu/playground<br><br>**Kids Walk to School.** Annual event coordinated through CDC to promote walking and increase community awareness. Contact CDC at 888-CDC-4NRG or ccdinfo@cdc.gov. Websites: www.cdc.gov/nccdphp/dnpa/kidswalk.htm<br><br>**Take 10.** Ten minutes physical activity breaks for students that are specific to the core subjects. To order email: bmoore@ilsi.org From the International Life Sciences Institute. 770-934-1010; fax: 770-934-7126. website: www.ilsi.org |
| Reading for Teens | Berg, Francie. **Children and Teens Afraid to Eat: Helping Youth in Today's Weight-Obsessed World.** Hettinger, N.D.: Healthy Weight Network. 1997**.** |
| Other Organizations to Contact | **American School Food Service Association.** 1-800-877-8822; www.asfa.org<br>**American Heart Association.** www.americanheart.org Click on “healthy lifestyles”.<br>**Center for Science in the Public Interest (CSPI),** 1875 Connecticut Avenue, NW , Suite 300, Washington, DC 20009-5728. 202-332-9110, ext. 352.<br>**National Food Service Management Institute,** Your Healthy Food LINE, National Food Service Management Institute, The University of Mississippi, P.O. Drawer 188, University, MS 38677-0188. 1-800-943-5463. Website: www.olemiss.edu/depts/nfsmi or email: yhfline@olemiss.edu<br>**National Heart, Lung & Blood Institute.** http://www.nhlbi.nih.gov. Request catalog: 301-591-8573. |
| Other Websites | **Body Positive.** www.bodypositive.com<br>**Center for Weight and Health, University of California.** www.cnr.berkeley.edu/cwh. Extensive list of resources.<br>**Eating Disorders Awareness and Prevention.** www.edap.org<br>**Eating Disorders**: http://faculty.washington.edu/jrees/adolescentnutrition.html<br>**Fruits & Vegetables.** Www.dole5aday.com<br>**Size Acceptance and Non-Diet Approach**. Www.healthyweight.net<br>**Tufts University.** Critiques and links to nutrition sites. Www.navigator.tufts<br>**US Public Health Service Office on Women's Health**: Body Wise Eating Disorders packets: www.4woman.gov/BodyImage or www.health.org/gpower<br>**Videos for children & teens;** www.foodplay.com |

Additional resources may be found in the Promoting Healthy Lifestyle in the Community Setting.

## Linking Dining Room & Classroom Activities

- Involve food service staff in providing food for classroom tasting activities that feature foods from a period of history or region of the world studied in the classroom.
- Sponsor an art or essay contest on the theme of how school meals feed body and mind.
- Assist class in making a “pyramid” display of foods served at school lunch.
- Survey students on favorite school meals and favorite fruits and vegetables.
- Form a committee of students to make suggestions on school meals.
- Have students write a review of school meals for a school newsletter.
- Ask students to create healthy eating advertisements to be displayed in the lunchroom.
- Offer healthy fruits and vegetables and other healthy snacks for school activities.
- Conduct an “environmental assessment” of snack foods available at school or in the neighborhood.
- Form a committee of students and adults to ensure that healthy eating messages are supported by food sold in vending machines, à la carte meal offerings, and snack bars.
- Highlight foods on the lunchroom menu from other countries with information about the countries on the menu.
- Involve students in researching the cultural origins of foods served at school lunch and decorating the cafeteria with a multicultural theme.

*The following are examples of activities from the Iowa Team Nutrition Program:*

**Family History Cookbook** Ask students to talk to their parents, grandparents, or friends about cultural or memorable recipes they use. Compile recipes in a cookbook and include reflections on the recipe, source, the role it played in family celebrations, and what the food meant to the student.

**Cultural Food Festival** Combine a meal of ethnic foods with music and games from another culture. Invite someone from that country or that culture to talk to the class.

