

Nutrition, Physical Fitness and the Future of Orange County's Children

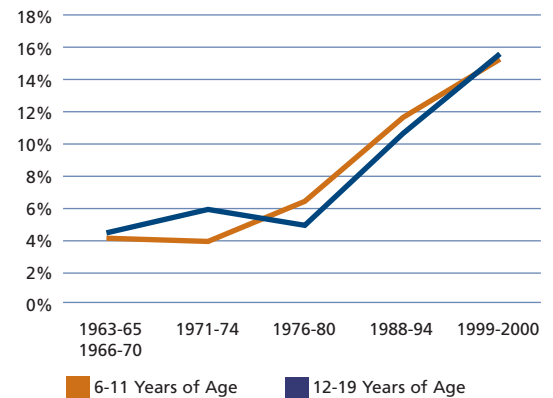
Today's time-strapped families need speed and convenience. These needs have driven, in part, changes over the past 30 years in day-to-day life. For example, between the 1970s and 1990s, the percent of meals eaten away from home has risen from 17% to 30%.²¹ Other aspects of modern life, such as concerns for safety or inaccessible playgrounds, have impacted kids' physical activity levels. Walking and bicycling by children aged 5–15 dropped 40% since 1977.¹¹ Today, only about one-half of youth regularly participate in vigorous physical activity and one-fourth report no vigorous physical activity. As kids get older, participation in all types of physical activity declines significantly.¹⁶ Instead of active play, some kids may substitute more sedentary activities. Children ages 2-17 watched an average of 19 hours, 40 minutes of TV each week in 2000 (the equivalent of nearly three hours a day).³⁵

The demands of modern life have been met, but at a price. The unintended result is an environment in which it is hard for children and their families to make healthful food and activity choices. One of the most disturbing symptoms of this environment is the growing number of unfit or overweight children in Orange County and nationwide.

Growing awareness of these trends is now producing a new kind of demand. Those who shape children's environments directly at home, at school, or in the community are responding to the new demand for an environment that supports a healthy lifestyle. Business leaders who want future workers to be healthy and productive, or officials tasked with maintaining a fit military, are adding their voices to the call and seeing the role they have in shaping a healthy environment for children.

But for individuals, families and institutions alike, the first step is awareness of what constitutes a healthy lifestyle for children, how far many children and parents are from that lifestyle, and what elements of the Orange County environment discourage a healthy lifestyle. This awareness has led to a wide range of local organizations taking steps to counter the negative health trends for children. Their efforts are showcased at the end of this report.

Percent Overweight Children and Adolescents
United States, Selected Years 1963-2000



Sources: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey, Hispanic Health and Nutrition Examination Survey (1982-84), and National Health Examination Survey (1963-65 and 1966-70)

Over the past four years, the Orange County Community Indicators Project has become a respected resource for its annual measurement of economic, social, health, and environmental trends that affect quality of life in Orange County. The annual report has developed a broad and powerful readership of business and community leaders working to keep Orange County strong and vibrant. This respect and readership offers the Project a unique opportunity to reach an influential audience on issues of significant community concern.

This report on the health and fitness of Orange County's children documents the rising trend in unfit and overweight kids over the past 30 years, briefly analyzes the environment of inactivity and poor eating habits that contributes to this trend, and poses questions for the consideration of those who shape children's environments including families, businesses, schools/daycare centers, and the health and medical community. We hope you find this report informative and thought-provoking.

For a fully footnoted version of this report, log on to: www.oc.ca.gov/ceo/Comm_Indicators/Comm_Indi.asp.

Components of a Healthy Lifestyle

Experts recommend that kids accumulate at least **30 to 60 minutes of vigorous, active play** or exercise a day. Kids should be active when they can (e.g., before and after school) and limit extended periods of inactivity (two or more hours).^{3,4,33} Given the strong correlation between unhealthy body composition and TV watching, the American Academy of Pediatrics recommends **limiting TV watching and video game playing** to no more than **one to two hours a day** for children **under two years old**.

