Orange County Community Indicators Project

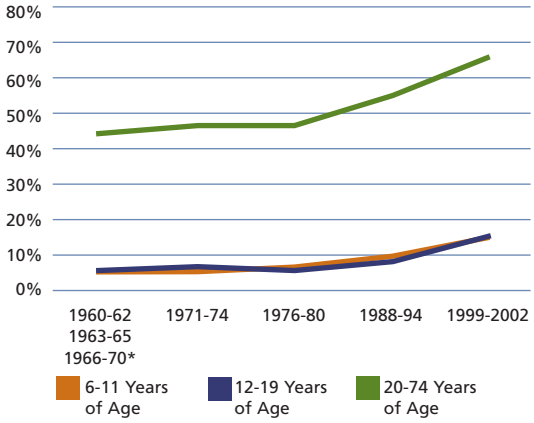
special report

Nutrition and Physical Activity: Why is it Important and How is Orange County Doing?

Obesity carries a high price—in health, lives and money. Overweight adults are twice as likely to rate their health as fair-to-poor than individuals of normal weight.[1] Type II diabetes, once referred to as adult-onset diabetes, is now diagnosed in children at an unprecedented rate.[2] Only about one-third of Orange County students can meet basic fitness standards.[3]

In California alone, the illnesses associated with physical inactivity, obesity and overweight will cost public and private employers $21.7 billion a year in increased health insurance premiums and lost productivity.[4] This should be a matter of deep concern for business leaders and policymakers alike as the most overweight generation in American history prepares to enter the workplace.

Overweight Children, Teens, and Adults
United States, Selected Years 1960-2002



* The child and teen figures are from 1963-65 and 1966-70 surveys. The adult figure is from the 1960-62 survey.

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 (1960-62, 1963-65 and 1966-70)

Why is this happening now? Orange County residents feel forced to rush from working, to studying, commuting, shopping, playing, and in between it all—eating as best they can. If county residents were asked what keeps them or their children from eating well, familiar answers would likely surface.

- *There is not enough time to plan meals, shop and cook.*
- *Dining out is just too convenient.*
- *Fresh foods are difficult to prepare—and hard to like if you do.*
- *Children are "picky eaters," while healthy foods are too expensive and too likely to go to waste.*

The truth is that we also surround ourselves with sugary, fatty, unhealthy foods at the home, office and school.

It is also hard to find time and places to get active. The barriers to exercise are legion: low energy after a day of work or school; a perceived lack of safety in exercising alone or in allowing children to play, walk, or ride their bikes among busy streets; no inviting places to be active near the home or office; reductions in school physical education—and a general lack of knowledge about the benefits of physical activity.[5, 6]

Many of these barriers are the result of gradual but significant social and economic shifts in the last few decades, from changing land use patterns, to the expansion of unhealthy food options. We have created an environment in which it is hard for adults and children to make healthy choices in food and activities. The good news is that people yearn for change. Parents want a lifetime of good health for their children. Awareness is increasing among businesses and employers, public policymakers, teachers, restaurant owners, and many others that we can shape a healthier environment for children and adults alike.

The Orange County Community Indicators Project is best known as the source of the annual Community Indicators report, now in its 6th year. This report measures economic, social, health, and environmental trends that affect quality of life in Orange County.

In 2003, the Project released its first ever Special Report: Nutrition, Physical Fitness and the Future of Orange County's Children. The Special Report documented the rising trend in unfit and overweight kids over the past 30 years and analyzed the environment of inactivity and poor eating habits that contributes to this trend.

Due to the continuing importance of this issue, the Special Report has been updated and expanded. The document you are reading now builds on the original by updating the information on children and adding data on adults' health and fitness. We hope you find it informative and thought-provoking.