**“Wrap It Up”** Demonstrate a quick, nutritious meal, such as a “wrap” containing a variety of healthy foods.

**Ethnic meal for after school program** Divide students into two groups to serve a special meal. Each group takes turns setting the table, serving the other students and creating a special atmosphere with music and decoration. Use the opportunity to teach hospitality skills and table manners.

**Family Style Service for Kindergarten Students** Enlist parent volunteers to serve a family style lunch to promote new food choices and simple nutrition facts. Also a good opportunity to promote table manners.

**Nutritious snacks for poetry day** Appoint a class to prepare and serve refreshments for guests at special events, e.g., Poetry Day or Environmental Day.

**Nutritious snacks for school-wide track meet** Provide power snacks and sack lunches to participants at a school-wide track meet.

**Nutrition booth and nutritious snacks at Kindergarten round-up** Provide heart healthy foods, literature and recipes at Kindergarten round up

**Fruit mural on cafeteria wall** Have students paint fruits and/or vegetables on the cafeteria wall.

## References


1. Health is Academic. Marx, E., Wooley, S.F., & Northrop, D. (Eds.). (1998). New York: Teachers College Press.

2. Murphy, J.M. Pagano, M.E., Nachmani, J, Sperling, P, Kane, S., Kleinman, R.E. The relationship of school breakfast to psychosocial and academic functioning: Cross-sectional and longitudinal observations in an inner-city school sample. Arch. Pediatr. Adolesc. Med. 152:899-907, 1998.

3. Lytle, L.A. Nutrition Education for School-Aged Children: A Review of Research. U.S. Department of Agriculture, September, 1994.

4. Connell, DB, et al. Summary findings of the School Health Education Evaluation: Health promotion effectiveness, implementation and costs. Journal of School Health. 55:316-321, 1985.

5. Nader, P.R., et al. Three Year Maintenance of Improved Diet and Physical Activity: The CATCH Cohort. Archives of Pediatric and Adolescent Medicine. 153:695-704, 1999.

6. Gortmaker, S.L., et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. Arch. Pediatr.Adolesc.Med. 153:409-418, 1999.

7. Gortmaker, S.L., et al. Impact of a school-based interdisciplinary intervention on diet and physical activity among urban primary school children: Eat Well, Keep Moving. Arch.Pediatr.Adol.Med. 153:975-983, 1999.

8. Harrel, J.S., et al. A public health vs. a risk-based intervention to improve cardiovascular health in elementary school children: The Cardiovascular Health in Children Study. American Journal of Public Health. 89:(10):1529-1535, 1999.

9. General Accreditation Standards. Iowa Code, Section 281, Chapter 12.5 (3), (4) and (5).

10. Thissen-Milder, M. Current status and perceptions of physical education in Iowa. The Shape of Iowa Report, 1994.


**Additional References**


So how is your school's food? School Nurse News. 18(2), March, 2001
What's enough good food for a student? School Nurse News. 18(4), Sept.,2001.
Thin! At what price? School Nurse News. 18(5), Nov., 2001

# Supplement D.
# Promoting Healthy Lifestyles to Prevent Obesity
# In the Community Setting

Communities have the opportunity to create an environment that facilitates healthy lifestyles for children through program planning and community infrastructure.

Communities can ensure that appropriate after school programs are available for children and that healthy snacks are served through schools, recreation centers, churches or youth organizations. Reimbursement for snacks served in after school programs that have an educational component is available through the Child and Adult Care Food Program. Communities can work with fast food restaurants, convenience stores and traditional restaurants to encourage them to offer healthy snack and meal options. Guidance is available from local dietetic associations, hospitals or the American Heart Association.

Plan for recreation areas that are accessible to all age, ability and income levels. Accommodate a variety of interests from a preference for individual sports such as swimming, walking and biking to team sports such as basketball and soccer. Indoor and outdoor facilities should be available to allow for the possibility of severe weather. All children should be assured a safe environment in which to play. Federal and state funding is available to create recreational trails. Information on accessing these funding sources is provided under Resources.

