The Health and Social Benefits of Recreation

An Element of the California Outdoor Recreation Planning Program

State of California
Resources Agency

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Executive Summary

Californians today are confronted with a number of serious health and social issues - obesity, diabetes, depression and suicide to name a few. The trend towards a sedentary lifestyle is recognized as a major contributor towards many of California's health and social issues. With the increased awareness of these issues, park and recreation professionals, policy makers, health care providers, public safety officers and educators need to better understand the benefits that park and recreation lands, facilities and programs may play in addressing these concerns. Healthcare and recreation professionals realize they must make physical activity fun, safe and accessible to address these alarming health trends. They need to make recreation opportunities more available while actively promoting the link between parks and recreation and better mental, physical and societal health.

This publication documents the positive impacts that parks and recreation can have on the physical, mental and social health of individuals and their communities. The first chapter presents studies documenting the overall health benefits, both physical and mental. These studies demonstrate how physical activity helps to control obesity, boost the immune system, diminish the risk of disease and increase life expectancy. Like improvements to our physical well-being, many studies show that participation in recreational activities is an important contributor to Californians' mental health and quality of life. California's parks, trails and historical sites provide excellent inducements to physical activity and our scenic views and waterways encourage active visitation. As shown in these studies, parks and recreation can also aid in reducing depression, relieving stress, improving self-esteem and personal growth.

Chapter 2 includes studies outlining the social benefits of recreation, such as strengthening communities, promoting social bonds and supporting youth. Participating in recreation activities helps develop our youth, improve their education and deters them from negative behaviors. California is large and diverse and has a wide range of social conditions that influence the way we live, work, and recreate. These social conditions can be addressed and improved through participation in park and recreation activities. Recreation opportunities and parks are essential for strengthening and maintaining a healthy community. Proximity to parks and recreation facilities leads to safer, cleaner neighborhoods, volunteerism, stewardship and creates a livelier community atmosphere.

Social bonds are improved when families recreate together and when seniors and individuals with disabilities are actively engaged in recreation activities. Recreation and park facilities help promote social bonds by uniting families, encouraging cultural sensitivity, and supporting seniors and individuals with disabilities. Recreation provides us with family and community bonds that last a lifetime.

Perhaps the most significant conclusion in this report is that these benefits can act in tandem. For example, a recreation program directed at youth obesity can increase self-esteem, reduce the use of alcohol, build family bonds, and promote volunteerism, all at the same time. The combined values that may be gained are almost endless. And, while not the subject of this study, clearly this has a positive economic impact and value to the community as well. The aggregate impact of these health and social benefits makes parks and recreation one of the most cost-effective public services available to decision-makers.

While additional research documenting the physical, mental and social benefits of parks and recreation is greatly needed, the information compiled here is important for local and state park and recreation service providers in gathering support for their programs. Educators, law enforcement personnel, and health providers will also benefit from this information and should see park and recreation service providers as active partners in support of their mission. Finally, local decision-makers must challenge their park and recreation service-providers to act on the individual and community benefits demonstrated in this study, and to provide them with proper support.

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Introduction

While parks and recreation can have a measurable impact on state and local economies, they can have important non-economic benefits as well. In this report benefits are considered advantageous changes, an improved condition or gain to an individual, group or to society. With our heightened awareness of the serious health and social issues confronting Californians today, it is important to better understand the health and social benefits associated with parks and recreation beyond their simple economic contributions.

Some of the severe health problems that Californians currently face include obesity, diabetes, and cardiovascular disease. Over two million Californians have been diagnosed with diabetes and cardiovascular disease. The obesity epidemic alone is now costing the state over two billion dollars each year. As noted in this report, a nationwide trend towards sedentary lifestyles has been identified as a major contributor towards these alarming health trends while also playing a part in such societal concerns as increased crime and juvenile delinquency.

An estimated 7 in 10 American adults are not regularly active during their leisure time and 4 in 10 are not active at all (Schoenborn, 2002, April 7).

To curb these disturbing trends, healthcare and recreation professionals realize they need to make physical activity fun, safe and accessible by making opportunities more readily available and actively promoting the link between parks and recreation resources and improved mental, physical and societal health.

While a number of recreation activities involve physical activity, the following four studies document a causal link between recreation facilities and physical activity:

- A positive correlation between environmental infrastructure (such as trails and recreation facilities and enjoyable scenery) and physical activity was found in a study of environmental determinants. The national study included 1,818 people, a majority of whom were low income (Brownson et al., 2001).

- Teens that used recreation centers were 75% more likely to engage in the highest category of moderate to vigorous physical activity, according to a long term study of over 17,000 teenagers. This national study provided the first evidence that community recreation facilities are important for adolescent activity (Gordan-Larson, 2000).

- The annual Roper Starch Report found that 90% of Americans consider outdoor recreation as the best way to be physically active. Even more felt that if people increased their outdoor recreation activities, the effects on their health would be beneficial (ARC, 2000).

- A large-scale Cleveland Metro parks study of older park visitors found that two-thirds of them were highly or moderately active while in the parks. Three additional studies also document strong relationships between physical activity and outdoor recreation (Ho et al., 2003, April).

This publication documents studies showing the positive impacts that parks and recreation can have on the physical, mental and social health of individuals and their communities. This summary of pertinent studies builds on the ideas from two earlier publications, 1) the Driver et al. *Benefits of Leisure* (1991) and 2) *The Benefits of Parks and Recreation: a Catalog* a Park and Recreation Federation of Ontario Canada publication

(1992), which present and discuss similar earlier studies. This report summarizes and discusses a number of additional studies from 1990 forward, bringing in studies within California whenever possible.

Percentage of Adults in California who reported no leisure-physical activity* by sex, race, and ethnicity, 2000	
Male	24.0%
Female	29.0%
White	17.6%
Black	24.9%
Asian/Pacific Islander	30.4%
Hispanic	41.4%
Total	26.5%
*No exercise, recreation, or physical activity (other than regular job duties) during the previous month.	
Source: CDC, 2002	

The first section of this report presents studies documenting the overall health benefits, both physical and mental. The second section includes studies outlining the more social benefits of recreation for communities, social bonds and youth.

This compilation of the documented health and social benefits of recreation is a product of the continuing outdoor recreation planning program of the California Department of Parks and Recreation. This publication is an element of the California Outdoor Recreation Plan (CORP) and expands on the findings in its *Benefits of Outdoor Recreation* chapter. This report will be made available to statewide park and recreation providers either in hard copy or in electronic format on the California Department of Parks and Recreation's Planning Division web page (www.parks.ca.gov/planning) and is intended to help them gather support for their programs.

Although earlier editions of the California Outdoor Recreation Plan briefly discussed the values of outdoor recreation in such general terms as reduced stress, improved physical fitness, and enhanced self esteem, the current severe health issues confronting Californians today require a more explicit and detailed examination of how parks and recreation can help with these health and social problems. In a time of increasing health and social ills, it is critical to understand the many benefits of participating in recreation activities.

Chapter 1: The Health Benefits of Recreation

The first section of Chapter 1 describes the physical health benefits associated with recreation which specifically involve physical activity. Three separate studies document the positive impacts that physical activity can have on obesity; dozens of studies connect physical activity to reduced risks for chronic diseases. Some studies even demonstrate how physical activity can increase your life expectancy in measurable increments.The second section addresses the mental health benefits derived from both active and inactive recreation opportunities. Numerous individual studies show how exercise, physical activity and even mentally recalling outdoor recreation activities can have positive effects on depression, stress and self-esteem. Two-thirds of Californians consider outdoor recreation important to their quality of life.