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

Social and Economic Shifts

Increasing labor force participation has undercut fitness by encroaching on time for balanced nutrition, regular meals and physical activity. This is partly driven by economic pressure, with rising costs of living encouraging longer hours and two-career families, and partly driven by broader social changes. Rent has taken a growing proportion of household income nationwide (two Orange County cities were among the top ten highest rents in the nation in 2000).[7] Mortgage expenses have followed a similar trend. Today, only 11% of Orange County households can afford the median-priced home, significantly fewer than the 39% just a decade ago.[8] Women's participation in the labor force has seen unprecedented growth, more than doubling since the 1970s. Single-parent families also rose, from 9% in the 1960s to 27% in the 1990s.[9] The result of these shifts is an increased demand for speed and convenience as families seek to balance work and home life. For example, the percent of meals eaten away from home has risen from 18% in the 1970s to 32% in the 1990s.[10] Snacking and skipping breakfast have increased in the past decades as well.[11]

Changing Land Use Patterns

Evolving patterns of building and community design have increasingly discouraged Americans from walking. Population density of urban areas has decreased as more Americans live in the suburbs. More than 80% of new homes in the 1990s were suburban. Jobs have also moved to the suburbs.[12] In 1970, 25% of office space was in the suburbs; today 60% is in the suburbs and 85-90% of total metropolitan jobs are in suburbs. Low-density suburban development tends to separate residential, commercial, and office space, favoring driving in lieu of walking or bicycling. Accordingly, time spent driving is at an all-time high. In 1960, 64% of adults drove to work, compared to 88% in 2000. Walking to work was more than three times as common in 1960 as it is today.[13] In the past 20 years the average number of miles Americans travel in their cars to work or to run errands has increased 81%.[14] Children's trips made by walking or bicycling have declined by more than 40% since 1977.[15]

Expansion of Unhealthy Food Options

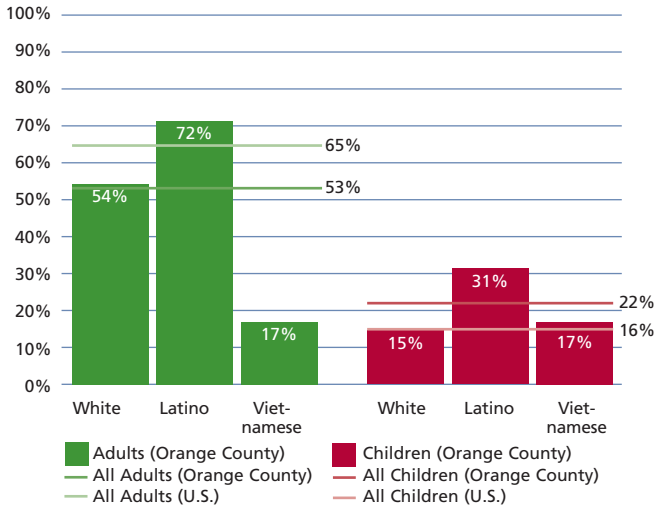
Business expansion and marketing in the food and beverage industry create powerful dynamics of their own. Fast food outlets numbered about 30,000 nationwide in 1970; today they are estimated at 222,000 (a 640% increase, 16 times the rate of population growth over the same period) with sales of more than $125 billion.[16, 17] By catering to peoples' sense of value, portion sizes grew markedly between the 1970s and 1990s at conventional and fast food restaurants. Portion sizes at home followed suit.[18] To compete in this intense market, fast food chains spend approximately $3 billion annually on television advertising.[19] The top four U.S. soft drink companies spent a total of $631 million in 1997 on advertising.[20] Much of this advertising targets children and teens by tying products to well known media icons. These trends may partially account for the fact teens' soft drink consumption has doubled since the 1970s. Among all Americans milk consumption has declined 23% since 1970 and has been replaced by soft drinks and other flavored beverages. Added sugar consumption has risen approximately 23% since 1970 to an average of 52 teaspoons per person per day.[21, 22, 23]

The average American child sees between 10,000 and 30,000 advertisements each year on television alone. A vast majority (95%) of these are for one of four types of foods: fast foods, sodas, sugar-coated cereals and candy.[a]

TRENDS IN OVERWEIGHT

Over the past 40 years, the Centers for Disease Control and Prevention (CDC) report an increase in the number of children ages 6-11 who are overweight from 4% to 16% of the population (a 276% increase). Similar growth (250%) occurred among 12-19 year olds. In 1960, 45% of adults were overweight compared to 65% today, a 46% increase. In Orange County, 53% of adults were overweight in 2004 compared to 48% in 1998.

