

California Food Guide

Physical Activity: California's Approaches to Promoting Physical Activity and Health

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What's New

- Federal and state Safe Routes to School legislation is an example of environmental and policy approaches that hold important promise for increasing physical activity levels and decreasing the risk of chronic diseases among large populations over the long-term.
- The United States Department of Agriculture (USDA) in 2005 revised the Dietary Guidelines for Americans.¹

Public Health Implications

Healthy People (HP) 2010 objectives recommend that Americans should aim to reduce the proportion of adults who engage in no leisure-time physical activity from a baseline of 40 percent to a target objective of 20 percent.² Over half of California adults are not engaging in sufficient physical activity, which is leading to primarily sedentary lifestyles. Thus the California baseline does not meet the HP 2010 target.³ Recently, it has been estimated that the annual cost of physical inactivity cost the state of California approximately \$13.3 billion dollars in the year of 2000.⁴

Definition

Physical activity is defined as, “bodily movement produced by the contraction of skeletal muscles that increases energy expenditure above the basal level.”⁵

Physical activity can occur in the context of occupational, household, leisure time, or transportation activities. Many people mistakenly use exercise and physical activity synonymously. **Exercise**, is physical activity that is planned, structured, repetitive, and purposeful for improving or maintaining one of more components of physical fitness.⁵ **Physical fitness** components include, cardio-respiratory (aerobic) endurance, muscular endurance and strength, speed, flexibility, agility, balance, reaction time and body composition.⁵ A person is considered **physically inactive** when they indicate that they have not engaged in any leisure time physical activity during the previous 30 days.³

Burden

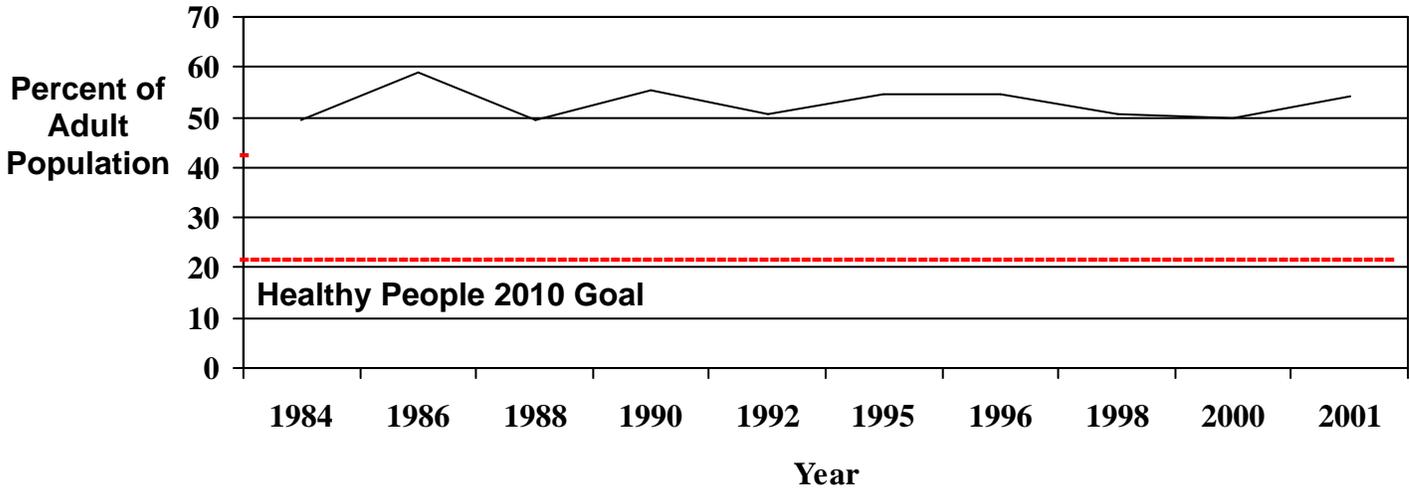
In California, physical inactivity is by a large margin the most prevalent chronic disease risk factor with more than one of every two adults reporting a sedentary lifestyle.³ This is unfortunate since years of irrefutable research evidence indicates that low levels of physical activity are strongly linked to high rates of mortality and morbidity from chronic diseases such as coronary heart disease, non-insulin dependent diabetes, obesity, hypertension, colon and breast cancer, osteoporosis, and depression.⁵ Sedentary lifestyle is also associated with decreased mental alertness, higher levels of stress, poor sleep quality, low self-worth, higher rates of disability, and diminished quality of life.⁵