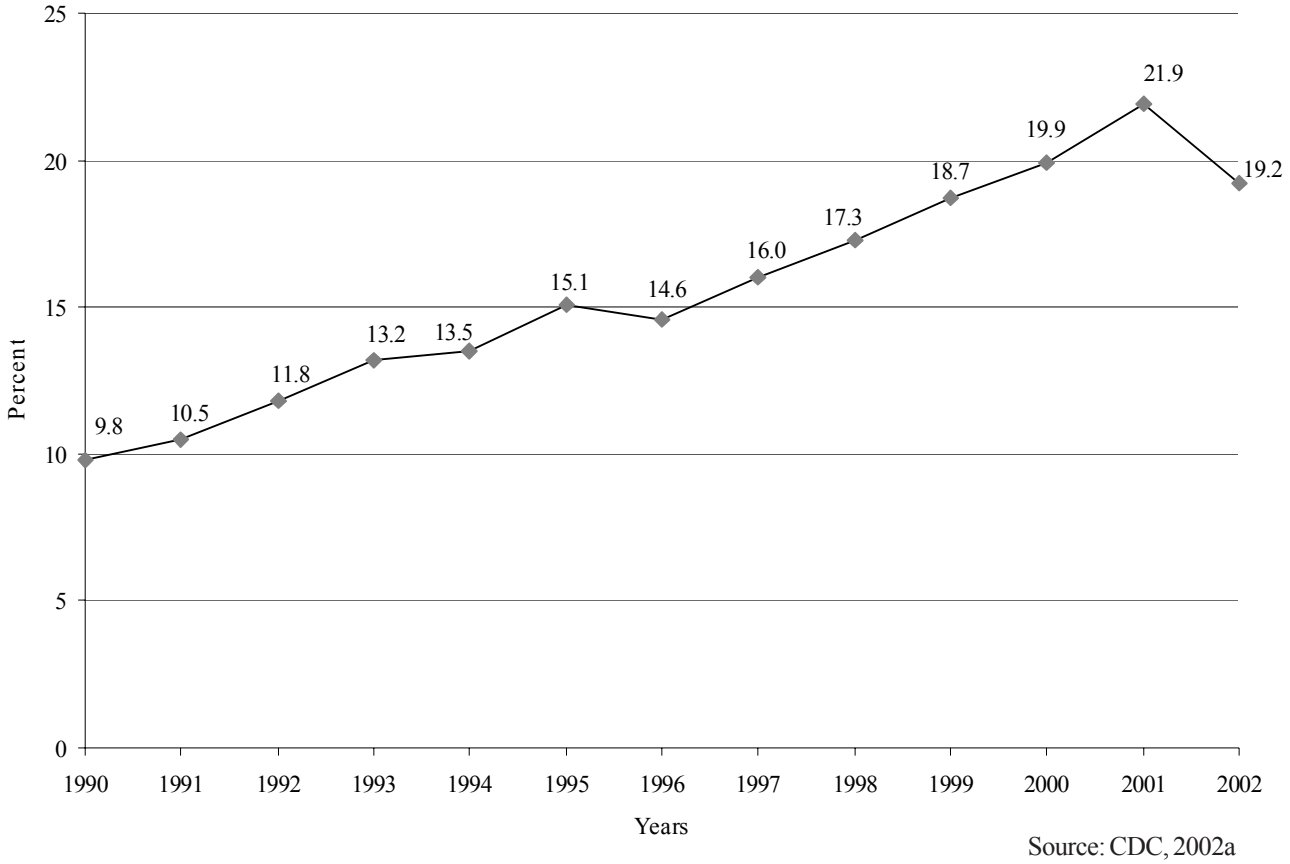
The Physical Health Benefits

California's parks, trails and historical sites are excellent inducements to physical activity. These varied recreational opportunities make physical activity interesting, enjoyable, and encourage life-long fitness habits. The many documented health benefits of staying active include reduced obesity, a diminished risk of disease, an enhanced immune system and most importantly, increased life expectancy.

Reduces Obesity

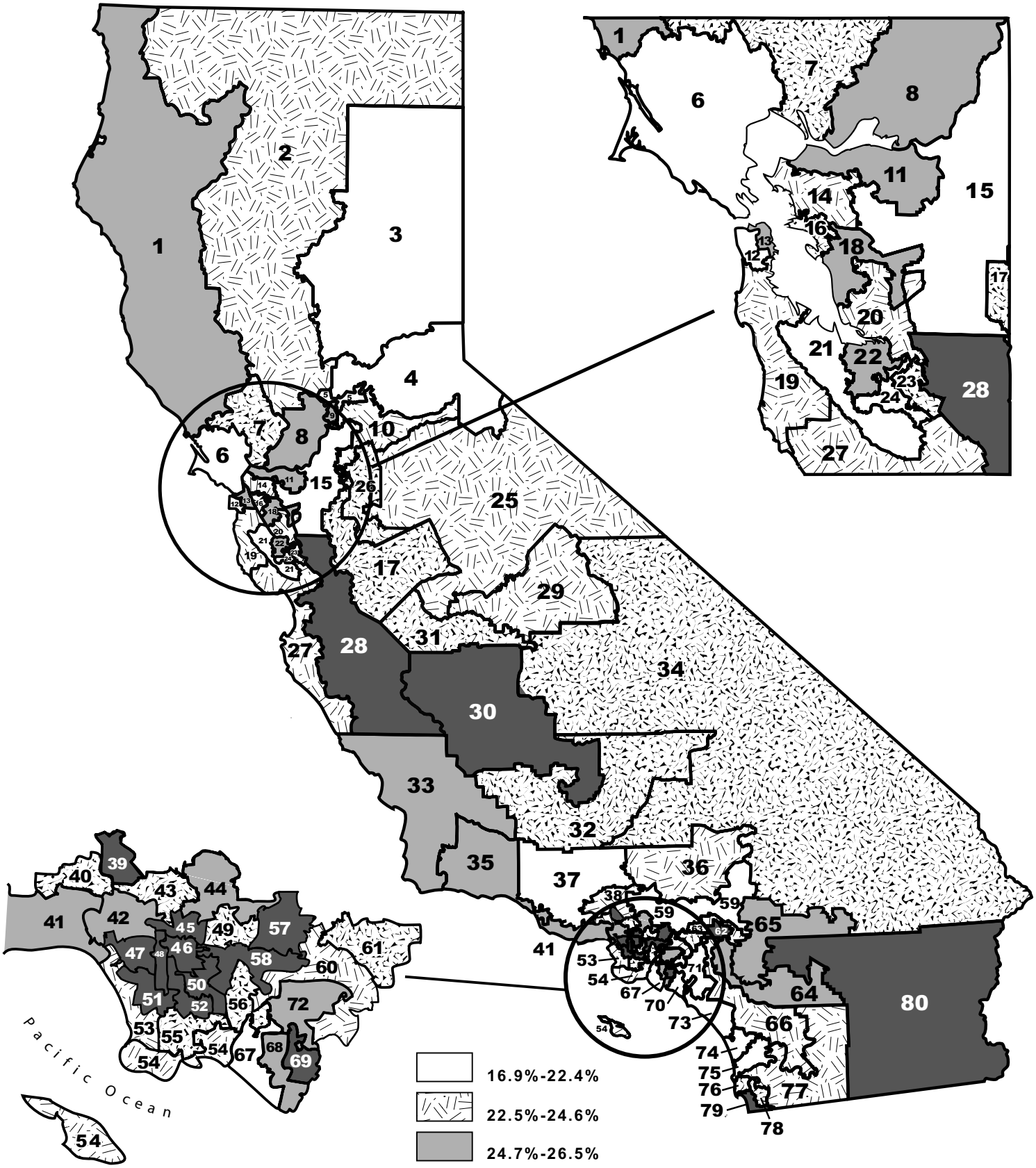
As California's sedentary problems grow, so does the obesity epidemic. Obesity continues to be a major health concern and is closely linked to physical inactivity. Overweight and/or obesity is associated with increased risk for disease, mortality and chronic medical conditions, such as coronary heart disease, hypertension, diabetes, gallbladder disease, respiratory disease, some cancers, and arthritis.

The Growth of Obesity in California: "Percentage of California's Population"



Source: CDC, 2002a

Percentage of Children in Each Assembly District Who Are Overweight



All California Assembly Districts became effective in the November 2002 election based on the 2000 Census.

Each range represents one-fifth of all Assembly Districts.

Source: Koa et al., 2002

According to the Centers for Disease Control, almost 20% of Californians are obese, a figure directly affecting mortality rates and increasing health care costs (CDC, n.d.a). In 2001 the Surgeon General assessed the cost of obesity in California at $14.2 billion in direct medical costs and lost productivity (Koa et al., 2002).

The numbers of overweight and obese children and adolescents in the United States have doubled over the past two decades. In California, over 26% of children are overweight and in some school districts the percentage climbs to 40-50%. Risk factors for heart disease (previously considered an adult disease), including high cholesterol and high blood pressure, are occurring with increasing frequency in overweight children and adolescents. The state chart, on the adjacent page, details the percentages of overweight youth in the different assembly districts. Fifty percent of overweight adolescents will become overweight or obese adults; this percentage increases if one or more parents are also overweight or obese (Koa et al., 2002).

Exercising activities can help curb obesity. The correlation between recreation activity and health was highlighted nationally in a report from Health and Human Services, *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001* (HHS, 2001). This report connects obesity to the need for communities to provide adequate parks and recreation opportunities and recognizes the benefits of increased physical activity. The following studies highlight the benefits of physical activity in maintaining an appropriate body weight.

- Physical activity alone can reduce intra-abdominal visceral fat, which many scientists believe is the most dangerous kind, according to a controlled Seattle study of 173 women (Hellmich, 2003).

- Active people are better protected against overweight and obese health risks, according to a review of 24 current articles evaluating health outcomes associated with physical activity and body composition. Obese individuals who were active also had a lower incidence of disease and mortality than did normal-weight men/women who were sedentary (Welk & Blair, 2000).

The prevalence of obesity is more strongly related to a lack of physical activity than to increases in caloric intake (Welk & Blair, 2000).

Diminishes Risk of Chronic Disease

Recreational activities also significantly reduce the risk of many serious diseases. The *Physical Activity and Health: A Report of the Surgeon General* states that millions of Americans suffer from diseases that can be prevented or the symptoms improved through increased physical activity:

* 13.5 million people have cardiovascular disease,
* 1.5 million people suffer from a heart attack in a given year,
* 50 million people have high blood pressure,
* 8 million people have adult-onset (non-insulin-dependent) Type II diabetes,
* 95,000 people are newly diagnosed with colon cancer each year, and
* 250,000 people suffer from an osteoporosis related hip fracture each year (HHS, 1996).

Heart Disease

Cardiovascular Disease (CVD) or heart disease is a leading causes of death. Three of the major factors that significantly increase the risks of developing heart disease are 1) obesity, 2) diabetes and 3) lack of physical

activity. Obesity and diabetes can be greatly reduced through regular aerobic exercise and physical activity. Recreation activities, such as running, brisk walking, swimming and bicycling are excellent for elevating the heart rate and lowering the incidence of heart disease, obesity and diabetes, if done regularly.

- Regular moderate activity, such as brisk walking for 30 to 60 minutes, reduces the incidence of cardiovascular disease according to a literature review of articles and studies published between 1991-2000 (Haennel & Lemire, 2002).

- Walking three or more hours per week cuts a woman's risk of heart disease by 30 percent and five or more hours cuts it by 40 percent, as found in a Boston New England Journal of Medicine study of over 120,000 women (McCarthy, 2002).

- Modest physical activity changes the size and density of cholesterol-carrying proteins thereby causing less damage to the cardiovascular system. These benefits occur even if a person's total cholesterol and weight remain the same (Associated Press, 2002).

- Exercise significantly reduces the chance for heart problems, according to 43 separate studies conducted by the Centers for Disease Control. Those who do not exercise are twice as likely to have coronary heart disease (AHS, n.d.).