Percent Overweight within Select Racial/Ethnic Groups
United States, 1999-2002 and Orange County, 2004[b]



Source: Orange County Health Needs Assessment (2004) and National Health and Nutrition Examination Survey (1999-2002)

Within racial and ethnic groups, the percent overweight varies. Data from a national survey of low-income children indicates that the percentage overweight in each racial and ethnic group has increased steadily over the past decade.[24]

What explains these trends? Interestingly, 39% of overweight Orange County adults consider themselves "about the right weight" and only 10% of Orange County parents consider their child overweight.[25] Indeed, there is much confusion about what constitutes "overweight" and "obese." These terms have negative connotations that seem to be judgmental and unkind rather than helpful medical definitions. Parents are confused as to when their child might be considered overweight and when they as parents should act.[26]

Annually Americans spend an estimated $46 billion on diet products and weight loss books and services.[c]

This confusion may account for some of the overweight increase. Genetics may play some role in the trend, but it cannot account for the rapid rise in overweight since the genetic composition of the population changes slowly.[27] Rather, individuals' food and activity choices are shaped by a variety of factors in their environment.

COMPONENTS OF A HEALTHY LIFESTYLE

Below are activity, dietary and screen media (e.g. TV watching or video game playing) guidelines for different age groups.

Daily Activity, Nutrition, and Screen Media Guidelines

	PHYSICAL ACTIVITY	NUTRITION	TV WATCHING/VIDEO GAME PLAYING
YOUNG CHILDREN	Accumulate 30-60 minutes structured; 60+ minutes unstructured. Limit inactivity to less than 60 minutes at a time.	Balance energy expenditure with intake. Consume a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit the intake of saturated and trans fats, cholesterol, added sugars and salt.	Under two: None. Over two: No more than 1-2 hours.
ELEMENTARY AGE CHILDREN	Accumulate 30-60+ minutes vigorous, active play. Limit inactivity to less than 2 hours at a time.		No more than 1-2 hours.
TEENS	Daily active lifestyle activities and 20+ minutes of moderate- to vigorous-intensity activity 3 or more days a week.		
ADULTS	30-60 minutes moderate- to vigorous-intensity activity most days of the week.		No standard set.

Source: American Academy of Pediatrics, National Association for Sport and Physical Education, United States Department of Agriculture, and Centers for Disease Control and Prevention.

The U.S. Department of Agriculture (USDA) recently released updated dietary recommendations at www.mypyramid.com. The new system replaces the familiar one-size-fits-all food pyramid and allows users to obtain individualized dietary recommendations based on their activity level, age and sex. This website and other websites provide more detailed dietary and activity recommendations by age.

Resources for Activity and Dietary Recommendations by Age

Activity Recommendations	(infants and toddlers):	www.aahperd.org/naspe/template.cfm?template=toddlers.html
	(elementary age):	www.aahperd.org/naspe/pdf_files/input_activity.pdf
	(teens):	www.aap.org/family/physicalactivity/physicalactivity.htm
	(adults):	www.cdc.gov/nccdphp/dnpa/physical/recommendations
Dietary Recommendations	(age 2 to 6):	www.usda.gov/cnpp.KidsPyra/LittlePyr.pdf
	(age 2 and up):	www.mypyramid.com
	(adults):	www.healthierus.gov/dietaryguidelines/

WHY IS IT IMPORTANT?