Soda and fast food increasingly take the place of milk and more nutritious foods in children's diets. Experts generally discourage soda and strongly recommend **five servings of fruits and vegetables** a day to protect against a large number of diseases.^{32,46} Recommendations for healthy activity levels and eating habits vary according to children's ages. For specific healthy lifestyle recommendations by age, see the boxed inset.

Activity recommendations for infants and toddlers: www.aahperd.org/naspe/template.cfm?template=toddlers.html
Activity recommendations for adolescents: <http://www.aap.org/family/physicalactivity/physicalactivity.htm>
Nutrition recommendations for children: <http://www.choc.com/pediatric/hhg/eatwell.htm>
Food Guide Pyramid for young children (2-6): <http://www.usda.gov/cnpp/KidsPyra/LittlePyr.pdf>

The Gap Between Recommendations and Reality

The upward trend in the number of overweight children and the latest data on physical activity and nutrition suggests a gap between the recommendations and reality. Many facts suggest this growing gap is cause for concern. More and more kids are being diagnosed with "adult" health problems that are largely caused by being overweight. Type II diabetes prevalence, once rare among youth, has tripled in the under 18 population since 1997.³⁴ Overweight children report lower self-esteem and quality of life and have higher rates of depression.² They also have a high chance becoming overweight or obese adults.^{10,20,25,41} If unhealthy children become unhealthy adults there are further negative consequences. As many as 300,000 deaths in the U.S. are attributed to obesity every year and the economic cost of obesity (such as health care costs and losses due to absenteeism) was estimated at \$117 billion in 2000.^{1,13}

Even children with normal weights may be suffering symptoms of physical inactivity and poor nutrition such as low aerobic capacity or lagging academic performance.⁸

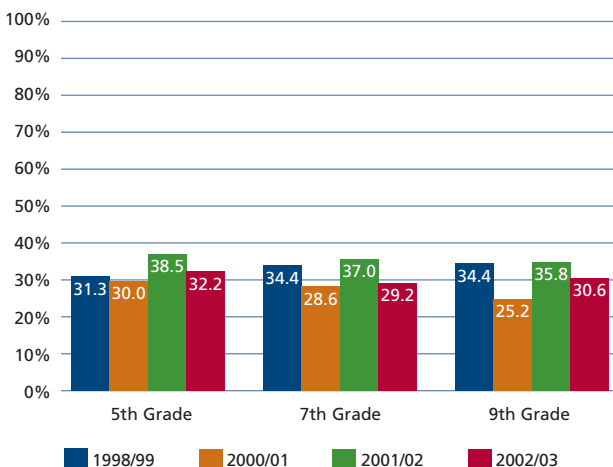
While concern is warranted, hopelessness is not. Public health officials are quick to point out that many of these conditions are preventable. To help guide progress towards healthier children, Healthy People 2010 – a national health promotion and disease prevention initiative that establishes national health objectives – set the 2010 target for overweight or obese youth (ages 6-19) at 5%.¹² Achieving this target would return children to the levels of the 1960s and 70s, according to Centers for Disease Control and Prevention (CDCP) estimates. However, as the next section describes, estimates on the percent overweight vary.

Trends in Overweight

Nationwide, the CDCP reports an increase from 4.2% to 15.3% over the past 30 years in the number of children ages 6-11 who are seriously overweight, a 264% increase (see chart on first page).