New development can encourage walking by including sidewalks and making services accessible to pedestrians. Neighborhood planning that comingles housing, shopping areas and business offices, schools and park areas encourages residents to become more active in their daily routine. This type of development may require rethinking zoning policies, building codes and other factors that affect construction of new homes and businesses and will require input from consumers, builders and government officials.

## Promoting Physical Activity

Physical activity is essential to lifelong health and sustaining a high quality of life. Persons who are overweight can still be fit through regular exercise (1). Keeping children and youth physically active has positive impacts on self esteem and reduces youth crime (2). For example, crime was reduced by 55% in a community that offered midnight recreational programs.

- Plan new development to promote walking.
- Market physical activity through positive portrayal in the media.
- Plan recreational areas to accommodate a variety of leisure pursuits: biking, canoeing, fishing, cross country skiing, skating or walking.
- Rent expensive equipment such as ice skates, canoes, cross country skis, and toboggans.
- Accommodate both individual as well as organized activities.

- Plan both indoor and outdoor recreational facilities to allow for Iowa's changing seasons.
- Promote after midnight recreational programs or other alternative recreational programs for teens.
- Plan summer recreation programs for children.
- Flood a park for winter skating.
- Request donations of inexpensive toys that encourage physical activity – chalk, jump rope, balls, bubbles for distribution to all children.
- Develop a buddy system between children or adult to child to encourage physical exercise.
- Form walking clubs.
- Organize a children's walk to school day.

## Promoting Healthy Eating

The community and the environment determine what foods are available. Persons in a community come together to share food and food values. There are many opportunities to encourage healthy eating in the community.

- Provide cooking classes through hospitals, Iowa State University Extension, high schools, or community colleges.
- Use parenting classes provided through hospitals, schools, alternative schools and community action agencies to stress the importance of healthy eating and foster parenting styles that promote healthy feeding relationships.
- Promote the WIC and Head Start Programs to families with children.
- Encourage child care providers to participate in the Child and Adult Care Food Program and the Iowa Association for Education of Young Children.
- Promote fruits and vegetables through Farmer's Markets and community garden activities.
- Assist restaurants in identifying healthy choices on the menu.
- Encourage grocers and restaurants to offer healthy fast food options.
- Emphasize healthy foods and food preparation techniques through festivals, fairs and fundraisers.

## Fostering a Healthy Body Image

Establishing a healthy lifestyle begins with a healthy perception of self and body. The community can affirm that each child has value. Evaluate the messages suggested by community leaders and institutions and through the media that children receive.

- Encourage local media to positively portray children with a variety of body sizes.
- Ensure that resources are available to assist children who are struggling with body image issues.

- Ensure that mental health professionals in the community are familiar with issues of body image disturbance, weight problems and their relationship to self-esteem.

Small changes make the difference between normal and overweight. The entire community can have a heightened awareness of the simple measures that can make a difference in children and display enthusiasm for healthy lifestyles.