The Growing Cost of Poor Nutrition and Inactivity

The upward trend in the number of overweight children and adults—as well as the latest data on physical activity and nutrition—show the extent of the gap between recommendations and reality.

We should all be alarmed by the growing frequency of serious health problems associated with this gap. As we noted earlier, type II diabetes—once a rarity among youth—now accounts for between 8% and 45% of new diabetes cases in the under 18 population, depending on geographic location.[28] The prevalence of diabetes among adults has nearly doubled since 1980.[29] Overweight children report lower self-esteem and quality of life, while suffering higher rates of depression; the percent of overweight adults who rate their health as fair or poor is double that of individuals of normal weight.[30, 31] Society, as well as individuals, pays the costs in the form of the $21.7 billion in California alone in lost productivity and higher insurance premiums shouldered by public and private employers.[32]

Public health officials are quick to point out that the economic and health consequences of overweight are largely preventable. To help guide progress towards a healthier population, Healthy People 2010—a national health promotion and disease prevention initiative that establishes national health objectives—set the targets displayed at right.

As the next section details, the gap between recommendations and reality is growing in Orange County. To reach these targets we cannot simply diminish these trends. We must reverse them.

Goal	Baseline	Target
Reduce the proportion of children and adolescents who are overweight or obese (ages 6-19)	11%	5%
Reduce the proportion of adults who are obese (ages 20+)	23%	15%
Increase the proportion of adults who are at a healthy weight (BMI greater than 18.5 and lower than 25)	42%	60%

Source: Healthy People 2010 (www.healthypeople.gov)

Some researchers contend that if childhood obesity continues unabated, the average lifespan of today's children could be shortened two to five years.[d]

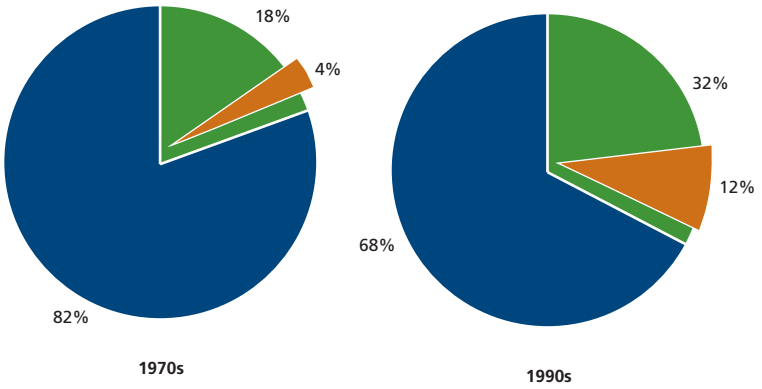
HOW IS ORANGE COUNTY DOING?

Nutrition

Most residents have a general understanding of what is healthy to eat and what is not. And parents recognize their important job as role models for their children when it comes to eating right.[33] Unfortunately, this knowledge does not always translate into a healthy lifestyle for children and adults. In Orange County, 33% of kids eat fast food three or more times a week and 26% at least once a week.[34] Food away from home either at school or at a restaurant is generally higher in saturated fat and lower in fiber and calcium than is food at home.[35] While eating at home can improve diet, it is not enough to ensure a healthy diet. Even with 68% of meals eaten at home, only slightly more than a half (52%) of Orange County adults and fewer children (44%) consume five or more servings of fruits or vegetables a day.[36] One culprit may be TV-watching during mealtimes, which is associated with children eating fewer fruits and vegetables (infrequently the subject of commercials).[37]