Indeed, the public health and economic burdens of physical inactivity are significant. In California, it is estimated that physical inactivity may be responsible for nearly \$13 billion annually in direct and indirect medical care, lost employee productivity, and worker's compensation costs.⁴ These costs will continue to rise due to increases in California's aging population, growth in the general population, monetary inflation and the continued high prevalence of physical inactivity. The greatest burden will be borne by those with the highest rates of physical inactivity: low income, less educated, racial/ethnic minorities, immigrants, and older adults. As such, physical inactivity will continue to contribute to the health disparities observed in many California communities and populations.

Incidence and Prevalence

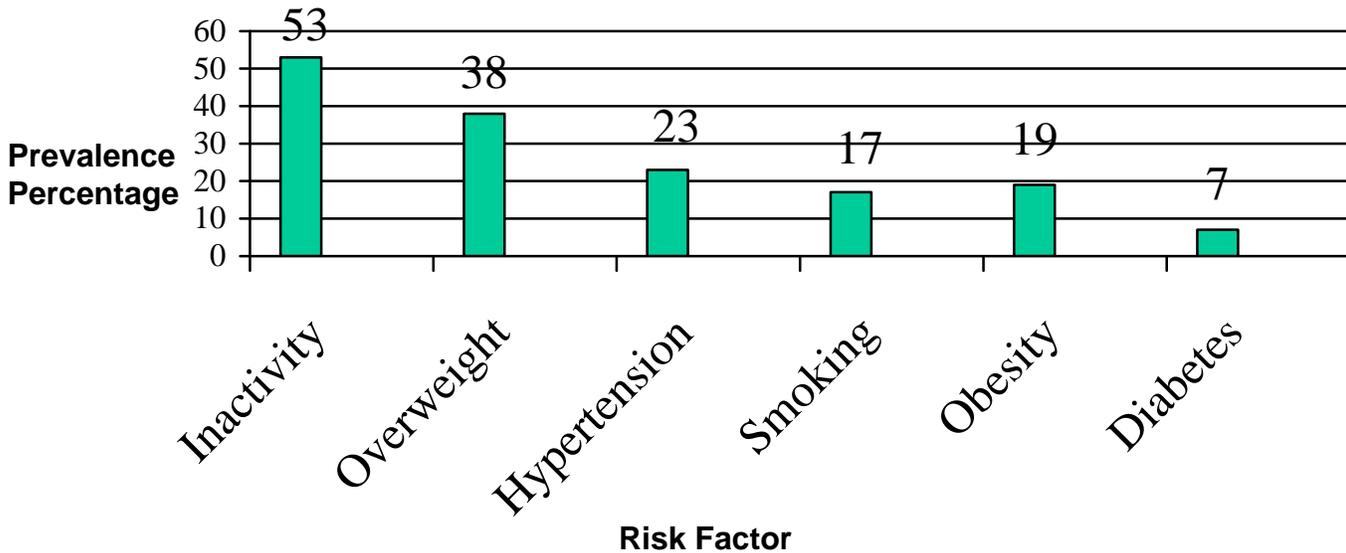
The rates of physical inactivity in California adults have remained relatively unchanged over the past 15-20 years (see Figure 1).³ Combining persons who report absolutely no leisure time physical activity over the past month with those who report being irregularly active (e.g., one to four physical activity bouts per month), over one-half of California adults are not engaging in sufficient levels of physical activity to reap health benefits. These persons lead essentially sedentary lifestyles. This rate of physical inactivity is well above the Healthy People 2010 goal of 20 percent of the population reporting a sedentary lifestyle, indicating more work needs to be done to combat this unhealthy behavior.