## Resources

| | |
|---|---|
| Policy Guidance | **Healthy Generations:** University of Minnesota publication. One issue devoted to obesity can be found at: http://www.epi.umn.edu/mch/pages/hgrsorc2.html |
| | **Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services.** http://www.cdc.gov/mmwr/PDF/rr/rr5018.pdf |
| | **Promoting Physical Activity: A Guide for Community Action:** A 408 page resource from the CDC & P, $32.00. Published 1999, Item BCDC0152, ISBN 0-7360-0152-2. To order contact website: www.humankinetics.com; call 1-800-747-4457; fax 217-351-1549; Human Kinetics, P.O. Box 5076, Champaign, IL 61825-5076. |
| | **Surface Transportation Policy Project**. www.transact.org; 202-466-2636. This organization supports pedestrian development. |
| Physical Activity Promotion | **Hearts n Parks Community Mobilization Guide**. Collaborative effort of National Heart Lung & Blood Institute & National Recreation and Park Association. Resource guide & video to support using community recreation facilities to promote healthy lifestyles. NIH Publication No. 01-0655, Call 1-800-649-3042 or see website: www.nrpa.org Click on "programs" and "health". |
| | **Kids Walk to School Guide.** Promotes school children walking to school. Sponsored by Partnership for a Walkable America, National Safety Council & CDC1121 Spring Lake Drive, Itasca, Il 60143-3201. Telephone: 1- 800-621-7615 ext 2383; Fax: 630-775-2185. See website www.cdc.gov/nccdphp/dnpa/kidswalk.htm. |
| | **Project Fit America** works with a school to obtain funding for a fitness course on school grounds to communities making a commitment to the fitness program and a follow up evaluation. Contact Project Fit American, Phelan Building, 760 Market Street, Suite 907, San Francisco, CA 94102. www.projectfitamerica.org |
| | **Walkability Checklist.** The Partnership for a Walkable America has developed a checklist for communities available at www.nsc.org/walkable.htm or request by fax to the National Highway Traffic Safety Administration, 202-493-2062. |
| After School Programs | **CAN-FIT.** California Adolescent Nutrition and Fitness Program, which funds creative programming to promote healthy lifestyles in California, see project descriptions at www.canfit.org/index.html or contact Arnell Hinkle, 2140 Shattuck Avenue, Suite 610, Berkely, CA 94704. |

After School Programs, cont

**Girl Power!** Website developed in 1996 by the US DHHS, aims to help 9 to 14 year old girls to make the most of their lives. Includes nutrition, physical activity and other health promotion messages while promoting self confidence in academics, arts, sports, etc. See website: www.health.org/gpower or contact National Clearinghouse for Alcohol and Drug Information at 1-800-729-6686.

**Jump Start.** After school programs developed by the NHLBI and the National Recreation & Park Association. See NRPA website: Www.nrpa.org**,** click on "programs" and "after school" ; or call 1-800-649-3042.

**Project Lean**. The California Lean Program includes 8 lessons on healthy eating, handouts and activity suggestions. http://www.dhs.ca.gov/lean or call 916-323-4742.

**Sisters Together: Move More, Eat Better** Program Guide for African American women ages 18 to 35. Materials can be downloaded or ordered from the Weight Control Information Network. 301-984-7378. www.niddk.nih.gov/health/nutrit/nutrit.htm

Iowa Resources to Support Recreation

**Iowa Department of Natural Resources** is interested in creating opportunities to promote physical activity and interest in the outdoors. Look under "County Government" in the yellow pages for County Conservation Board or contact the DNR Conservation Officer through the sheriff's office.

**Iowa Resource Enhancement and Protection Program** (REAP) funds grants to cities for developing parks and open spaces. Contact Kevin Szcodronski at 515-281-8674 for information on applying for these funds. www.state.ia.us/dnr/organiza/reap/county.htm or reap/city.htm

**Iowa Department of Transportation** administers three programs which fund recreational trails: the Transportation Enhancement Program through the Transportation Equity Act for the 21st Century (T-21), a state recreational trails fund and a federal recreational trails fund. For more information, contact the regional DOT Transportation Center Office listed under state government in the yellow pages or Nancy Burns at 515-239-1621.

Iowa Resources to Promote Healthy Eating

**BASICS for Nutrition Grants.** USDA Food Stamp Program provides matching funds to Iowa communities for community-based nutrition education and physical activity promotion to low income audiences. Contact Doris Montgomery at the Iowa Department of Public Health. 1-800-532-1579. dmontgom@idph.state.ia.us

**Pick a Better Snack.** A nutrition campaign designed to increase consumption of fruits and vegetables in Iowa through media messages, school and community activities and local promotions to make parents, caregivers and children aware that they can Pick a Better Snack by choosing fruits and vegetables. Contact the Iowa Nutrition Education Network at 1-800-532-1579.

**Child and Adult Care Food Program.** Reimbursement for snacks provided during after school activities that have an educational component is available. Bureau of Food and Nutrition, Department of Education, Grimes State Office Building, Des Moines, IA 50319. 515-281-5356.