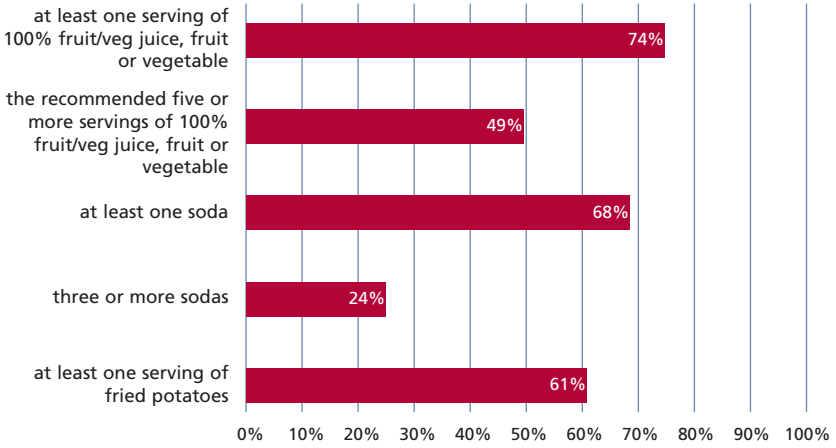
More than half (57%) of Orange County adults indicated that their doctor had not discussed nutrition or diet with them in the past three years.[e]

Meals Away from Home and Percent that are Fast Food
United States, 1970s and 1990s



Source: Guthrie JF, Lin BH, Frazao E. Role of food prepared away from home in the American diet, 1977-78 versus 1994-96: Changes and consequences. Journal of Nutrition Education and Behavior, May-June 2002 (www.jneb.org)

Approximate percentage of Orange County 7th, 9th, and 11th graders who had in the past 24 hours:



Source: California Healthy Kids Survey, Orange County, 2003/04

Note: Not comparable to 2001/02 data

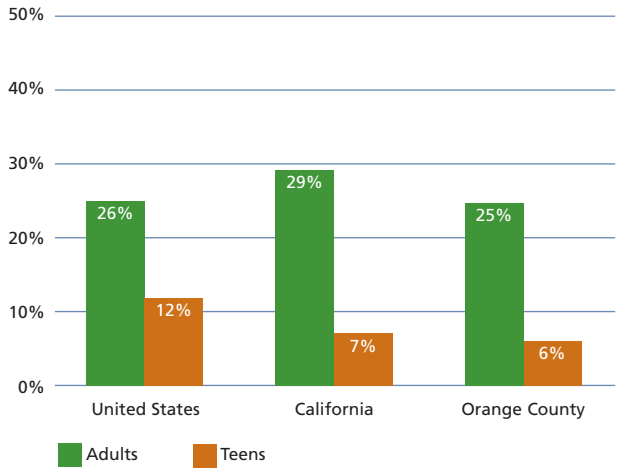
Whether at home, school or when dining out, 68% of Orange County kids report having at least one soda a day.[38] Even the increased consumption of diet soft drinks is of concern, as studies show that they tend to replace more nutrient-rich alternatives like milk.[39] Equally troubling are increased portions of all kinds of foods. Very young children are able to respond to internal satiety cues and stop eating when full, but children as young as five already tend to eat more when more is placed in front of them.[40] Patterns set in youth then correlate strongly to weight problems later. Obese children tend to become obese adults; since bodies tend to defend the highest weight that they attain, losing weight as an adult can be especially difficult.[41, 42, 43, 44, 45]

Physical Activity

Depending on grade level, only between 30% and 37% of Orange County students can meet basic fitness standards.[46] In Orange County, 31% of teens get an insufficient amount of physical activity. A quarter of Orange County adults report no vigorous or moderate physical activity at all and far fewer get the recommended amount.[47, 48]

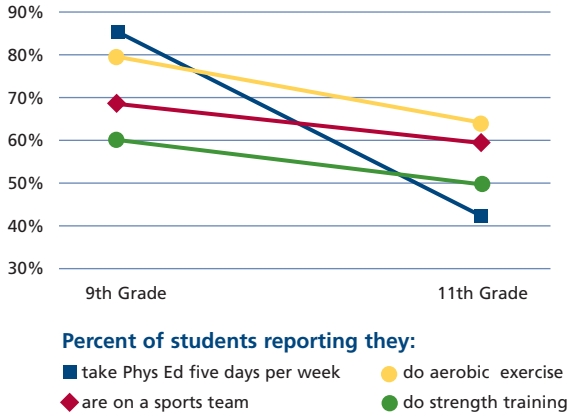
In the past three years, about half (51%) of Orange County adults report that their doctor never discussed exercise with them.[f]