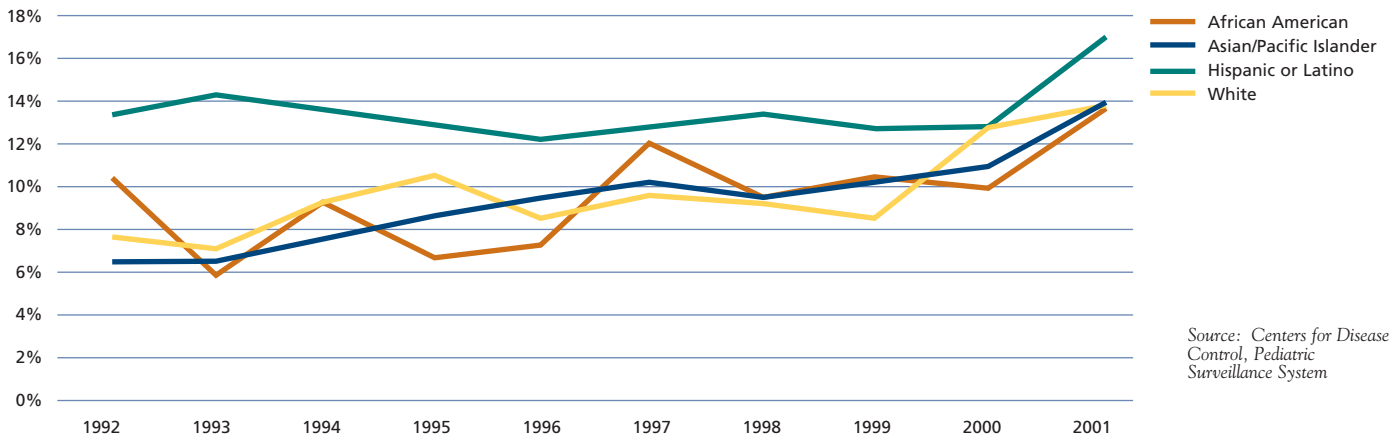
For Orange County, the 2002/03 Fitnessgram reports that 32% of 5th graders, 29% of 7th graders, and 31% of 9th graders have unhealthy body compositions. The standards used by the Fitnessgram are stricter for some age groups than the CDCP standards, accounting for the higher estimates.⁹

Percent of Students Who are Overweight
Orange County, 1998/99 - 2002/03



Source: California Department of Education, Fitnessgram (2001/02 does not include Tustin or Capistrano Unified School Districts)

**Percent Overweight Among Low-Income Orange County Children Ages 2 to 5
By Race/Ethnicity - 1992 - 2001**



Source: Centers for Disease Control, Pediatric Surveillance System

Variations are evident by race and ethnicity. A survey of youth from low-income families reports that in Orange County, Hispanic 2-5 year olds and 5-12 year olds have the highest percentage of overweight (17% and 21%, respectively, in 2001). African American youth in the 12-20 age bracket have the highest percentage of overweight (23%) followed closely by White and Hispanic youth (both 20%). This survey shows that the percentage of overweight children has increased for all racial and ethnic groups in Orange County over the past 10 years.¹⁴

While the estimates vary by study, they all agree that the percentage of overweight children is considerable. Genetics

certainly play a role, but genetics alone cannot account for the rapid rise in overweight youth since the genetic composition of the population changes slowly.¹⁵ Rather, children and adolescents' food and activity choices are shaped by the foods available at home, school and in their community; the availability of exercise through schools, clubs, and safe places to play; and what they see and hear on TV and in the community. In short, their choices are shaped by their environment. Over the past 30 years there have been many changes in children's environment that negatively impact their activity levels and food intake. The current environment of poor nutrition and inactivity has potentially harmful consequences for all children, regardless of weight.

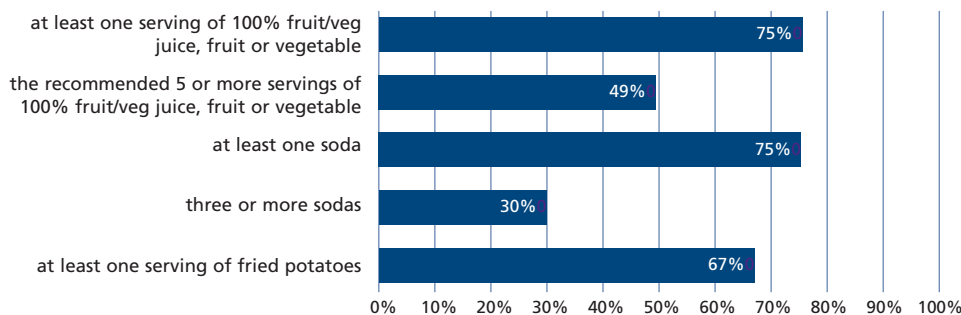
What it's like to be a kid in Orange County... The Environment of Poor Nutrition