**Iowa State University Extension**. Administers Expanded Food and Nutrition Education Program (EFNEP) and the Family and Nutrition Program (FNP) which provides nutrition, meal preparation and food safety education to families. Call 515-295-6620 for contact information in your county. See Websites below.

Iowa Resources to Promote Health Eating

**Iowa WIC Program.** Provides nutrition education, supplemental foods and access to health care for pregnant, breastfeeding and postpartum women, infants and children up to the age of 5. Clinics held in all 99 counties. Call 1-800-532-1579 for contact information in your county.

**American Heart Association of Iowa, Heartland Affiliate**. Educational materials are available for individuals and schools. 1111 9th St., Des Moines, IA 50314; 515-244-3278; www.AmericanHeart.org

**Midland Dairy Council**. Produces nutrition education materials for schools and individuals. 101 NE Trilein, Ankeny, IA 50021; 515-964-0696 or 1-800-406-MILK.

**5 Plus 5 Workbook.** A guide for communities to promote Iowans eating fruits and vegetables 5 times a day and becoming physically active 5 days a week. Available from the Iowa Substance Abuse Information Center; 1-800-247-0614.

Parenting Support

**HOPES-HFI: Healthy Opportunities for Parents to Experience Success.** In home family support for pregnant women through the child's fourth birthday. Goals are to promote self sufficient families, promote child health and safety, improve family functioning and parent/child interactions, and build on family strengths. Program covers 10 counties. Contact Joyce Berkenes, Home Care Iowa, Inc. 515-243-0599

**Early Head Start.** Provides early, continuous, intensive, and comprehensive child development and family support services to low-income families with children under age three. Contact the Head Start Collaboration Office Coordinator, Anita Varme, Iowa Department of Education, 515-242-6024.

**Healthy Start.** Works with pregnant and parenting women with children through the first year of life to remove barriers to services and decrease infant mortality in Polk County. Provides transportation, translation services, incentives to participate in health services and attend classes. Contact Clarice Low at 515-237-8161 ext. 211.

**Shared Visions Parent Support**: Advocates for Iowa's children and families and to administer model child development and parent programs for young children and families at risk. Serves at risk children from birth through three years of age through 12 programs. Contact the Iowa Department of Education Head Start Collaboration Office Coordinator, Anita Varme at 515-242-6024.

**Shared Visions Child Development Coordinating Council.** Serves children ages 3 – 5 in 55 counties through 114 programs located in public schools, Head Start agencies and non-profit agencies. Call the Iowa Department of Education Early Childhood Consultant at 515-281-7844.

Websites

**Active.** www.activeparks.org
**After School Programs.** Www.afterschool.gov
**American Walks**. www.americawalks.org
**Center for Science in the Public Interest**. Www.cspinet.org.
**Centers for Disease Control and Prevention.** Http://eta.aed.org
**ISU Extension.** www/.extension/iastate.edu/fnp
or www.exnet.iastate.edu/Pages/families/efnep/efnepfacts99.html
**Playground Safety.** Www.uni.edu/playground; 1-800-554-7529.
**Walkability Checklist**. www.nsc.org/walkable.htm

Additional resources may be found in the *Promoting Healthy Lifestyle in the Home, Promoting Healthy Lifestyles in the Child Care Setting*, and *Promoting Healthy Lifestyles in the School Setting*.

## References

1. Lee, C.D., et al. U.S. weight guidelines: Is it also important to consider respiratory fitness? International Journal of Obesity. 1998; 22, Suppl 2, S2-S7.

2. U.S. Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.

# Supplement E.
# Preventing Obesity and Further Weight Gain in the Health Care Setting

Although the primary purpose of this document is to promote prevention of childhood obesity, a brief discussion of intervention is appropriate. Children with a family history of obesity and those with chronic illness or disability are at high risk. Increased risk is also attributed to income status and certain ethnic groups such as Native Americans, Hispanics and African Americans. However, obesity is increasing in prevalence in all socio-economic and racial groups; therefore, all children require screening and early intervention for excessive weight gain.