Percent of Adults and Teens Reporting No Physical Activity
United States, California, Orange County, 2001 and 2003



Sources: Behavioral Risk Factor Surveillance System, 2001 (http://apps.nccd.cdc.gov/brfss/), California Health Interview Survey, 2001 and 2003 (www.chis.ucla.edu), Youth Risk Surveillance System, 2003 (www.cdc.gov/HealthyYouth/yrbs/index.htm)

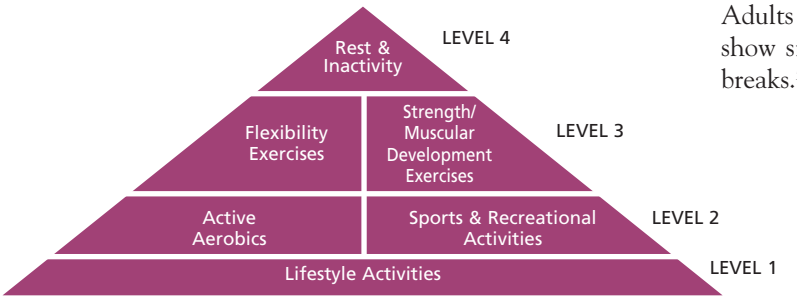
Change in Physical Activity from 9th to 11th Grades
Orange County, 2005



Source: California Healthy Kids Survey, Orange County, 2003/04

Notes: The Phys Ed and sports team data are 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.

To improve fitness, the Physical Activity Pyramid (modeled after the better-known Food Guide Pyramid) emphasizes "lifestyle activities."[49] These include walking or riding to or from school/work, taking the stairs instead of the elevator, doing chores around the house, and (for kids) active play. For many people, however, the pyramid is effectively upside-down.



Opportunities for physical activity at school and work are increasingly scarce. One in seven California teens (15%) report that their school does not require or even offer Physical Education (Phys Ed).[50] In Orange County, 84% of 9th graders take Phys Ed five days a week, but this drops to 44% by 11th grade.[51] Phys Ed is often squeezed out in search of more time for academic instruction, despite studies showing that physical activity is positively correlated with academic performance.[52, 53] For grades one through six the California 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. But school policies matter: teens whose schools require Phys Ed are more likely to be engaged in regular physical activity than those whose schools do not.[54]

Most Orange County adults drive to work and tend to spend a majority of the day sitting at a desk.[55] Sedentary behaviors such as sitting at work or at home are associated with increased risk of obesity and diabetes.[56] Office architecture and location often conspire against physical activity at work when stairs are hidden and there is no inviting place for a walk. Yet research shows exercise during the work day is good for business. Adults who spend most of their day working at a computer show significantly greater productivity if they exercise during breaks.[57]

Reducing academic class time by 240 minutes per week (or 48 minutes per day) to permit increased physical activity leads to consistently higher math scores.[g]

Orange County doctors rarely discuss exercise and nutrition with their younger adult patients, reserving these topics for their older patients.[h]

Free time after school and work could provide more opportunities for physical activity, but the call of sedentary activities is strong. Kids may be "safe at home" watching TV in lieu of more active after-school activities. Orange County children spend an average of two hours a day watching TV.[58] Interestingly, California parents believe their children are naturally active and get enough exercise through play each day even if they watch two to three hours of TV. However, an overwhelming number of scientific studies show children who watch more TV tend to be heavier. TV-watching not only displaces vigorous play but also encourages passive snacking while watching. There is also evidence that children with TVs in their bedrooms are more likely to be overweight.[59] The link is similar among adults. Overweight adult men who watch over 21 hours of TV per week are twice as likely to develop type II diabetes as men who watch less TV.[60] Women who spent at least three hours per day watching TV had a 40% increased risk of obesity and a 30% increased risk of type II diabetes. Those who spent at least five hours per day watching TV had a two-fold increased risk of obesity and 70% increased risk of diabetes.[61]