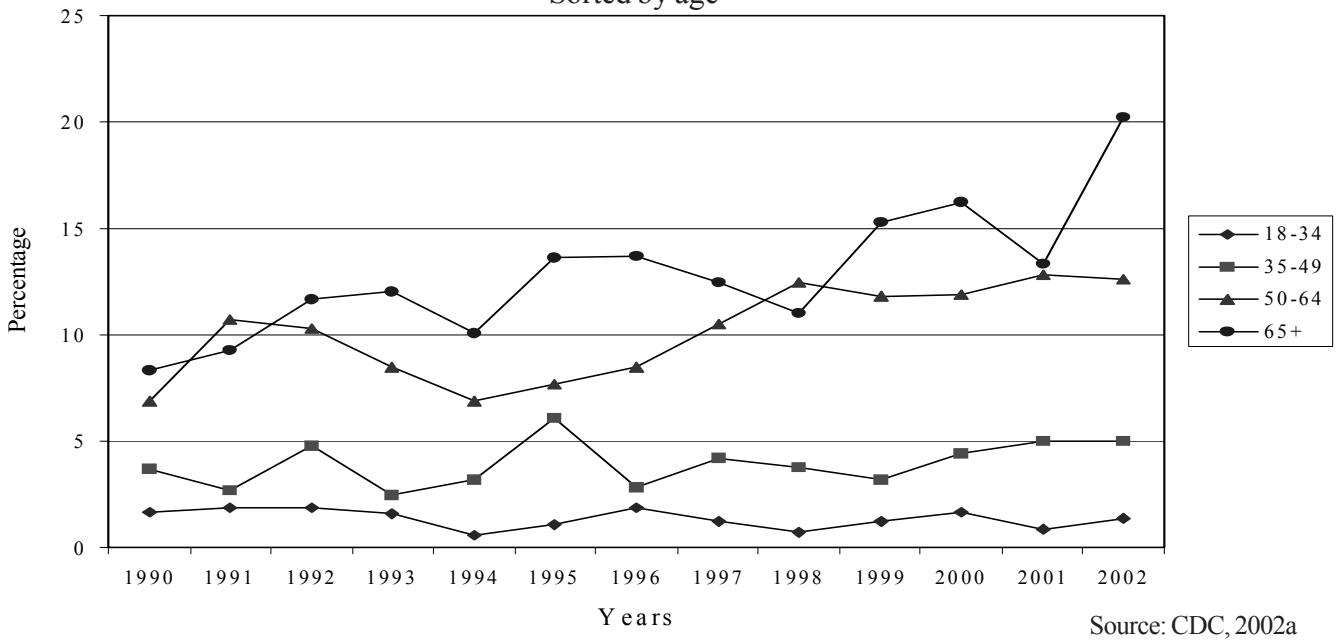
More than 2,600 Americans die from CVD each day, an average of one death every 33 seconds (AHA, 2002).

Diabetes

There are over 2 million people in California with diabetes mellitus. Annually there are over 300,000 diabetes-related hospitalizations with an estimated cost of $3.4 billion, ranking this disease as the seventh highest cause of death in California and the United States (CDCP, n.d.). Diabetes was once considered to be a middle-age disease, but with the rise in childhood obesity, Type II diabetes cases are being diagnosed at every age. The early onset of Type II diabetes exposes people to the risk of infirmity, blindness, amputation, heart disease, and stroke at much earlier ages (Booth & Chakravarthy, 2002).

Percentage of Californians Diagnosed with Diabetes

Sorted by age



Source: CDC, 2002a

- The risk of Type II diabetes decreased progressively with increasing levels of physical activity, as found in a long-term study of 5,159 men. (Wannamethee et al., 2000).

- The role of a sedentary lifestyle in the development of Type II diabetes has been demonstrated in longitudinal studies of college alumni, registered nurses, physicians, and middle-aged British men (Kriska, 1997).

Physical activity along with a balanced diet appears to be the best combination for decreasing weight and improving glucose tolerance and insulin sensitivity (Kriska, 1997).

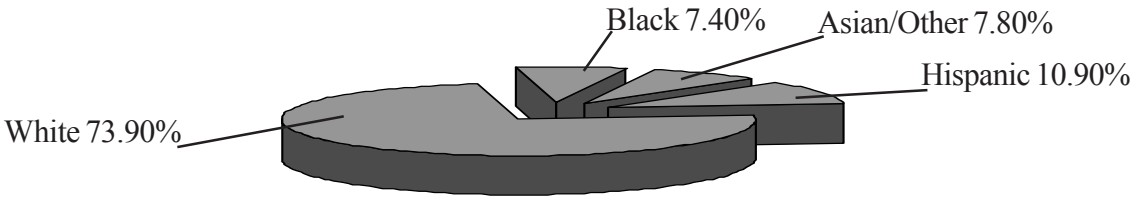
Cancer

Cancer, along with heart disease is another leading cause of death in the United States. In 2003, the American Cancer Society estimated that there were 52,200 deaths and 125,000 new cases of cancer in California. People who exercise have a lower incidence of colon cancer than their sedentary counterparts, according to 25 out of 33 publications on the relationship between physical activity and colon cancer (Lee, 1995). Active living has been shown to help prevent site-specific cancers, particularly in the colon, breast and lungs.

Cancer Deaths by Race/Ethnicity

California 2000

(N=53,005)



Source: CDHS, 2002

- It was found that those who were more physically active in adulthood had a lower risk of breast cancer than those who were less physically active. Consistency of activity was more important than intensity in a study which followed 121,701 nurses (aged 30-55) from 1976-1992. These nurses were surveyed at different points during the study period to gather data on physical activity, such as the average number of hours per week spent participating in moderate or vigorous "recreational physical activity" (walking, jogging, cycling, swimming, aerobic dance, tennis, etc.), (Rockhill et al., 1999).

- Increased leisure-time activity was associated with a reduced risk of breast cancer in a study of 25,624 women who either exercised regularly or were sedentary. In those that exercised regularly, the reduction in risk was greater in pre-menopausal women than in postmenopausal women, and greater in younger women than in older women (Thune et al., 1997).

Physical activity must be sustained over time to protect against colon cancer as demonstrated by a study that followed more than 17,000 men for almost 26 years (Lee, 1995).

- A study found that women who did not spend any time being physically active had 2.4 times the risk of breast cancer than did those who exercised 3.8 hours or more per week. This 1994 study was of 545 women, 40 years or younger, with breast cancer and compared their physical activity patterns to 545 similar women without breast cancer who were the same age, race and from the same neighborhood (Lee, 1995).

Osteoporosis

Strong muscles, joints and bones can be maintained by physical activity that adds additional stress to strengthen the skeletal structure. Weight-bearing activity is essential for normal skeletal development during childhood and adolescence. Regular exercise, especially muscle strengthening, may protect against the rapid decline of bone mass in post-menopausal women and protect the elderly from falls and fractures by increasing their strength and balance. The benefits of physical activity on various types of arthritis are uncertain, although increased muscle strength, bone density, and connective tissue could provide some relief for arthritis symptoms. Many reports have shown that bone mass in physically active individuals is significantly higher than in their inactive counterparts. Sports that use one side of the body, such as tennis, best demonstrate how exercise can have positive effects on bone density (Shaw & Snow, 1995). Participating regularly in other recreation activities such as hiking, kayaking, weight lifting, and sports help maintain bone and joint health.

- Women, who exercised regularly in their 20's and had a healthy intake of calcium, decreased by 30% their risk of developing osteoporosis in their 70's (Gorman, 2002, Jan. 21).

- Physical activity after menopause can enhance an estrogen replacement program for decreasing bone loss (Shaw & Snow, 1995).

- Participation in organized fitness and sports programs helps children build higher bone density, combating osteoporosis in later life (Shaw & Snow, 1995).

- Regular physical activity increases bone mass, bone and muscle strength, and improves the structure and function of connective tissues (Paffenbarger, et. al., 1991).

Boosts Immune System

The physically fit person is less prone to illness. A Centers for Disease Control & Prevention study found that physically active individuals have lower annual direct medical costs than inactive people. Active individuals had fewer hospital stays, fewer physician visits and used less medication. The savings were consistent for men, women and even smokers. These savings are demonstrated in the adjacent charts. If all adults achieved very modest levels of physical activity, the estimated nation-wide savings would be $76.6 billion annually (ARC, 2000).

- People who exercised for 20 minutes once a week were significantly less likely to call in sick than non-exercisers. Those who exercised twice a week missed even less work according to an Oklahoma State University study that tracked 79,000 people for a year (Mooney et al., 2002).

- There was a 23% reduced risk of upper respiratory tract infections for people who were regularly active compared to those who were not, according to a study of 547 adults (Nieman, 2001).

"...local park and recreation users report fewer visits to a physician for purposes other than checkups than did non park users..." (Ho et al., 2003, April).

- Research shows that positive changes in the immune system occurs during moderate exercise. Even though the immune system returns to its pre-exercise condition, each exercise session appears to be additive in reducing the risk of infection over time (Nieman, 2001).

- By participating in community activities and surrounding themselves with family and friends, social people are four times less likely to get colds than those who are more isolated (O'Sullivan, 2001).

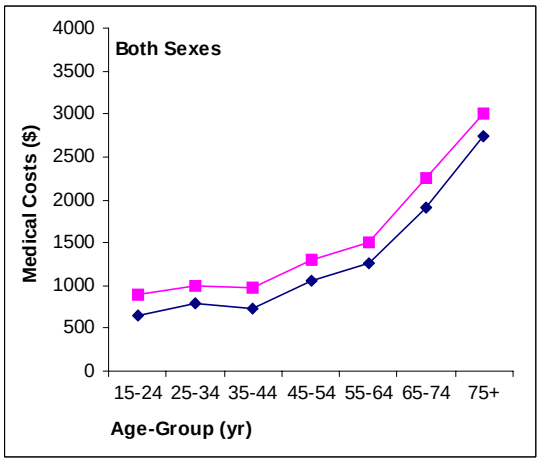
- Increases in positive moods, which have been linked to enhanced immune response, are reported following participation in and recollecting about outdoor recreation activity (Tarrant et al., 1994).