Surveys indicate that parents trust their physician's advice on nutrition. Presumably this trust can be extended to other lifestyle issues, such as exercise, as well. Prevention of obesity begins early in life and a the health care professional is a primary source of guidance. Health care professionals must make prevention of childhood obesity a high priority. Well child examinations for all children should include:

- Routine measurement of height and weight and calculation of Body Mass Index [1] (BMI) for age (1);
- Serial plotting of weight gain and linear growth on standardized growth charts; and
- Anticipatory guidance, education and/or counseling regarding healthy eating, physical activity and parenting/nurturing styles.

Plotting of weight for height ratio or BMI for age can provide early detection of excessive rate of weight gain and identify trends toward a disproportionate relationship between weight and height.

## Intervention When a Child May be Overweight

The Task Force acknowledges that physicians face difficulties when determining how to address obesity issues with families. A diagnosis of obesity can label a child unfairly and set up parents to struggle with children over food and other activities. This is counterproductive to the intervention goals. While intervention is important to prevent further obesity and its complications, physicians need to be sensitive to the many issues involved when counseling families. It is useful to first determine the family's perceptions of the problem. Counseling should emphasize healthy lifestyles rather than weight loss as described in the supplement on *Promoting Healthy Lifestyle in the Home*.

[1] BMI is calculated using the formula $kg/m^2$. The recently revised growth charts for children and adolescents published by the Centers for Disease Control and Prevention (CDC) and the National Center for Health Statistics are available to download at the website listed under Resources. Tools and instructions for calculating the BMI are also available at this site.

Recently the Maternal and Child Health Bureau, the Health Resources and Service Administration and the Department of Health and Human Services convened an expert committee to develop standard guidelines for the evaluation and treatment of overweight children and adolescents (1). The Child and Adolescent Obesity Task Force promotes the following recommendations from that committee. Intervention is indicated for children and adolescents when screening information gathered from routine primary health care visits reveal:

- BMI greater than or equal to the 95$^{th}$ percentile for age and sex;
- BMI greater than or equal to the 85$^{th}$ percentile, with secondary complications of obesity. Secondary complications include elevated serum lipids, hypertension, orthopedic disorders, sleep disorders, gall bladder disease and insulin resistance; or
- Weight gain pattern indicating recent, or consistent, annual increase(s) of $\geq$2 BMI units.

Treatment is best provided by an interdisciplinary team, including professionals in nutrition, pediatric and specialized medicine, physical therapy and psychology to develop an individualized care/treatment plan addressing physical, medical and psychosocial needs of the child and their family. Current research and practice guidelines serve as a basis for recommendations. Currently the resources available to complete a comprehensive evaluation and to develop this type of care plan are only available at tertiary care centers.

Often the most effective intervention plan is to institute a healthy diet based on Food Pyramid Guidelines and to encourage water intake. Utilization of community and school support is also important for the long-term success of intervention programs. Many families are in need of assistance in making environmental changes. Trained in-home service workers available through Iowa State University Extension program assistants available through the Expanded Food and Nutrition Education Network and the Family Nutrition Program can be helpful in translating families' commitment to health into practical daily changes.

## Protocol Based on Level of Risk

The intervention approach should be determined by the severity of obesity, complications of obesity, family history and the openness of the family to accept and implement change. Severe food restriction and punishing attitudes is contraindicated. The following levels of intervention are suggested.

1. *Primary level intervention – children 85$^{th}$- 95$^{th}$ percentile BMI*

- Routine medical examination conducted by a physician, nurse practitioner, or physician's assistant.
- Nutrition assessment conducted by a licensed dietitian to assess etiology of excessive calorie intake including basic pattern of meals and snacks, frequency of fast food intake, frequency of juice or sweetened beverage consumption, leisure time activities, and caregiver nurturing style/feeding interactions.
- Follow-up visits every 3-6 months.

- Establish goals:
    - Primary goal – develop healthy eating and activity patterns (general lifestyle changes).
    - Weight goal – maintenance.