Figure 1: Prevalence of Physical Inactivity Among California Adults, 1984-01³



The prevalence of physical inactivity among Californians is much greater than the prevalence of other risk factors for chronic disease (figure 2).⁶ These data further demonstrate the need to focus resources on encouraging and enabling persons to become and remain physically active.

Figure 2: Prevalence of CVD Risk Factors Among California Adults, 2003⁶



Can increasing our levels of physical activity prevent chronic disease?

Yes. There is an increasing recognition and consensus among epidemiologists, experts in exercise science, and public health professionals on the value of regular moderate intensity physical activity in improving the health of Americans. For example, according to Physical Activity and Health: A Report of the Surgeon General, regular physical activity significantly reduces the risk of:⁵

- Coronary heart disease
- Non-insulin dependent diabetes
- Obesity
- Osteoporosis
- Colon cancer
- High blood pressure

See Table 1 located at the end of the chapter for the potential impact regular physical activity has on several common chronic diseases.

According to the most recent California data, African American women, Hispanic men and women, and persons with less than a high school education are least likely to engage in regular leisure time physical activity.³ However, data indicates that nearly one out of every two Californian adults is physically inactive regardless of gender, age, race, ethnicity, or geographical location. Unfortunately the majority of adult Californians are not engaging in sufficient physical activity to achieve significant health benefits.⁵ A key challenge for public health is to help improve the detrimental behaviors of those who are at high risk for physical inactivity and chronic disease.¹

Common Concerns/Strategies

If the current percentage of Californian adults who are physically inactive could be reduced, the statewide financial toll from this modifiable risk factor could be substantially decreased. A five percent increase in the percentage of physically active adults could produce cost savings of about \$1 billion per year.⁴

What other benefits accrue from physical activity?

Physical activity also helps:

- Increase mental alertness
- Manage stress
- Reduce anxiety
- Manage depression
- Improve sleep quality
- Control or reduce weight
- Improve mood (psychological well-being)
- Enhance quality of life
- Increase self-confidence and self-worth

How much physical activity does it take to reap the benefits? Physical Activity and Health: A Report of the Surgeon General recommends that for health-related benefits all adults should accumulate at least 30 minutes of at least moderate-intensity physical activity on most, if not all, days of the week.⁵ The report also states that persons already achieving this level could gain even greater health and fitness benefits by performing physical activity for a longer duration and/or at a higher intensity.

The recommended level of physical activity can be achieved with a 30-minute brisk walk five days per week.⁵ Nearly every Californian can integrate physical activity into his or her life with slight modifications in daily routine. This is termed **incidental physical activity**. The integration of incidental physical activity is useful when considering that an estimated daily imbalance of only 100 kilocalories is linked to the rising rates of overweight and obesity among adults.⁴ Lifestyle modifications to help offset this daily energy imbalance might include taking stairs instead of elevators, parking further away from a destination, walking or biking rather than using the car for short (less than one-half mile) trips, getting off the bus a stop or two before the usual stop, or doing yard work and household chores. Promoting incidental physical activity does not overlook the role of structured, planned physical activity or exercise, but assists in making individual behavior change realistic and possible. Table 2 (on page 13) presents the potential energy expenditure of replacing common sedentary activities with regular physical activity.

Reports subsequent to the Surgeon General's recommend that children and youth should be physically active for at least 60 minutes per day for a variety of physical and mental health and social benefits.⁷ Children and youth can attain physical activity recommendations in the context of free play, games, transportation, physical education, intra- and inter-mural programs, organized sports, recreation, structured exercise, and work. In addition, extended periods of sedentary activity, such as non-academic television watching and computer use, should be discouraged and limited. Children and youth should be limited to a maximum of two hours a day for television and video time.⁸

See Table 3 for current physical activity guidelines for various age groups developed by the California Department of Health Services.