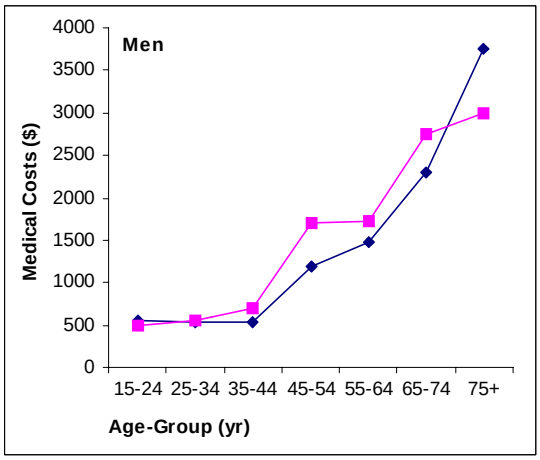
Increases Life Expectancy

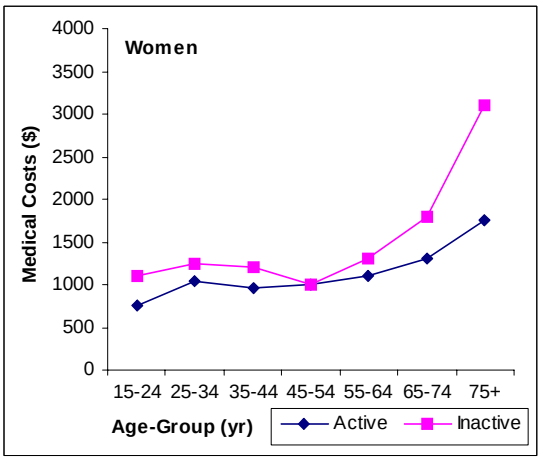
Regular physical activity reduces the risk of developing or dying from some of the leading causes of illness and death in the United States. Exercise and fitness can increase longevity and reduce many causes of mortality (Paffenbarger, et. al., 1991). We can live longer and healthier lives by actively participating in regular recreation activity.

- Every time sedentary people walk a mile, they add 21 minutes to their life, saving society 34 cents in medical and related costs (O'Sullivan, 2001).

- On average, every hour you spend exercising increases your life expectancy by two hours. People in a regular exercise program at age 75 have a lower death rate over the next few years than do similar groups of sedentary people (ARC, 2000).







Sixty to 90% of fitness enthusiasts feel they get fewer colds than do their sedentary peers, according to a literature review of numerous studies (Nieman, 2001).

Source: Pratt, Macera & Wang, 2000

The Mental Health Benefits

Mental health disorders pose a significant public health burden and are a major cause of hospitalization and disability. These disorders cost the United States approximately $148 billion per year (HHS, 1996). Regular physical activity during recreation can reduce the severity of many mental health disorders, enabling individuals to better cope with their daily lives. At least 30 to 60 minutes of regular (preferably daily), moderately intense physical activity through recreation programs and activities can result in significant mental health benefits.

The Effect of Physical Activity on Mental Health		
Trait or Disorder	**Effect**	**Comments**
Depression	Moderate	Decreases symptoms; efficacy similar to psychotherapy in patients with mild-to-moderate depression; unclear whether physical activity (PA) prevents onset of depression, but it may reduce symptom severity
Anxiety	Small-to-moderate	Reduces state anxiety but unclear whether it improves trait anxiety
Panic disorder	Small	Often produces transient increase in anxiety, but anxiety dissipates with time if patient adheres to regimen of activity
Energy/vigor	Large	Intensive PA increases perceived energy level; unclear whether regular PA influences habitual energy levels
Self-esteem	Small-to-moderate	Greatest improvement found in those with low self-esteem before PA
Positive affect	Small-to-moderate	Effect most pronounced if PA involves social interaction
Eating disorders	Unclear	Intensive PA or exercise may be symptom of an eating disorder
Source: Fontaine, 2000		

Although the physical health benefits of recreation require some activity, not all the mental health benefits do. The various studies that follow document the positive impacts that recreation can have on mental health, from reducing depression and relieving stress, to improving quality of life in a variety of ways, to helping people to feel better about both their surroundings and themselves.

The Center for Mental Health Services partnered with the National Institute of Mental Health to develop the first Surgeon General's report on mental health and mental illness (HHS, 1999). Among its many findings the report notes that while much is known about the treatment of mental illness, there is a great deal more to learn about prevention. The report suggested that nearly half of all Americans with severe mental illnesses failed to seek treatment and that for centuries, society has made a clear distinction between the mind and body. This report makes a clear connection between mental and physical health and the importance of mental health to overall health and well being. It also found that mental disorders affected nearly one in five Americans in any given year and, if left untreated, these disorders can be just as serious and disabling as physical diseases such as cancer and heart disease.

Reduces Depression

Depression is a mental illness that comes in several forms. The symptoms include feelings of loneliness, despair, hopelessness, and worthlessness, deep, unshakable sadness, diminished interest in activities, and thoughts of suicide. The forms of depression can vary in their symptoms, severity, and persistence. Symptoms can last for weeks, months, or even years. Depression is a disease affecting people of all ages, income, and ethnic backgrounds. The incidence of major depression, the severest form, is increasing while the age of onset is decreasing. An estimated 34 million adults in the United States will suffer from depression at some time in their lives. An average person with depression is unable to work or engage in normal activities for some five weeks out of the year (Kessler, 2003). As a result of depression, 29,350 people committed suicide in 2000, which made it the third leading cause of death in the United States among 15 to 24 year olds (Miniño, 2002).

Recreation and leisure activities can help alleviate depression. Participating in recreation activities provides Californians with experiences they look forward to and enjoy. Recreation activities also reduce alienation, loneliness and isolation, all of which contribute to depression. Recreation provides a social atmosphere that draws people out of their houses and into community life. Depressed patients who were not medicated were less likely to relapse if they started exercising, compared to those who only took antidepressants (Gorman, 2002, Jan. 21). Many studies have found that recreation and leisure activities can help prevent and treat many forms of depression.

- Physical activity was related to significant reductions in depression in five separate studies ('meta-reviews') during the 1990s that concentrated on the re-analysis of data from groups of earlier individual studies. The reductions occurred for subjects who were classified as non-depressed, clinically depressed, or mentally ill (Landers, 1997).

- A positive correlation between participation in three leisure activities and decreased depression was found in a study of 7,432 older Canadians. The more time participants spent on hobbies, swimming and visiting with friends, the more their depression decreased (Siegenthaler, 1997).

- Mentally recalling outdoor recreation activities increases positive moods which are linked to improved self-esteem, lowered depression and reduced suicide rates (Tarrant et al., 1994).

- Children who are depressed or have emotional problems benefit from increased levels of physical activity, lowering their levels of depression (Morgan, 1994).

- The likelihood of depression was reduced by the size of someone's social network, their level of physical activity and how often they interacted with friends during park and recreation activities (Ho et al, 2003, April).

Athletic participation reduces some high-risk behaviors in adolescent females, particularly suicide (PCPFS, 1997).

Relieves Stress

Rest, relaxation and revitalization through recreation activity are essential to managing stress in today's busy and demanding world. No one is immune to the stress which we all experience at some point in our lives. Positive and enjoyable recreation experiences can decrease stress, anxiety and psychological tensions. A California Department of Parks and Recreation survey found that more than 75% of respondents cited relaxing and 59% reducing tension as very important factors influencing the enjoyment of their favorite recreation activities (DPR, 2003).

The human body has built-in stress relievers that can be triggered through recreation activity. Prolonged continuous exercise increases the production and release of endorphins, resulting in a sense of euphoria, also called a "runner's high." The release of adrenaline through exercise causes the heart to beat faster and stronger and opens up the bronchioles in the lungs. If the adrenaline that builds up from everyday stress is not released, it can cause muscle tension and feelings of stress and anxiety.

Stress reduction through recreation also comes from group activities that strengthen social ties and the calming effects of desirable outdoor settings. All-in-all, being more relaxed promotes improved work performance, better social interactions, and a general sense of well being, all of which reduce stress. Studies demonstrate the many benefits associated with recreational escapes:

- Researchers examined 27 narrative reviews (findings from groups of previous studies) conducted between 1960 and 1991. They discovered that 81% of the reviews found reductions in anxiety following exercise. Six extensive narrative reviews (up to 159 studies each) found that aerobic exercise significantly reduced anxiety (Landers, 1997).

- In a focus-group study of older women, participants reported that leisure gave them an escape from daily stresses and helped them cope with such major traumas as a death in the family (Siegenthaler, 1997).

- Window views of nature have been shown to increase positive feelings, lower stress levels and improve the physical condition of both hospital patients and office employees (Tarrant, 1996).

- Reductions in stress associated with recreation activities were found in well over 100 studies of recreation experiences in wilderness and urban nature areas (TPL, 1994).

- Participants felt significantly calmer and less anxious at the park than at home, and the longer they stayed at the park, the less stressed they became, according to interviews with 186 nature recreationists (Ho et al., 2003, April).

"Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wilderness is a necessity." ~ John Muir

Improves Quality of Life

Recreation activity is a medium in which participants can change their self-image and gain personal satisfaction. Quality of life benefits from recreational activities include:

* enhanced self-esteem through improved feelings of self-worth, reliance, and confidence,
* personal growth,
* enhanced expression of and reflection on personal spiritual ideals, and
* feelings of satisfaction from one's personal, neighborhood and community life.

Self-Esteem

Positive self-esteem and self-image can be achieved through lifestyle choices by selecting recreation activities that contribute to a feeling of control over one's life. Increasing our skill levels and success at a recreation activity builds our self-confidence and esteem which in turn affects other facets of our lives, such as family and work. Studies have shown that active participation in recreational activities helps to improve our self-worth.

- Consistent physical activity increase self-esteem, according to a substantial number of studies (Frank & Gustafson, 2001).

- A positive correlation between physical activity and increased physical self-concept or self-esteem has been found in four reviews of numerous studies. The increases were greatest for people with disabilities (Landers, 1997).