2. *Secondary level – children >95$^{th}$ percentile BMI for age*

- Routine medical examination conducted by a physician, nurse practitioner or physician's assistant with laboratory tests as indicated by family history and clinical signs.
- Nutrition assessment including in-depth dietary and physical activity evaluation conducted by a licensed dietitian and psychosocial screening conducted by a psychologist or social worker.
- Increased frequency of structured monitoring by health professionals (every 1 to 3 months).
- Establishment of specific outcome goals for dietary or physical activity behavior change.
- Establish goals:
    - Primary goal - change in 1-2 identified problematic eating/active behaviors.
    - Weight goal – initially weight maintenance then weight loss to BMI 85$^{th}$ percentile (esp. if positive family history of obesity).

3. *Tertiary level – children >95$^{th}$ percentile BMI for age with complications, strong family history of obesity*

- In-depth evaluation by multiple disciplines including psychology, social work, medicine, dietitian and physical therapy with inclusion of behavior management principles such as contracting and self-monitoring activities (diaries).
- Incentive based goals and role modeling; in-depth medical and physical therapy evaluation including cardiovascular endurance/fitness.
- In-depth dietary history and nutrition assessment conducted by licensed dietitian.
- Possible inpatient admission for interdisciplinary assessment/intervention planning and documentation of ability to stabilize weight with normalized dietary intake and daily physical activity.
- Follow-up visits monthly.
- Establish goals:
    - Primary goal – change in 1-2 identified problematic eating/active behaviors.
    - Weight goal – slow weight loss of 1-2 BMI units, stabilize for 6 months with weight maintenance and repeat with slow weight loss.

## General Approaches to Treatment

Many families are not aware that their overweight child is facing critical health problems. Physicians may need to explain the concerns to the family and outline options for prevention. The following suggestions are summarized from the article by Barlow & Dietz (2).

- Assess family readiness for change. Total family commitment is required for success in maintaining long-term behavior change, and overall change in family dietary patterns, intake and level of physical activity is necessary for a child's success.
- Begin treatment as early as 3 years of age or at the onset of excessive weight gain.
- Educate family about complications of obesity.
- Involve family and all caregivers in the treatment process.
- Include behavior management principles in instituting permanent changes.
- Instruct families to monitor eating and physical activity as a tool for problem solving.
- Assist family in initiating small, gradual changes in dietary intake and physical activity level.
- Increase activity through limiting television viewing, incorporating activity into daily routines and participating in physical activity as a family.
- Avoid restrictive calorie diets unless closely supervised by physician for medical reasons.
- Encourage and empathize, not criticize.
- Utilize a team of experienced professionals.

## Establishing Weight Goals

The primary goal for overweight children is little or no weight gain while linear growth continues, decreasing BMI. Children with secondary complications of obesity will benefit from weight loss. The following guidelines should be considered in establishing weight goals.

- Initial goal after the age of three years is maintenance of baseline weight instituted with small changes in diet and activity while long-term weight maintenance is suggested for obese children 7 years of age or younger without the presence of secondary complications.
- Families should first demonstrate ability to make slight changes in diet and activity patterns. Additional changes can then be pursued to achieve weight loss gradually.
- Ideal weight for height is unrealistic; appropriate weight goal is BMI for age between the $85^{th}$ to $97^{th}$ percentile.
- When weight loss is indicated, weight loss should approximate one pound per month

Establishing a healthy, balanced diet and regular physical activity (3-4 times week – active play for 20-30 minutes), often leads to initial weight loss which levels off to weight maintenance. After a period of weight maintenance, additional small changes in dietary intake and physical activity should be made to decrease BMI by 1-2 units at a time. This protocol of small changes to intake/output with period of stabilization of weight is recommended for long-term maintenance of healthy lifestyle habits.

Preventing and treating obesity continues to be a difficult problem to address. The Iowa Child and Adolescent Obesity Task Force is committed to reviewing and presenting new information regarding the prevention and treatment of obesity.