In Orange County, 90% of boys and 86% of girls ages 6-17 eat fast food at least once a week. On average, Orange County kids eat fast food three days per week.³⁶ The decline in meals eaten at home and the increase in fast food consumption over the past 30 years correlate with the increase in overweight among children and adults. Soft drink consumption among adolescents saw increases during this period as well. On average, 12-19 year old boys consume 28 ounces of soda per day and girls consume 21 ounces.⁴⁴ Soft drinks contribute almost half of the sugar in teenagers' diets.²⁶ Even the increased consumption of diet

soft drinks are of concern, as studies have shown that they are being consumed in the place of more nutrient-rich alternatives like milk.²⁴ A poor, low-nutrient diet has been found to adversely influence the ability to learn and to decrease motivation and attentiveness.²⁷ Adding to the influences on children's diet is the trend toward increased portion sizes over the past 30 years. Young children are able to respond to internal satiety cues and stop eating when full, but children as young as five already show signs of responding to their food environment, eating more when more is placed in front of them.³⁸ Dietitians advise smaller portions but warn that restricting intake can backfire; children put on "diets" tend to become preoccupied with food and overeat when they get the chance and may actually increase their risk for obesity.⁴⁰

What role can schools and child care providers play in improving children and families' nutrition?

Approximate Percentage of Orange County 7th, 9th, and 11th Graders Who Had in the Past 24 Hours:

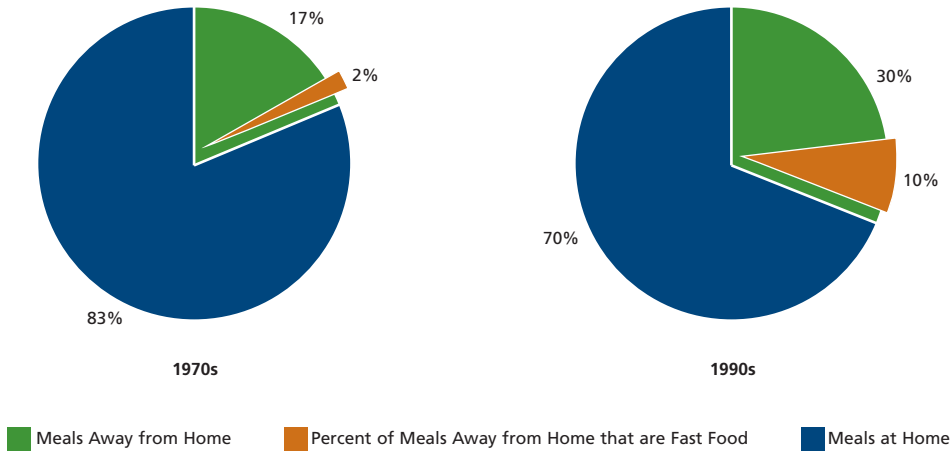


Does your pediatrician or health care provider track your child's Body Mass Index and emphasize healthy habits at each visit?

Source: California Healthy Kids Survey, Orange County, 2001/02

Note: Please see note about the California Healthy Kids Survey on page five.

Children's Meals Away from Home and Percent that were Fast Food, 1970s and 1990s



Source: Ebbeling, Cara B., Pawlak, Dorota B., Ludwig, David S. Childhood obesity: public health crisis, common sense cure. Lancet, August 10, 2002, vol 360, issue 9331,473.