Personal and Spiritual Growth

Self-expression and identity affirmation is positively reinforced through participation in recreation activities. Recreation helps us explore our inner spirit and sense of self, creating new behaviors and a new identity. It is becoming more common to identify with the activities we participate in, seeing ourselves as 'hikers', 'swimmers' or 'soccer players', rather then with the positions we hold at work. Parks and natural environments also have great spiritual meaning and represent a strong sense of place for many of us. They elicit fond memories of family outings, fun times, bonding with children and freedom, representing the less stressful side of our lives.

- Participating in wilderness recreation can influence womens' everyday lives by leading to increases in self-sufficiency, perspective shifts, connection to others, and mental clarity (Pohl et al., 2000).

- Improved mental engagement, increased self-awareness, and clarification of values- all gained through introspection, creative engagement and expression of spiritual renewal- are some of the scientifically documented outdoor recreation benefits that develop and enhance social systems (Driver et al., 1991).

- Recreation can strengthen our identities and define who we are, according to a study of participants in eight different activities (Haggard & Williams, 1991).

"Parks are a sanctuary for us in a chaotic world. That's why visitation soared after 9/11. The experience of nature confers a sense of sanity. It bestows a spiritual calmness that helps people cope."~Ruth Coleman, Director of California State Parks

Life Satisfaction

Recreation activity is important to personal life satisfaction and those who participate in recreation are notably happier. Those who recreate more often are likely to be completely satisfied with their choice of careers, friends, and their perceived success in life. The evidence strongly suggests that participation in outdoor recreation, particularly as a child, leads people to have more satisfying and fulfilling lives.

- Nine out of ten outdoor recreation participants express satisfaction with their personal health and fitness while the six out of ten who don't participate are unsatisfied with their personal health and fitness (ARC, 2000).

- Close to half of those who participate in recreation several times a week say they are "completely satisfied with the quality of their lives," compared to just one quarter of non-participants (ARC, 2000).

The enjoyable experiences we pursue directly affect our quality of life. Californians agree that participation in recreation activities contributes to their overall quality of life.

- It was found that over 65% of Californians felt outdoor recreation was important or very important to the quality of their lives in three consecutive surveys by the California Department of Parks and Recreation in 1992, 1997 and 2002. Additionally, the percentage increased with each survey conducted (demonstrating the growing importance of outdoor recreation in Californians' lives) (DPR, 1994; 1998; 2004).

- Over 95% of California's mayors and chambers of commerce believe recreation areas and facilities improve the quality of life in their cities and communities (DPR, 2002; 2003).

A broad choice of parks and recreation areas, facilities and programs promote active living opportunities and enhance the overall health and well being of all Californians. Research supports the notion that active living through recreation is good for your body and mind. Recreation activity can provide the means for staying physically active, keeping us fit from top to bottom, inside and out.

"The effect of having other interests beyond those domestic works well. The more one does and sees and feels, the more one is able to do, and the more genuine may be one's appreciation of fundamental things like home, and love, and understanding companionship." ~ Amelia Earhart

Chapter 2: The Social Benefits of Recreation

Recreation opportunities can have positive impacts on our society. Living in California presents a wide range of social conditions influencing the way we live, work, and recreate. These conditions can be improved through participation in recreation activities. The physical benefits of recreational activity on health are well studied, but some of the social benefits of recreation are not as well documented. Social benefits, such as promoting stewardship and reducing crime, are well studied. Numerous studies support the link between participation in outdoor recreation and increased condern for the environment. Survey opinions and crime statistics also support the link between open spaces, recreation and reduced crime. Other areas, such as the impact on communities and encouraging volunteerism have not been as well studied. Despite a great deal of professional theory and speculation, it is evident that further studies are necessary to understand the full scope of social benefits that are associated with open spaces, parks and recreation facilities.

Strengthens Communities

Park and recreation opportunities are essential for strengthening and maintaining a healthy community. Positive impacts are evident throughout the community. Recreation brings neighbors together, encourages safer, cleaner neighborhoods and creates a livelier community atmosphere. Parks and recreational facilities also help improve a community's image, socioeconomic status and enhances the area's desirability. When people move they seek a desirable community. When they retire they also look for a community that will accommodate their special needs. Residents recognize the numerous benefits that well maintained open spaces and recreation facilities can have for a community.

- Ninety-nine percent of California mayors believe that parks and recreation strengthen the community image and creates a sense of place (DPR, 2002).

- Seventy-seven percent of Los Angeles citizens, who were surveyed in 1993 after the riots, listed improved parks and recreation facilities as "absolutely critical" or "important" to the restoration of their community (TPL, 1994).

Reduces Crime

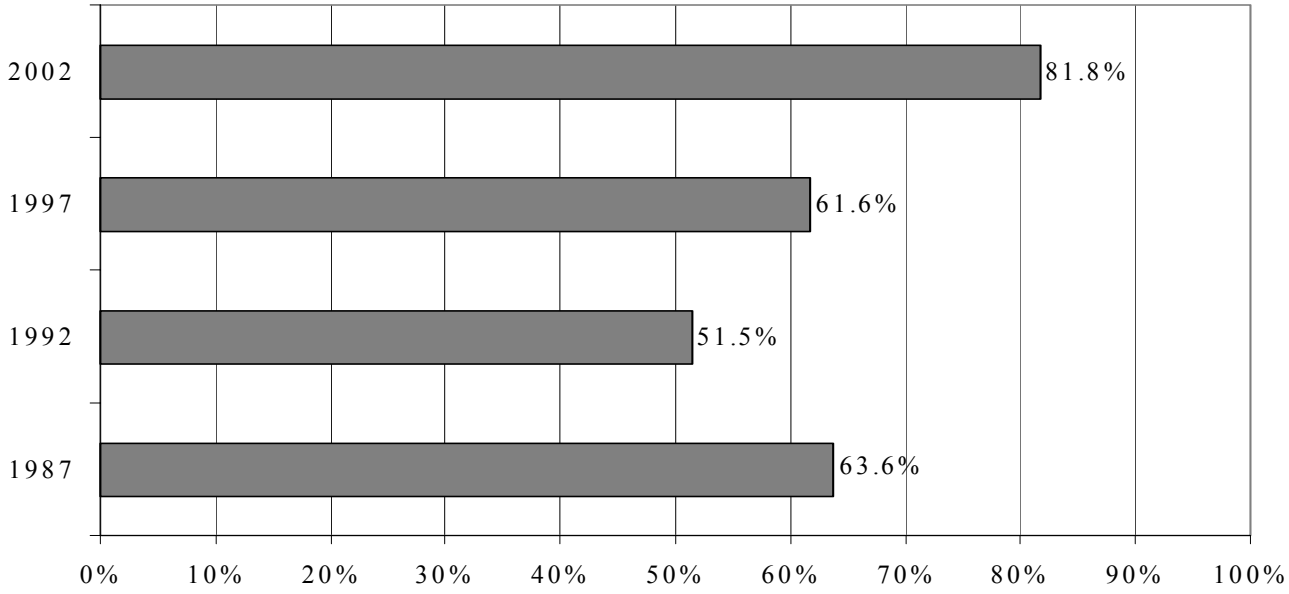
Violent crime in urban areas continues to be a concern for Californians. With increasing population and unstable economies, fighting crime is a continual battle. Well maintained parks and recreation facilities help reduce crime in a community. The presence of park users in and around the facilities is an excellent deterrent. Low crime rates increase property values and help residents feel secure. The Developing Youth section of this document also explores how parks and recreation opportunities help youth avoid criminal activity.

- Over 80% of California mayors and chambers of commerce believe that recreation areas and programs reduce crime and juvenile delinquency in their communities (DPR 2002, 2003).

- Crimes by and against children dropped after a Bakersfield school district began an after-school program for over 1,300 students. Lewd acts against children dropped by 46% within the district boundaries, compared to a drop of only 8% in the rest of the city (FCIK, 2001).

- The burglaries and thefts in a Philadelphia precinct dropped 90%, after police helped neighborhood volunteers clean up vacant lots and plant gardens, falling from 40 crimes each month before the cleanup to an average of only four per month afterward (TPL, 1994).

Percentage of Californians that moderately or strongly agree that outdoor recreation areas and programs help to reduce crime and juvenile delinquency in their communities.



Source: Data compiled using the Public Opinions and Attitudes on Outdoor Recreation in California.

Encourages Volunteerism

Participation in recreation activities promotes volunteerism. Park and recreation agencies rely on volunteers to ensure the delivery of programs and services. In 2003, with 10,752 volunteers, 924,555 hours were contributed to the state parks (Cowan, 2004, June 1). The National Park Service had 125,000 volunteers contribute 4.5 million hours of service, valued at over 72 million dollars (NPS, 2002). Without volunteers many recreation and park services could not be offered. Volunteers lead programs and serve as docents, coaches, park board members, and provide labor in virtually every community. The dedication and pride that people have for parks and recreation areas leads to increased interest and involvement in other aspects of the community. Volunteers are irreplaceable for meeting the recreation demands of a growing public.

- Adults who use parks, recreation and cultural facilities and participate in recreation programs are more willing to volunteer than those who do not use these services, according to a case study of 640 adults (Busser & Norwalk, 2001).

Promotes Stewardship

Open space, park and recreation areas are an ideal medium for encouraging and developing stronger stewardship of the land. People who enjoy outdoor recreation become more familiar with natural resources and the environment. This increased knowledge helps them understand how their personal actions can affect the environment.

- Participants' feelings of care and connectedness for the environment were higher while they were in the park and after they exited the wilderness than when they initially came to the wilderness according to a study of 62 groups in the Okefenokee Wilderness (Borrie & Roggenbuck, 2001).

- Ninety-five percent of Americans agree that outdoor recreation is a good way to increase peoples' appreciation for nature and the environment (ARC, 2000).

- Ninety-six percent of all Californians believe that maintaining the quality of the natural setting is an important factor in their enjoyment of outdoor recreation areas (DPR, 2004).

- Optimal outdoor recreation experiences can result in a state of connectedness with the earth and its creatures, which in turn, can result in a greater sense of appreciation for the environment and the community of life (McDonald & Schreyer, 1991).