The United States Department of Agriculture (USDA) recently released the revised Dietary Guidelines for Americans 2005 (Dietary Guidelines). Revisions include specific recommendations related to physical activity throughout the life span. These recommendations include the following:

Dietary Guidelines for Americans 2005: Recommendations for Physical Activity¹

The Dietary Guidelines state that most adults do not need to see their healthcare provider before starting a moderate-intensity physical activity program. However, men older than 40 and women older than 50 years who plan a vigorous program or who have either chronic disease or risk factors for chronic disease should consult their physician to design a safe, effective program. Key recommendations include the following:

- Engage in regular physical activity and reduce sedentary activities to promote health, psychological well-being, and a healthy body weight.
- To reduce the risk of chronic disease in adulthood: Engage in at least 30 minutes of moderate intensity physical activity, above usual activity, at work or home on most days of the week.
- For most people, greater health benefits can be obtained by engaging in physical activity of more vigorous intensity or longer duration.
- To help manage body weight and prevent gradual, unhealthy body weight gain in adulthood: Engage in approximately 60 minutes of moderate to vigorous intensity activity on most days of the week while not exceeding caloric intake requirements.
- To sustain weight loss in adulthood: Participate in at least 60 to 90 minutes of daily moderate intensity physical activity while not exceeding caloric intake requirements. Some people may need to consult with a healthcare provider before participating in this level of activity.
- Achieve physical fitness by including cardiovascular conditioning, stretching exercises for flexibility, and resistance exercises or calisthenics for muscle strength and endurance.

Key Recommendations for Specific Population Groups¹

- **Children and adolescents:** Engage in at least 60 minutes of physical activity on most, preferably all, days of the week.
- **Pregnant women:** In the absence of medical or obstetric complications, incorporate 30 minutes or more of moderate intensity physical activity on most, if not all, days of the week. Avoid activities with a high risk of falling or abdominal trauma.
- **Breastfeeding women:** Be aware that neither acute nor regular exercise adversely affects the mother's ability to successfully breastfeed.
- **Older adults:** Participate in regular physical activity to reduce functional declines associated with aging and to achieve the other benefits of physical activity identified for all adults.

Opportunities for Improvement

Partnership, collaboration, and greater understanding among public and private sectors will be the keys to successfully increasing physical activity levels in

California. Public health professionals, legislators, policy makers, city planners, transportation engineers, commercial advertisers, private industry, school boards and superintendents, architects, employers, and others need to recognize that they each play a role in either encouraging or discouraging physical activity among Californians. Effective solutions to the physical inactivity epidemic cannot be implemented without their cooperation and involvement.

The California Center for Physical Activity (CCPA), formerly known as the Physical Activity and Health Initiative (PAHI), was created by the former California Department of Health Services to lead the statewide effort to combat the rising tide of physical inactivity and reduce the risk of preventable chronic disease in California. The mission of CCPA is to get more Californians more active, more often, thereby reducing the personal, societal, and economic costs associated with sedentary living. To achieve this end, CCPA and willing partners are working to implement a broad spectrum of intervention strategies including policy and environmental change approaches. A long term effort will need to be sustained to overcome the social norms, myths, physical environments, and policies that currently dissuade regular physical activity.

Also, it is critical to link physical activity promotion to other statewide and local health initiatives for the prevention and/or control of unintentional injury, cancer, diabetes, obesity, cardiovascular disease, and osteoporosis, as well as those focused on traffic safety, violence prevention, environmental health, and nutrition. In this regard, partnerships with non-governmental and nonprofit organizations are essential to attain the goal of improving the health of higher risk populations.