The Environment of Inactivity

Between 31% and 41% of students cannot meet basic aerobic capacity standards and these rates vary by school district (a map showing the breakdown by school district is available at www.oc.ca.gov/ceo/comm_indicators/comm_indi.asp).⁹ Some of these children may have low aerobic capacity due to asthma, but it is not a significant proportion since only 8.3% of Orange County children suffer asthma symptoms.⁴⁵ Having a healthy body weight reduces a child's chances of developing asthma to begin with.⁶

Could your business adopt a school district to fund proven programs that increase active lifestyles and healthy eating?

To improve fitness, the Physical Activity Pyramid (modeled after the better-known Food Guide Pyramid) emphasizes "lifestyle activities."¹⁸ These include: walking or riding to or from school, taking the stairs instead of the elevator, doing chores around the house, and active play

such as climbing on a jungle gym for younger kids or more organized games for older children. For many children, however, the pyramid is turned upside-down.



Physical education (Phys Ed) is increasingly squeezed out in search of more time for academic instruction, yet studies have shown that physical activity is positively correlated with academic performance.^{8, 23, 39} For example, reducing academic class time by 240 minutes per week to

Have Phys Ed offerings and/or student Phys Ed participation declined in your school district?

permit increased physical activity leads to consistently higher math scores.⁴² For grades one through six the education code requires 100 minutes per week of physical education and

200 minutes per week for grades seven through 12, but the California Department of Education does not monitor districts for compliance nor penalize non-compliance. Data also show that Phys Ed programs may not meet quality standards, with children spending most of the allotted time hearing instructions, doing calisthenics, lining up, and waiting in line.^{22, 29, 30}

After school provides another opportunity for physical activity. The after school activity Orange County parents would most like to have available for their children ages six to 17 is recreation and sports (46%). However, the availability of after school activities varies by income. Low-income families report less access to after school activities than middle- and upper-income families.³³ Most Orange County cities offer after school sports for a fee; some provide free supervised after school play time at city parks or on school grounds.

What would encourage or enable kids to get more active after school or to walk to school?

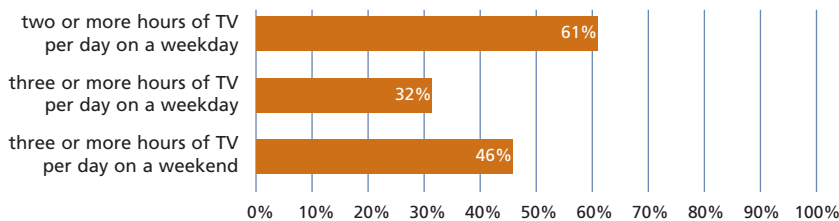
Kids may be “safe at home” watching TV in lieu of more active after school activities. An overwhelming number of scientific studies show children who watch more TV tend to be heavier. TV watching not only displaces vigorous play but many children passively eat calorie-dense foods while watching. Studies show that young children are highly influenced by advertising.⁷ They are exposed to about 10 food commercials per hour, most for what are widely considered “junk foods.”^{22, 31, 43}

What role can the health community play in reducing children’s time spent watching TV?

Watching TV during mealtimes also is associated with children eating fewer fruits and vegetables (infrequently the subject of commercials).¹⁷ There is also evidence that children with TV’s in their bedrooms are more likely to be overweight and spend more time watching TV or playing video games than children without TV’s in their bedrooms.¹⁹ The impact of computer use and time spent surfing the Internet on weight is likely similar to TV, but kids spend less time on the computer than watching TV. Only 18% of Orange County’s youth spend more than two hours a day using a computer, roughly similar to the state average.⁴⁵