Outdoor recreation increases participants' political involvement in environmental issues. Experience in the natural environment beginning at an early age, encourages recreationists to become involved with, and successful in, promoting many environmental issues. When people participate in outdoor recreation, they become appreciative of the natural environment and the benefits they derive from it. This participation often leads to investments of time and money in the protection, conservation and maintenance of parks and open spaces. The following studies find a strong association between outdoor recreation and environmental awareness.

- The most environmentally committed people participate in outdoor recreation the most frequently. A study sorted Americans into five activism categories ranging from the most environmentally committed to the least committed. The study further refined the connection between outdoor recreation and environmental concern, identifying a correlation between the frequency of outdoor recreational activity and the spectrum of environmental activism (ARC, 2000).

Nearly 55,000 Americans worked to clean 7,700 miles of shoreline in 2000. Since the first National River Cleanup Week in 1992, concerned citizens, local civic organizations, and conservation groups have swept, shoveled, and bagged trash on some 81,000 miles of shoreline (Willis, 2001).

- A clear linkage between environmentalists and avid participation in outdoor recreation is demonstrated by the Roper Starch Report. One out of every ten active Americans is also personally involved in and supportive of outdoor recreation (ARC, 1999).

- Anthropological and psychological evidence suggests that humans have a primal need to connect with nature. Harvard biologist Edward O. Wilson calls it the "biophilia hypothesis." The theory states that the human need for association with the natural world goes beyond the attraction or appreciation of nature's utilitarian values. Biophilia implies that humans are inextricably linked with nature, as we evolved in close association with nature we have developed an unshakable, biologically based emotional dependence on the living world (TPL, 1994).

Promotes Social Bonds

This section demonstrates how recreation and park facilities help promote social bonds by uniting families, building cultural tolerance, and supporting individuals with disabilities and seniors. Recreation provides us with family and community bonds that last a lifetime.

Unites Families

Families that recreate together tend to be closer and more cohesive, and have a greater chance of staying together. This is true with both parent-child relationships and married couples. By participating in activities together, family members elicit feelings of loyalty, trust, harmony, teamwork and goodwill. This atmosphere encourages family members to try new behaviors and lifestyle changes. Many families use recreation as a way to form bonds and transfer important values to children. These family experiences create positive memories

and often are the catalyst for future participation. Family members often continue the activities throughout their adult lives while sharing them with their families. Opportunities for togetherness and sharing promote closer, healthier relationships within the family as seen in the following studies.

- A positive relationship between family leisure involvement and satisfaction with family life, especially from the parent and family level perspectives, was found in a study of 179 families (Zabriskie & McCormick, 2003).

- Forty-three percent of Americans were introduced to their favorite activity by their parents, while 16% were introduced through another relative (ARC, 2000).

- Family togetherness received a high rating as a reason to participate in outdoor recreation. Nearly three in four Americans consider this an important reason to get active (ARC, 1999).

- Seventy percent of Americans feel that "creating shared experiences that family and friends can bond over" is a major reason to participate in outdoor recreation (ARC, 1999).

- Literature reviews consistently find that husbands and wives who spend their leisure time together tend to be much more satisfied with their marriages (Orthner & Mancini, 1991).

- When families participate together in leisure activities bonding can occur, and the related benefits can include family satisfaction, interaction and stability. "...there does not appear to be any recent study that fails to find an association between joint activities and marital satisfaction" (Orthner & Mancini, 1991: 290).

Builds Cultural Diversity and Harmony

California is a richly diverse state, with more cultures, and languages than any other state in the Nation. California's rapidly growing diversity can create tensions and challenges of assimilation within communities. With such diversity, the need for cultural understanding and harmony increases. Recreation promotes positive contact between different ethnic groups and opens communication in a non-threatening atmosphere. Recreation opportunities provide a means for social interaction that can help to break down the barriers of unfamiliarity, fear and isolation.

California Population		
White	46.8%	16,438,000
Hispanic	33.2%	11,658,000
Asian	11.1%	3,913,000
African American/ Black	6.2%	2,184,000
Two or More Races	1.7%	589,000
Hawaiian/Pacific Islander	.7%	246,000
American Indian/ Alaska Native	.4%	131,000
Total	100%	35,159,000

Source: DOF, 2003

During recreation and leisure time, people are less concerned with differences and more concerned with having fun. The strength of a community is increased through recreation activities that allow people to share their cultural and ethnic differences. Over 80% of Californians participated in visiting historic or cultural sites and attended outdoor cltural events such as festivales and fairs (DPR, 2003b). These gatherings can educate people about other cultures, reducing the potential for "clashes" between groups.

Cultural resources, including historic buildings, sites and museums, can contribute to the overall functioning of society by helping individual ethnic groups embrace their cultural identities, and by helping Californians understand and appreciate our states' diversity. These historic sites help visitors immerse themselves in other cultures

and create places for sharing ethnic food, events, languages and traditions. Ethnic diversification creates a wide range of park use preferences and demands. Park and recreation professionals need to find ways to address the increasing diverse demands of California's public.

- Just about all play situations provide ample testimony that once the game starts, social distinctions disappear and the status of participants is determined by their ability to play the game (PRFO, 1992).

- Significant improvement in attitudes relating to self-expression, trust and acceptance of others are reported among the participants of the New Jersey Arts Alternative Program (PRFO, 1992).

Supports Individuals with Disabilities

There are 10.6 million non-institutionalized people with disabilities living in California (CSDC, 2002) and as we grow older we all face the potential of becoming disabled. Most people with disabilities are not born with them; 4 out of 5 become disabled after adolescence (Jones, 1995). Individuals with disabilities receive the same benefits from participating in recreational activities and their need is even greater. Lack of choices often stops them from being active. Individuals with disabilities are less likely to engage in regular moderate physical activity than individuals without disabilities, yet have the same need to promote their health and a quality lifestyle. With limited physical activity and social opportunities, individuals with disabilities are more at risk for negative health conditions and lifestyle choices such as depression, isolation, drugs and alcohol, than are individuals without disabilities.

California's Noninstitutionalized Population with a Disability	
5-20 years	8%
21-64 years	20%
65+ years	42%
Source: California Department of Finance, Census 2000	

With the enactment of the Americans with Disabilities Act (ADA) and many other inclusion laws, full accessibility is being advanced. Title II of the ADA applies to public entities and requires agencies to make reasonable modifications to its services and programs to make them readily accessible to and usable by people with disabilities. Many park and recreation providers are upgrading their services, programs, and facilities in order to accommodate all visitors. Advancing technology continues to create new adaptive and assistive equipment. With these upgrades, individuals with disabilities are finding more recreation opportunities available to them.

Studies have shown that rehabilitation facilities with strong recreation programs can have a tremendous impact on those that they serve. Individuals who participate in specific sports as a part of their rehabilitation process are more likely to become independent as well as physically and psychologically healthy and often continue some affiliation with the sport following their discharge. Shriners Hospital utilizes this theory in its rehabilitation program by offering a Spinal Cord Injuries Sports and Conditioning Camp. During this camp, patients participate in downhill skiing, rock climbing, scuba diving, kayaking, sailing, tennis, horseback riding and many other activities. Participants have found the camp beneficial in many ways. Participation in the various activities increased campers' awareness of other recreation opportunities. This was reflected in comments such as, "The camp showed me things I thought I couldn't do" and "the camp spurred me to join a wheelchair basketball team." Other benefits stated by the participants included meeting and talking with people their own age,

developing new friends, and problem solving with peers in comparable life situations. Most participants indicated they became more active following their camp experience (Johnson et al., 2001).

According to the National Consortium for Physical Education and Recreation for Individuals with Disabilities, recreational activities contribute to an individual's quality of life by:

* promoting physical activity as part of an active lifestyle,
* developing fundamental motor skills necessary for participating in individual and team sports,
* increasing physical independence and/or mobility,
* enhancing self-esteem and self-image, and
* establishing friendships with peers of all abilities (NCPERID, n.d.).

The quality of life for those with disabilities is enhanced through recreation opportunities. Social integration and quality of life are positive outcomes of community based leisure programs that enable interactions between individuals with intellectual disabilities and their peers without disabilities (Mahon et al., 2000).Through recreation activities, individuals with disabilities increase their frequency of social interactions, fostering meaningful relationships with peers with/without disabilities. Age-appropriate activities provide exposure to a range of opportunities that may become lifelong habits, promoting physical and psychological health, facilitating skill development, and enhancing perceptions of community membership (Mahon et al., 2000). These interactions help to establish healthy communication, understanding and form lasting relationships. Recreation also provides opportunities for self-expression and self-development. It fosters a sense of freedom and independence. Recreation reduces symptoms of anxiety and depression, improves mood, and promotes a general feeling of well being. The following studies demonstrate how important it is for individuals with disabilities to participate in recreation activities.

- Participants without disabilities also benefit from recreation that includes individuals with disabilities, encouraging them to focus less on individual differences and more on their shared interests in recreation (Mahon et al., 2000).

- Positive attitudes towards the disabled, increased tolerance and sensitivity were some of the confirmed benefits of participating in integrated outdoor experiences (McAvoy, 2001).

- By participating in re-socialization activities, individuals with disabilities enhance their interpersonal skills, experience a revitalized interest in life events and activities and an increased concern for the quality of life for others (Heintzman, 1997).

- Aerobic exercise training can significantly improve the mental capacity of individuals with spinal cord injuries while lowering their depression, increasing their self-satisfaction/image and independence, and reducing their suicidal tendencies (PRFO, 1992).

- Physical fitness and aerobic activities had a much more profound impact on self-esteem among children with disabilities than did curriculum activities as found in an analysis of 24 controlled studies (PRFO, 1992).

"Access to the beauty, inspiration, and education of our National Parks must be available to the citizens of the world whether or not they have a disability, everyone needs the recreative experience of the unspoiled out-of-doors."
~ William Penn Mott Jr.