CCPA instituted a rigorous programmatic planning process that included reviewing the literature, consulting with national and international experts, and convening potential partners to develop various approaches to the promotion of physical activity. Three potential solutions emerged from this planning process:

- A. Change our community environments to make them more walking and biking friendly.
- B. Promote physical activity among those who are at greatest risk for being sedentary and having chronic conditions, such as persons over the age of 50 years.
- C. Promote physical activity where over half of our population can be reached, such as the work place.

Listed below is a summary of potential intervention approaches for each of these areas.

A. California's Approaches to Active Community Environments

The environment in which we live has a profound impact on our behavior, including whether we choose healthy foods or are physically active. When environments are supportive of physical activity, individuals can more

successfully integrate physical activity into their existing routines. All communities have definable features that can contribute to individual and community health. A primary feature is an inter-connected network of safe and well maintained sidewalks, streets, trails, paths, and parks. This network permits residents to reach routine destinations by walking, or bicycling, perhaps in conjunction with taking transit. The availability of this supportive infrastructure where people live, work, and play is essential to make the healthy choice the easy choice. However, changes are needed to create activity friendly environments, and some of them are substantial. Since World War II, most communities have been physically designed to support automobile use and tend to discourage routine physical activity such as walking or cycling.

Opportunities:

California's approaches to active community environments encourage communities to:

- Support local and regional coalitions.
- Influence community and facility design.
- Increase public awareness and support.
- Prepare professionals to support their establishment and maintenance.
- Increase facility utilization.
- Nurture youth leadership.
- Influence legislation governing liability and taxes.
- Develop informal and formal community networks among gatekeepers and stakeholders.

B. California's Approaches to Active Aging

Inactive and irregularly active older adults comprise at least 60 percent of the 5.8 million older Californians.⁹ These individuals are not sufficiently active to gain positive physical health, mental health, and fitness benefits. Persons over age 50 exhibit losses in fitness, health, and function which begin to: 1) render them more dependent on care, 2) put them at higher risk for several chronic diseases, and 3) make them less likely to pursue leisure time physical activity and more likely to consume health care.¹⁰ Community dwelling, functionally independent persons over 50 years comprise by far the largest (70-80 percent of 4.1 to 4.6 million) of the older population.¹¹ Effective interventions can help restore or maintain physical function and functional independence, prevent chronic diseases, as well as retard progression towards stages of frailty. A physically active lifestyle can help these persons remain vital contributors to families, communities, employers, and society in general.

Opportunities:

California's Active Aging Project proposes to:

- Foster increased levels of physical activity by changing the perception of physical activity and exercise among older adults so that it is seen as easy to do, common place, and natural for their stage in life; increase the

understanding of health and other benefits (enjoyment, independence, and quality of life).

- Increase accessibility, affordability, and availability of various opportunities for older adults to be physically active.
- Disseminate widely and at minimal cost community-based and rigorously evaluated personal physical activity programs that are proven effective for older adults.
- Implement direct mail interventions for physical activity proven effective by partnering with stockholders that have extensive existing channels for dissemination.
- Modify existing or develop new physical environments that promote physical activity for older adults.
- Initiate policy within health care plans for routine physical activity assessment and counseling for older adults to promote increased levels of physical activity.

C. California's Approaches to Active Worksites

California has one of the fastest rates of increase in obesity among working age adults in the nation. Over half of California adults are overweight or obese.¹² Physical inactivity, obesity, and overweight costs California more than \$21.7 billion a year in lost productivity, workers' compensation, and medical costs. The majority of these costs are shouldered by California's public and private employers.⁴ Worksites are a viable place to promote healthy behaviors, because 70 percent of working ages Californians are currently employed, and adults spend more than one-third of their day at work.¹³

Opportunities:

California's strategies to promote active worksites include:

- Increasing the prevalence of workplace environments and cultures that support healthy active lifestyles for all workers including small employers and those that employ low wage workers.
- Improving the reach and quality of existing efforts to encourage and support healthy active lifestyles among workers.
- Developing and disseminating effective tools to foster and encourage healthy active workplace environments and cultures.
- Developing policy and legislation to encourage workplace environments and cultures that support active healthy lifestyles throughout California.
- Recognizing healthy workplace champions and best practices.
- Educating worksite gatekeepers, management, and employers.
- Partnering with associations to promote the development of a network of professionals committed to encouraging healthy active workplace environments and cultures statewide.