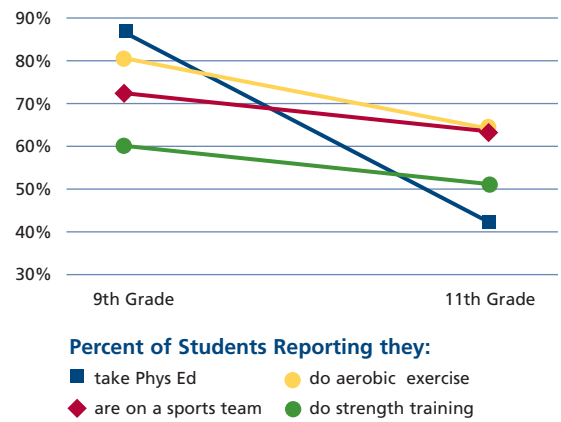
There is also evidence that children with TV’s in their bedrooms are more likely to be overweight and spend more time watching TV or playing video games than children without TV’s in their bedrooms.¹⁹ The impact of computer use and time spent surfing the Internet on weight is likely similar to TV, but kids spend less time on the computer than watching TV. Only 18% of Orange County’s youth spend more than two hours a day using a computer, roughly similar to the state average.⁴⁵

Percent of Orange County Children and Adolescents Who Watch:



Source: University of California, Los Angeles, California Health Interview Survey, 2001

Change in Physical Activity from 9th to 11th Grades Orange County, 2001/02



Source: California Healthy Kids Survey, Orange County, 2001/02

Notes: The California Healthy Kids Survey is a survey that school districts voluntarily choose whether or not to administer to their students. The Orange County data provided is not considered a complete or random sample of all Orange County students. “Aerobic exercise” indicates physical activity that made the student sweat or breathe hard for at least 20 minutes a day, three or more days in the past seven days. “Strength training” indicates exercises to strengthen or tone muscles three or more days in the past seven days.

Closing the Gap

Locally many organizations have started to take action to create a healthy food and fitness environment for Orange County’s children:

- The Boys and Girls Club of Buena Park is implementing Project Sozo, an after-school health and fitness program where kids participate in fun, game-oriented activities and sports and learn about healthy eating habits. Project Sozo also has a program for parents of children ages zero to five.
- Orange County schools are encouraging parents to create a “Walking School Bus” where students arrange to walk to school together, sometimes with a parent “driver.” This is one element of Safe Routes to School programs that help students, parents, and whole communities discover the benefits of walking and bicycling, such as increased exercise, improved health and fitness, cleaner air, reduced traffic congestion, and greater independence for children.
- Following in the footsteps of many local school districts that restricted access to high-fat, low-nutritional value foods (“junk foods”) and soda on their campuses, a 2003 California law which goes into effect in July 2004 bans the sale of soda on elementary school campuses and restricts the sale of soda on junior high and high school campuses.
- Latino Health Access, a local non-profit organization, runs an after school “health club” for kids at a Santa Ana elementary school.
- Many Orange County schools and community organizations are taking advantage of “Nutrition Network for Healthy, Active Families” which provides funding for nutrition education programs (such as “taste tests” of fruits and vegetables) and programs that teach the importance of daily physical activity.
- Providing a positive model for children and adults alike, the stairways at the Anaheim City Hall are conveniently located throughout the facility, well-lit, and identified with a placard that visually supports using stairs as a heart-healthy activity.

Local cities, businesses, schools and organizations are using their influence in the community, whether small or large, to counter the negative trends and conditions.

Supporting a Healthy Future

This report suggests that increasingly unhealthy children are an important issue for public concern – but this does not necessarily lead to alarmist conclusions. Just as rising obesity reflects many subtle and gradual changes in American lifestyles, reversing that trend will not necessarily require monumental change. Research published in the journal *Science* suggests that changes as simple as taking 2,000 more steps each day (e.g., two 15 minute walks, such as walking to and from school or a bus stop, or going shopping at a mall) or consuming 100 fewer calories a day (e.g., a tablespoon of butter, 8 oz. soda, or 3/4 oz. chocolate), would help slow or stop the rise in average weights.⁵

Parents, community groups, schools, and businesses can help knock down barriers to physical activity, or raise barriers to unhealthy consumption, in many small but significant ways. Policies and programs can be designed to increase activity in and out of school. Urban design and architecture can make walking more safe and inviting. Careful monitoring of the availability and marketing of unhealthy foods at school can help children avoid extra calories. And simple discussion of these issues in communities and families can raise awareness. Little could be more important for Orange County's future than the health of our children. The negative consequences of an unhealthy lifestyle and environment are real, but prevention is possible and the opportunities for personal and environmental change are well within reach.