## Resources

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|---|---|
| Treatment | **Shapedown**. Weight loss program for children and teens, with 15 years of experience. Leader must invest in training videos (price not on website). Each participant requires a workbook and a parent's guide $20/each. Call 415-451-8886 or see website at www.shapedown.com |
| | **Commited to Kids Pediatric Weight Management Program**: Multidisciplinary program for use with overweight children, based on degree of obesity. Program developed and evaluated in conjunction with Louisiana State University and reported in Southern Medical Journal. Leader investment of $225 + $75/each for curriculum (medical, nutrition, exercise & psychology). Training available in New Orleans. Patient handouts, videos & workbooks are additional costs. See website at www.committed-to-kids.com. |
| | **HUGS.** www.hugs.com Lifestyle education program features a "non-diet" approach. Leader initial investment of $495 and $50 licensing fee annually. Participant materials $33/each. |
| | **The Stoplight Diet for Children**. L.H. Epstein & S. Squires. Boston, MA: Little, Brown & Co., 1988. |
| | **PACE: Patient-centered Assessment and Counseling for Exercise and Nutrition**. Simple program that can be delivered in physician's office. Developed through collaboration of the Centers for Disease Control and Prevention and The Association of Teachers of Preventive Medicine. An adolescent version is being developed. Order from: San Diego State University, University of California, San Diego, 5500 Campanile Drive, San Diego, CA 82182-4701. 619-594-5949; website: www.paceproject.org. Two year license is $200 & notebook ($83) and forms ($25/100). Training recommended. |
| | **Way to Go Kids!** www.waytogokids.com. Leader investment of $695 required. Handout masters provided. |
| | **HUGS**: www.hugs.com This is a lifestyle education program with a non-diet approach for adults and teens. |
| Training for Professionals | **Children and Weight: What Professionals Can Do Training Kit.** University of California Agriculture and Natural Resources Publication 3416. Kit includes concept paper, case studies and 39 minute videotape featuring a Pediatrician, Pediatric Endocrinologist and a psychologist. or order by calling 1-800-994-8849; website: http://anrcatalog.ucdavis.edu. *May be able to borrow from the Bureau of Nutrition and WIC: 515-281-4919* |
| Websites | **TV Turnoff Network.** 1611 Connecticut Ave, NW, Suite 31, Washington, DC 20009; 202-887-0436; www.tvturnoff.org<br>**International Life Sciences Institute, (ILSI).** www.ilsi.org<br>**Growth Charts.** Www.cdc.gov/growth charts<br>**Obesity Guidelines.** Www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm The guidelines released in 1999.<br>**Links to Best Nutrition Sites.** Http://navigator.tufts.edu<br>**Weight Control Information Network (WIN):** www.niddk.nih.gov/health/nutrit/win.htm |

See the Promoting Healthy Lifestyle in the Home supplement for resources for parents. The Promoting Healthy Lifestyles in the Community supplement lists resources available in the community.

## References


1. Barlow, S.E. and W.H. Dietz. Obesity Evaluation and Treatment: Expert Committee Recommendations. Pediatrics 102 (3):29, 1998. .

2 Himes, J.H. and W.H. Dietz. Guidelines for overweight in adolescent preventive services: Recommendations from an expert committee. Am. J. Clin. Nutr. 59:307-316, 1994.


## Additional References


Epstein, L. H., & S. Squires. The Stoplight Diet for Children. Boston, MA: Little, Brown and Co. 1988

Epstein, L.H. et al. Decreasing sedentary behaviors in treating pediatric obesity. Arch. Pediatr.Adolesc.Med. 2000; 154:220-226.

Long, B.J., et al. A multisite field test of the acceptability of physical activity counseling in primary care: Project PACE. Am J. Prev. Med. 12: 73-81, 1996. .

Rollnick, S., et al. Negotiating behaviour change in medical settings: The development of brief motivational interviewing. J. Mental Health. 1:25-37, 1992.

Spieth, L.E. et al. A low-glycemic index diet in the treatment of pediatric obesity. Arch. Pediatr.Adolesc. Med. 2000; 154:947-951.

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