How Can We Get California's Children More Active?

Several California Department of Health Services programs and external partners are focused on increasing physical activity among California's children. Listed below are several recommendations that, if implemented, will promote and encourage regular physical activity among California's youth.

School-based Physical Education (PE)

- Ensure that certified teachers teach all PE courses.
- Require schools to provide daily physical activity breaks (recess) for all elementary school students.
- Provide sufficient oversight to ensure that schools meet all of the mandated PE requirements.

After School Programs

- Implement programs, including school sponsored competitive and noncompetitive extracurricular sports and recreation, that meet the needs and interests of all students.
- Support federal and state sponsored youth development and early education programs to include opportunities for quality physical activity.

Community Programs

- Support federal and state programs, including summer programs, for under served kids to incorporate quality physical activity.
- Require that daily physical activity breaks be incorporated into licensed preschool programs.
- Support access to community-based physical activity programs by offering transportation options, increased adult supervision, low program fees, and clean facilities.
- Develop legislation to protect from liability claims those that provide facilities, equipment, open space and programs that encourage physical activity. Such providers may include employers, schools, and park and recreation departments.

Community Design and Transportation Choice

- Allocate school transportation expenses to transportation budgets rather than school budgets.
- Promote more flexible street designs that slow traffic speeds and improve safety for both drivers and pedestrians.
- Implement programs and incentives to create, improve, and promote access to and use of transportation options that enhance physical activity, such as walking and biking.
- Support zoning regulations that support the creation and maintenance of green space and public parks.
- Provide student, staff, and community access to schools and school owned facilities during non-school hours.

**Table 1: Costs of Illness and Lost Earnings in California:
Reductions Possible with Physical Activity^{4, 14}**

Occurrence of Disorder in California	Population at Risk, percentage	Estimated Costs in California	Relationship to Physical Activity	Savings Possible Through Increased Physical Activity
Cardiovascular Disease (85,000 deaths)	42 percent of all deaths in California are due to CVD.	\$14 billion	Sedentary persons have double the risk of fatal CVD than physically active persons	Increased levels of physical activity could prevent 24,000-29,000 deaths from CVD
Overweight and Obesity	44 percent of males and 26% of female adults are overweight. 17 percent of males and 18.5 percent of females are obese.	\$9 billion	Physical activity helps reduce body weight and body fatness and prevents future increases	Physically active and fit yet overweight persons have a 50 percent lower risk of CVD mortality compared to lean unfit persons
Lipid Metabolism	60 percent of adults have blood cholesterol above 200 mg. Only 29 percent of adults know their blood cholesterol level.	\$5 billion	Endurance exercise will increase HDL-C and reduce triglyceride levels if accompanied by weight loss; endurance exercise will decrease LDL-C	For every one percent drop in blood cholesterol, a two percent drop in mortality results