Nutrition and Physical Activity Resources

- Active Living By Design, www.activelivingbydesign.org/index.cfm
- American Academy of Pediatrics, (847) 434-4000, kidsdocs@aap.org, www.aap.org.
- Body Mass Index Calculator, www.keepkidshealthy.com/welcome/bmicalculator.html
- Boys and Girls Club of Orange County, (714) 568-5710
- California Safe Walks to School Initiative, www.dhs.cahwnet.gov/routes2school/
- Centers for Disease Control, Nutrition and Physical Activity Publications, www.cdc.gov/nccdphp/dnpa/publicat.htm
- Children's Hospital of Orange County, (714) 997-3000, KidWise Health Advisor, www.choc.com/pediatric/index.lasso
- County of Orange Department of Harbors, Beaches and Parks, toll free: (866) OCPARKS, ocparks@pfrd.ocgov.com, www.ocparks.com
- Institute for Traffic Engineers Traffic Calming for Communities, (202) 289-0222, website@ite.org, www.ite.org/traffic/tcdevices.htm
- National Association for Sport and Physical Education, (703) 476-3410, naspe@aahperd.org, www.aahperd.org/naspe.
- Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, www.surgeongeneral.gov/topics/obesity/default.htm
- Task Force on Community Preventive Services' recommendations on proven ways to increase physical activity, www.thecommunityguide.org/pa/default.htm
- YMCA of Orange County, (714)549-9622, www.ymcaoc.org

- 33 National Association for Sport and Physical Education, Guidelines for Appropriate Physical Activity for Elementary School Children, 2003 Update (www.aahperd.org/naspe/pdf_files/input_activity.pdf).
- 34 National Center for Health Statistics, Data 2010 (www.cdc.gov/nchs/about/otheract/hpdata2010/aboutdata2010.htm)
- 35 Nielsen, 2000 (www.tvfa.org/factsheets.htm)
- 36 Orange County Health Needs Assessment, 1998
- 37 Orange County Health Needs Assessment, Spring Report 2002
- 38 Rolls BJ, Engell D, Birch LL. Serving portion size influences 5-year-old but not 3-year-old children's food intake. *J Am Diet Assoc* 2000; 100: 232-34.
- 39 Sallis JF, Prochaska JJ, Taylor WC, Hill JO Geraci JC. Correlates of physical activity in a national sample of girls and boys in grades 4 through 12. *Health Psychology* 1999; 18(4):410-415.
- 40 Satter E. *How to get your kid to eat...but not too much*. Palo Alto, CA. Bull Publishing Co., 1987.
- 41 Serdula MK, Ivery D, Coates RJ, Freedman DS, Williamson DE, Byers T. Do obese children become obese adults? A review of the literature. *Preventive Medicine*, 1993; 22: 163-177.
- 42 Symons CW, Cinelli B, James TC, Groff P. Bridging student health risks and academic achievement through comprehensive school health programs. *J School Health* 1997; 9:113-126.
- 43 Taras HL, Gage M. Advertised foods on children's television. *Arch Pediatr Adolesc Med* 1995; 149: 649-52.
- 44 United States Department of Agriculture Food Consumption Survey, 1994-1996
- 45 University of California, Los Angeles, Center for Health Policy Research, 2001 California Health Interview Survey (www.chis.ucla.edu)
- 46 Yen ST, Lin BH. Beverage consumption among U.S. children and adolescents: full-information and quasi maximum-likelihood estimation of a censored system. ERS Elsewhere No. 0221. August 2002 (www.ers.usda.gov/publications/erselsewhere/eajs0221/)