Supports Seniors

The number of citizens over 65 is increasing. More than ten percent of California's population is 65 or older (CSDC, 2002). Life expectancy in the early 1900s was 47 years and today is 75 years. More than 80% of us will live past 65. With this increased life expectancy comes a longer retirement. Seventy-five percent of males and 84% of women aged 65-69 are not in the work force (Munroe, 1999). Inactivity also increases with age. By age 75, about 1 in 3 men and 1 in 2 women engage in no physical activity at all (CDC, n.d.b). Recreation can enhance active living, helping limit the onset of disease and impairment normally associated with the aging process. Recreation activities that include physical activity help the aging population lead independent and satisfied lives helping them remain mobile, flexible and maintaining their cognitive abilities.

- Improvements in cognitive performance, balance and body sway following participation in a general exercise program emphasizing have been documented in several well controlled studies (Chodzko-Zajko, 1998).

- An association between regular physical activity and lowered risks of cognitive impairment was suggested in a study of elderly persons. Researchers concluded that regular physical activity could protect elderly populations against Alzheimer's disease and dementia (Hamilton, n.d.).

Recreation activities provide socialization opportunities and help keep seniors active in the community. Seniors who live alone are often cut off from the community mainstream, losing their purpose for being and retreating into their homes, thus increasing their health risks. It is generally accepted that the risk of depression increases with age (Chodzko-Zajko, 1998). Seniors involved in recreation programs have reduced feelings of alienation and loneliness and increased intergenerational understanding. Activity can have beneficial effects on seniors regardless of their physical health. Studies confirm that recreation and physical activity help seniors lead healthier and happier lives.

- A positive association between physical activity and well being is reported by a review of 38 studies of older adults. All examined the relationship between regular physical activity and psychological functioning, including self-esteem, self-efficacy, and general well-being (Chodzko-Zajko, 1998).

- By tracking their activity in journals, participants of the Merry Milers senior walking program reported increased knowledge of neighborhood resources, ownership of personal behavior, socialization and friendship, optimism for the future, goal achievement, and conflict resolution. They also reported decreases in alienation, depression and loneliness. More than 80% of the participants reported improved limb and muscular ability, indicating they could move around the house better and lift their arms higher (Eckhart & Allen, 1998).

- Benefits such as having fun, feeling less lonely, reduced depression, fewer doctor visits, less medications, decreased pain, having more energy, generally feeling better, sleeping better at night, reduced medical costs, making friends, and having something to look forward to were identified through participant's personal testimonies of "Active Options", a fitness and recreation program for persons over 62 years of age (Katzenmeyer, 1997).

- Older adults involved in an organizational/recreation activity scored significantly better on the happiness scale than those who were not involved (PRFO, 1992).

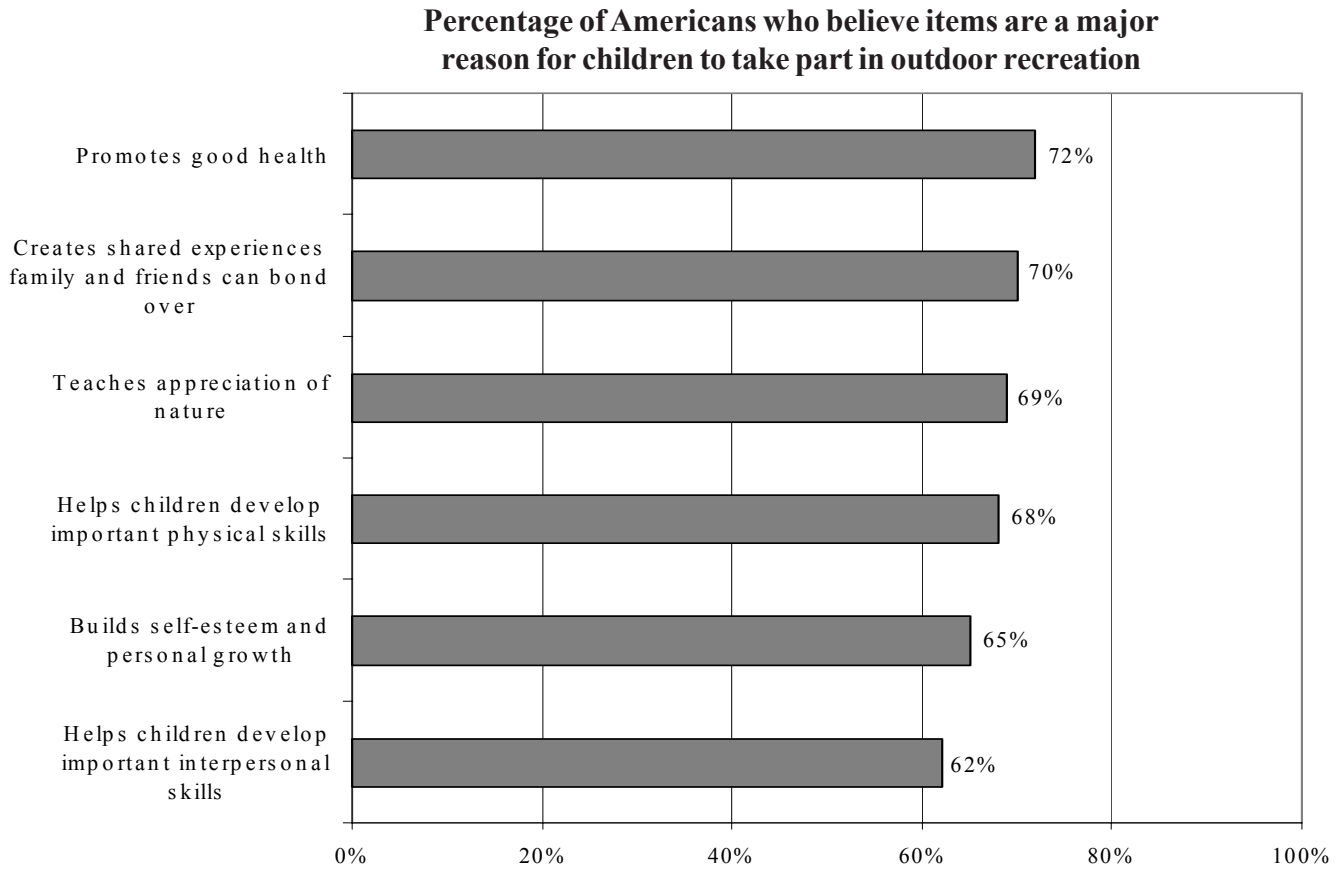
Supports Youth

With nearly five million of California's households having children under 18 it is vital to recognize the importance of recreation to youth (CSDC, 2002). Recreation is fundamental for children's physical, mental, social and emotional development. Participating in recreation activities helps to develop our youth, improves their education, and deters negative behaviors. Most parents, teachers and community leaders are well aware of the positive benefits youths receive from after–school activities.

- In a 2000 survey, a strong majority of respondents felt that recreation plays a positive role in the case of tough social problems such as juvenile crime (71%), underage drinking (66%) and illegal drug use (64%) (ARC, 2000).

- Eight out of 10 Americans believe participation in outdoor recreation can improve education in America (ARC, 2000).

- In 1992, 64% of Los Angeles County voters approved Proposition A, the Safe Neighborhood Parks Act - a special property tax surcharge providing $540 million to upgrade existing parks, buy land and build recreation facilities (TPL, 1994).



Source: ARC, 1999

Develops Youth

Recreation assists in overall youth development. Recreation activities help develop decision-making skills, cooperative behaviors, positive relationships and empowerment. Youth explore strategies for resolving conflicts while recreating and playing. They learn to act fairly, plan proactively, and develop a moral code of behavior. This play also helps enhance their cognitive and motor skills. Individuals with more highly developed motor skills tend to be more active, popular, calm, resourceful, attentive and cooperative. Recreation also provides children the chance to learn, consolidate, and practice the skills necessary for further growth and learning. Independent goal pursuits, such as looking for fun and enjoyment, increased participants' goal attainment in other areas (Estes & Henderson, 2003).

- A study of Northern California youth found they had increased self-esteem after participating in a rural recreation program, increased commitment to education after participating in a community basketball and tutorial program, and increased involvement with positive role models and authority figures after participating in both programs (Dahl, 1999).

- Sports can be a great avenue toward developing mature reasoning skills that include more assertion and less aggression, and more compliance with rules and fair play (PCPFS, 1997).

Participation in recreation activities can increase self-esteem, self-concept and confidence. As children experiment with their successes and failures, they learn to trust themselves and others. Delinquency was reduced when recreation participation brought about increases in self-esteem and self-concept (Mclean & Neal, n.d.). When young people feel good about themselves they operate more effectively and productively in families, communities and schools.

- The more time children and adolescents spend being sedentary, the less likely they will spend any time being moderately active at all. The more time children spend being highly active, the higher their self-efficacy and self-esteem. This study by researchers at the Robert Wood Johnson Medical School evaluated the activity levels of 92 children, aged 10 and under, and looked at the relationships between physical activity and self-esteem. They found that children spend 75.5% of their day inactive, watching television, sitting at the computer, and doing homework. Additionally, children only spent 1.4% of the day engaging in "vigorous activity" (Strauss et al., 2001).

- Physical activities provide a wonderful opportunity for girls to test their problem solving abilities, learn new skills, and find ways to account for successes and failures. They provide a fundamental source of opportunities to challenge one's self, take risks and develop skills that may lead to higher self-esteem (PCPFS, 1997).

- A significant relationship between high levels of physical activity and a higher ability to integrate into peer groups, easier contact with parents and friends, and a higher degree of life satisfaction were found in a year of 1,671 children aged 11, 13 and 15 (PRFO, 1992).