<p>Diabetes</p>	<p>six percent of adults have diabetes with higher prevalence among older and racial/ethnic minority populations.</p>	<p>\$10 billion</p>	<p>Physical activity can reduce the risk for developing NIDDM by 33-36 percent</p> <p>Physical activity reduces weight gain and central adiposity and enhances insulin sensitivity</p>	<p>Physical activity converts 50 percent of impaired glucose tolerance (IGT) patients to normal glucose tolerance, as well as 50 percent of NIDDM patients to non-diabetic status</p> <p>One-third of deaths attributable to diabetes could be averted with increased levels of physical activity.</p>
<p>Hypertension, stroke (15,000 deaths)</p>	<p>20 percent of adults have high blood pressure (BP>140/90), of which 90 percent have mild-moderate hypertension.</p>	<p>\$1 billion</p>	<p>Endurance exercise results in an average reduction of 10.5 mmHg in systolic and 8.6 mmHg in diastolic BP</p>	<p>Physical activity lowers mortality risk 40-60 percent in persons with hypertension and the risk of developing HTN 20-35 percent</p>
<p>Cancer 50,000 total deaths from all cancers 5,000 deaths from colorectal cancer 4,300 deaths from breast cancer</p>	<p>Colorectal cancer is the third most commonly diagnosed cancer among men. Breast cancer is the most commonly diagnosed cancer among women.</p>			<p>One-third of deaths from colon cancer attributed to physical inactivity</p> <p>12 percent of breast cancer risk attributable to physical inactivity</p>

Table 2: Energy Expenditure Benefits of Replacing Common Sedentary Activities with Regular Physical Activity¹⁵

Sedentary Way		Active Way	
	<u>Kcals*</u>		<u>Kcals*</u>
Use remote	<1	Get up to change channel	3
30 mins of phone calls – sitting	4	Standing for 3 10-minute calls	20
Using garage door opener	<1	Open garage door twice/day	2-3
Hiring maid to clean and iron	0	30 min ironing + 30 min vacuum	152
Using lawn service	0	30 min do yourself mowing	360
30 min waiting for pizza	15	30 min cooking	25
Buying pre-sliced veggies/fruit	0	15 min washing, slicing, chopping	10-13
Using leaf blower	100	30 min raking	150
Let dog out in yard	2	Walk dog 30 min	125
Use car wash	18	Wash/wax 60 min	300
Email colleague	2-3	Walk 1 min, talk 3 min	6
Take elevator 3 flights	0.3	Climb 3 flights of stairs	15
Park close, walk 10 sec	0.3	Park 1 st spot, 2 min walk 5x/wk	8
Ride escalator 3 times	2	Walk 1 flight of stairs, 3x/wk	15
Cashier unloads shopping cart	2	Unload cart yourself	6
1 hr internet shopping	30	Walk 1 hr in shopping mall	145-240
Sit in car at drive-in window 30 min	15	Park and walk inside, 3x/wk	70
Pay at pump	0.6	Walk in to pay, 1x/wk	5
Sit and listen to 60-min lecture	30	Give 60-minute lecture	70

1. Assume person's caloric intake remains the same

2. Complete all of the tasks daily or as listed:

— Active Way = 10,500 kcals/month

— Sedentary Way = 1,700 kcals/month

3. Difference = 8,800 kcals/month or equivalent of 2.5 pounds/month or 30 pounds per year
(*doesn't include any structured exercise or recreation*)

*Estimates are for 150-160 pound person in kilocalories.

Table 3: Physical Activity Guidelines for California Children, Youth and Adults¹⁶

<p>Preschool Children</p>	<p>All preschool children should participate every day in a form of physical activity appropriate for their developmental level and physical health status. This should occur in the context of home, preschool, day care or other care giving settings.</p> <p>Free play designed to provide opportunities for each child to develop fundamental motor skills and to reach his or her potential at his or her own rate is preferable to structured sessions.</p> <p>Encourage as much free play as possible to take place in safe outdoor environments.</p> <p>In structured sports programs, participation and enjoyment should be emphasized rather than competition and victory.</p> <p>Emphasis should be placed on the promotion of physical activity as a natural and lifelong activity of healthy living. Setting, format, rules, and equipment should be modified accordingly.</p> <p>Sedentary behaviors such as watching television or videos should be kept to a minimum (no more than one hour per day total).</p>
<p>Children Five to 12 years</p>	<p>Elementary school children should accumulate at least 30-60 minutes of age and developmentally appropriate physical activity on all or most days of the week.</p> <p>An accumulation of more than 60 minutes, and up to several hours per day, of age and developmentally appropriate activities is encouraged for elementary school children. Given that children demonstrate patterns of intermittent activity, accumulation of physical activity over the day seems a practical approach.</p> <p>Some of the child's activity each day should be in periods lasting ten to 15 minutes or more that includes moderate to vigorous activity. Intermittent activity involves alternating bouts of moderate to vigorous activity with periods of rest and recovery.</p> <p>Extended periods of inactivity are discouraged for children. Sedentary behaviors such as watching television or videos, playing video games, and surfing the Internet should be kept to a minimum (no more than one hour per day total).</p> <p>A variety of physical activities are recommended for children. As many of these activities as possible should take place in a safe outdoor environment.</p>