Average Number of Hours of TV Watching per Day:

Age[†]	Location	Hours
Children	United States	2.9
Children	California	2.2
Children	Orange County	2.1
Adults	United States	4.0

[†]U.S. and Orange County child averages: ages 2-17. California child average: ages 4-17

Sources: Nielsen Media Research (2000), California Health Interview Survey (2001), Orange County Health Needs Assessment (2004)

Knocking Down Barriers

Parents, individuals, community groups, schools, cities and businesses can help knock down barriers to physical activity, or raise barriers to unhealthy consumption, in many small but significant ways. Worksites and schools are good places to promote healthy behaviors because all children attend school and most working-age Californians are currently employed.[62] Thoughtful modifications to neighborhoods, office parks and architecture could help make walking more safe and inviting. And simple discussion of these issues can raise awareness. Already, many local organizations have started to take action to raise awareness and create a healthy food and fitness environment in Orange County. Below are just a few examples of work in progress.

- The Orange County Register covered the obesity crisis with a series of articles addressing environmental factors in the county that affect weight, nutrition and physical activity. With funding support from Kaiser, the Register also published a series of nutrition and activity lesson plans in English and Spanish. Nearly 160 children entered to become an Orange County Register Fitness Ambassador; 12 were selected to act as a fitness role model in their communities.
- With funding support from the HealthCare Foundation of Orange County, KOCE TV produced a four-part series titled "Our Children's Health" that highlighted food and fitness issues affecting local children.
- The "Steps to Healthy Living" campaign (a partnership of ABC7, Kaiser Permanente, Community Action Partnership of Orange County/5-a-Day Power Play!, Orange County Register, YMCA of Orange County, and many schools) promotes healthy eating and physical activity among 4th, 5th and 6th graders by providing teachers with lesson plans and giving each child a pedometer.
- Project ALISA (Active Living in Santa Ana) works with city officials and neighborhood residents to make changes to the environment that support an active, healthy lifestyle.
- With funding support from the California Endowment, a partnership of Latino Health Access, Santa Ana Unified School District and Orange County Health Care Agency works to promote healthy lifestyles in the 92701 zip code area of Santa Ana.
- Over 40 groups have formed the Orange County Nutrition and Physical Activity Collaborative to coordinate their efforts to promote nutrition and physical activity.
- The Orange County Health Funders Partnership offers grants to help address policy and environmental issues related to nutrition and fitness.
- In June 2005, community members assessed the walkability of their neighborhood by walking from the Anaheim Independencia Family Resource Center to a nearby Albertson's which provided fruit and water to the walkers.
- Spearheaded by the local chapter of the American Academy of Pediatrics, Tesoro High School in Rancho Santa Margarita offers a nutrition and fitness class called "Improving Your Body Composition" aimed at helping students get fit and reduce excess weight.
- Governor Arnold Schwarzenegger held the first Governor's Summit on Health, Nutrition and Obesity in September 2005 where he signed legislation setting nutritional standards for kids, banning the sale of soda in public middle and high schools, and adding more fruits and vegetables to student meals. This builds on the California law in effect which bans the sale of soda on elementary school campuses.
- Congress passed a law requiring school districts participating in U.S. Department of Agriculture's school meals programs to establish a local wellness policy which sets goals for nutrition education and physical activity and establishes nutrition standards for all foods that are available on campus by the beginning of school year 2006-2007.
- Many fast food restaurants have started to offer healthy choices such as milk instead of soda, and apples, vegetables or salads instead of French fries.

Little could be more important for Orange County's future than the health of our children and our current workforce. Local cities, businesses, schools and organizations are using their influence in the community, whether large or small, to counter the negative conditions and together build a healthy environment for all residents.

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