<p>Youth 13-17 years</p>	<p>All adolescents should be physically active daily, or nearly every day, as part of play, games, sports, work, transportation, recreation, physical education, or planned exercise in the context of family, school, and community activities.</p> <p>Adolescents should engage in at least 60 minutes of moderate to vigorous physical activity per day on most days of the week. Thirty minutes of physical activity per day is a minimum. One hour per day represents a more favorable level.</p> <p>Physical activity can be performed in a continuous fashion or intermittently throughout the day.</p>
<p>Adult 18-59 years</p>	<p>General Health Benefits: All adults should accumulate a minimum of 30 minutes of at least moderate intensity physical activity on most, if not all, days of the week.</p> <p>Intermittent moderate to vigorous activities during the day should last from eight to 10 minutes, although shorter bouts may be needed when first starting a physical activity program.</p> <p>Integrating physical activity into one's daily lifestyle and routine is an effective way to accumulate physical activity over the day.</p> <p>Cardiorespiratory Fitness, Body Composition, and Additional Health Benefits: Adults should engage in moderate intensity endurance activity for 20-60 minutes three to five days per week.</p> <p>Endurance activity is any activity that uses large muscle groups, which can be maintained continuously, and is rhythmical and aerobic in nature. Examples include walking, hiking, running, jogging, cycling, bicycling, cross-country skiing, aerobic dance/group exercise, rope skipping, rowing, stair climbing, swimming, skating, and various endurance game activities or some combination thereof.</p> <p>Duration is dependent on the intensity of the activity; thus, lower-intensity activity should be conducted over a longer period of time (30 minutes or more), and, conversely, higher-intensity activity should be done over a shorter period of time (20-30 minutes).</p> <p>Moderate-intensity activity is recommended for adults not training for athletic competition.</p> <p>Muscular Strength, Muscular Endurance, Skeletal, and Flexibility Benefits One set of eight to ten resistance training exercises that condition the major muscle groups should be performed two to three days per week.</p>

	<p>Most persons should complete eight to 12 repetitions of each exercise; however ten to one repetitions may be more appropriate for persons who are older and/or more frail (approximately 50-60 years of age and above).</p> <p>Flexibility exercises that stretch the major muscle groups should be performed a minimum of two to three days per week.</p>
<p>Older adult ≥ 60 years</p>	<p>All older adults should meet the guidelines listed above for adults in addition to the recommendations below.</p> <p>Balance, agility, mobility, coordination, and reaction time exercises should be performed by persons experiencing a diminished capacity in these areas of function.</p> <p>Physical activity level should be increased more gradually in older adults to decrease the risk for soreness, discomfort, and injury. Older adults who have been sedentary should start with physical activity sessions of short duration and light intensity.</p> <p>Older adults with existing medical conditions or those who are unsure about their safety during physical activity should first consult their physician before embarking on a physical activity program.</p>

Resources/Web Sites

1. 2005 USDA Dietary Guidelines for Americans.
<http://www.healthierus.gov/dietaryguidelines/>
2. The National Association for Sports and Physical Education's (NASPE) physical activity guidelines for infants, toddlers, and preschoolers:
<http://www.aahperd.org/naspe/template.cfm?template=toddlers.html>

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