Enhances Education

Park lands and outdoor recreation facilities in county, city, regional and state parks provide exceptional learning opportunities for students. Using recreation areas and park land as a medium for learning creates a fun and relaxed atmosphere where students want to participate. Children have a natural affinity for environmental education, making it an effective springboard for the inclusion of many other areas of study, according to biologist E.O.Wilson, who notes that children are naturally "biophilic"- or drawn towards wildlife and to the outdoors. (Mann & Hensley, 2002). Statewide park and recreation agencies, schools and informal educational organizations offer environmental education programs and services to students. Joint partnerships between schools and parks help kids learn first-hand about science, math promotes respect for nature.

- Students in schools using an environment-based learning model earned higher scores on standardized tests than their counterparts in more traditional school settings. This California study, conducted in 2000, paired eight conventionally structured schools with eight demographically similar schools that had integrated environmental education into their curriculum. The second group of schools used proven educational practices but emphasized the local community and natural surroundings as the primary venues for learning. (Mann & Hensley, 2002).

- Case studies of educational facilities that adopted environment-based education as the central focus of their academic programs showed 1) improvement in reading and mathematics scores, 2) better performance in science and social studies, 3) declines in classroom discipline problems and 4) high level learning opportunities equalized among students (Mann & Hensley, 2002).

Recreation and park facilities enhance education and help improve grades. As children participate in recreation and leisure activities their learning skills are developed and improved, directly impacting their school performance.

- Higher Scholastic Achievement Test (SAT) scores were associated with higher levels of fitness in each of three grade levels in a study that compared the 2001 scores of students in grades 5, 7 and 9 on the SAT and the state-mandated physical fitness test (the Fitness Gram). The statewide study, conducted by the California Department of Education, explored the relationship between academic achievement and the physical fitness of students and provides evidence that students' physical well being has a direct impact on their ability to achieve academically (CDOE, 2001; Kao et al., 2003).

- Nearly 8 out of 10 teens who engage in after-school activities are "A" or "B" students, but only half of teens not participating in after-school activities earn these high marks. Teens who do not engage in after-school activities are 5 times more likely to be "D" students than those who do participate (Ericson, 2001).

- In 1991, 75% of the children enrolled in the Fort Myers, Florida, STARS (Success Through Academics & Recreational Support) Program were earning less than a C average in school. Following the program, 80% of the 1,500 children enrolled had brought their grades up to a C average or better (TPL, 1994).

Research demonstrates that many high school female athletes have higher grades and standardized test scores, lower drop-out rates, and are more likely to go to college than their non-athletic counterparts (PCPFS, 1997).

Deters Negative Behaviors

Fewer and fewer families can afford to have one parent stay at home, so the demand for after-school recreation programs and opportunities is increasing. Working parents andsingle parents need assistance with childcare after school and during the summer. Studies show greater instances of truancy, dropping out of school, drug abuse, and depression among children who come home to an empty house.

- The YMCA commissioned the *After School for America's Teens Survey* in January 2001. Five hundred US teens between the ages of 14 and 17 were interviewed by telephone. The key findings include:
  - the average US teen is unsupervised after school for up to five hours, 2 days per week,
  - teens that are unsupervised during the after-school hours of 3 to 6 p.m. are more likely to engage in risky behaviors such as drug and alcohol abuse, sexual activity, cigarette smoking, and carrying and using weapons, than are youth who are supervised or involved in structured activities during those hours,
  - more than half of the surveyed teens said they wished more after-school activities were available in their community. Six in ten teens left unsupervised during the week said they would likely participate in after-school programs if they were available, and
  - 54% said they would watch less television or play fewer video games if they had other things to do after school (Ericson, 2001).

- More than four out of ten teen girls become pregnant at least once before they turn 20, an estimated 900,000 teen pregnancies each year. Twenty-five percent of all sexually active teens also contract a sexually transmitted disease each year (Kirby, 2001).

Recreation programs can provide safe, developmental opportunities for latchkey children. The programs provide childcare in a stimulating setting, keeping children from being bored and keeping them out of trouble.

Safe parks and recreation centers topped the list when researchers asked adolescents what they wanted most during their non-school hours (TPL, 1994).

<u>Decreases Drug and Alcohol Use and Early Sexual Activity</u>

Smoking, drinking, fighting, vandalism, drug abuse and suicide all decrease following youth participation in positive arts, sports and recreation activities. Youth that enjoy full and active lives are much less likely to turn to self-destructive behaviors.

- Students who participate in one to four hours per week of extracurricular activities are 49% less likely to use drugs and 37% less likely to become teen parents than students who do not participate, according to a U.S. Department of Health and Human Services study(HHS, 2002).

- An evaluation of sexuality and youth development programs at 44 sites in California found reduced rates of sexual activity and pregnancy nine months after participants left the program. The programs offered academics, arts, sports, healthcare, family and sex education and had a positive impact on the sexual and contraceptive behavior of teen girls for up to three years. (Kirby, 2001).

- Service learning programs (providing voluntary community service) that involve fixing up parks and recreation areas have the strongest positive effects on teen pregnancy rates while the teens are participating in the programs (Kirby, 2001).

- Researchers found that 329 youth had better school attendance, lower anxiety and depression, and actually decreased their use of cigarettes, smokeless tobacco, and alcohol after participating in a twelve-week physical training program (Collingwood et al., 2000).

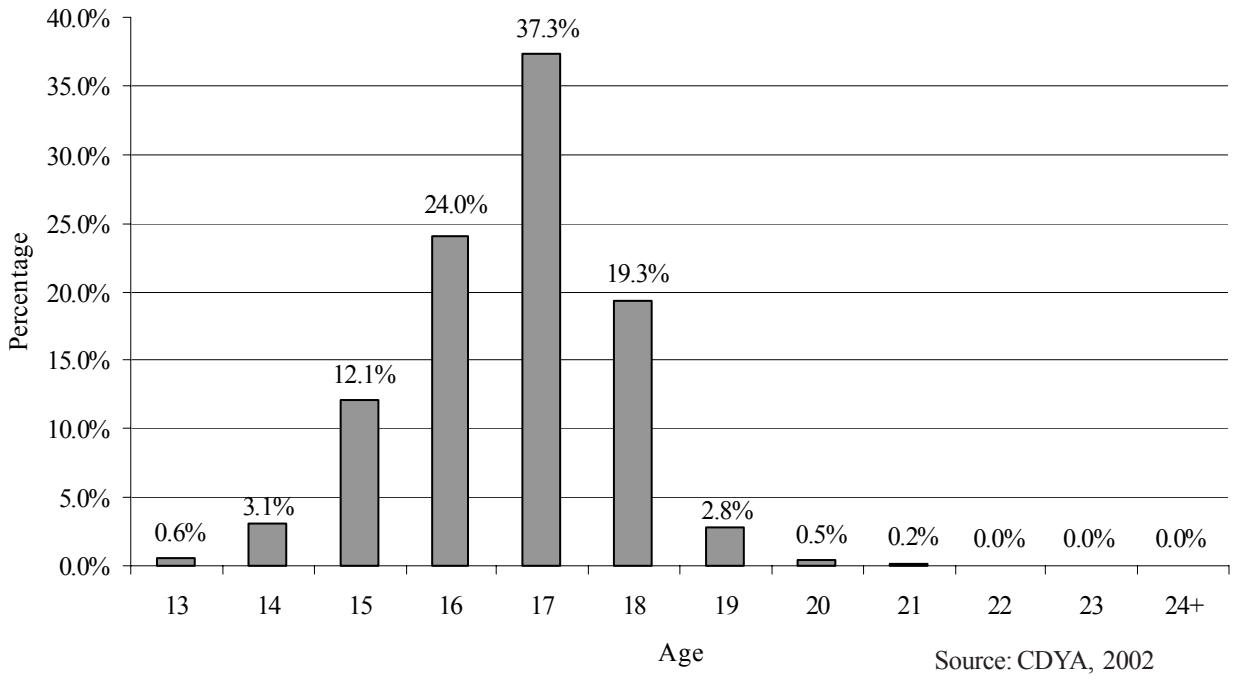
Crime Prevention

Rising crime rates are a primary concern of most Californians. In 2002, California had 5,954 youth offenders in criminal institutions (CSDC, 2002).

> "According to a study by the U.S. Department of Justice, in many cities half the young men will be arrested for assault, robbery, burglary, or other serious crimes by the age of 17." "The Office of Juvenile Justice and Delinquency Prevention estimates that the cost of keeping one teenager in detention for a year currently approaches $29,600...but more prisons and a threat of longer sentences does not necessarily deter young offenders. While California was spending $4 billion building new prisons, gang membership in Los Angeles doubled" (TPL, 1994; 3).

The following graph breaks down the age of offenders who have commited a crime for the first time. It can be seen that participation in criminal activities starts at an early age. This helps to illustrate the importance of youth participating in recreation activities and programs at early ages. This participation will establish lifelong habits that promote healthy lifestyles and deter negative behaviors.

Percentage of First Crimes Commited, Distributed by Age



Source: CDYA, 2002

The increasing numbers of latchkey youths and the increased use of television and video games to raise children directly relate to the nation's increasing crime rates.

- A correlation was found between the increased levels of television violence watched by children and aggressive adult behavior, following a continuing study from in the early 1960s that tracked subjects for 40 years (Kolata, 2002).

- Adolescents and young adults who watched television for more than 7 hours a week had an increased likelihood (up to 200%) of committing an aggressive act in later years, according to a continuing study that began in 1975 and followed 707 families for 17 years (Kolata, 2002).

- Fifty-seven percent of all violent crimes by juveniles occur on school days and 19% in the 4 hours between 3 p.m. and 7 p.m., based on the FBI's National Incident-Based Reporting System data (Snyder & Sickmund, 1999).

After-school recreational programs are a logical and inexpensive way to address crime. Communities with active recreation programs have seen local reductions in crime. One California district was able to keep 231,405 youths busy on evenings and weekends by using a court grant of only $13,000 (CPRS, 1996). No method has been established to measure how much crime is caused by a lack of supervision and recreation opportunities, but there is evidence that crime frequently drops when supervision and recreation opportunities are improved.

- Crime in the area has dropped by 36% since the Redlands police department began delivering their Rec-On-Wheels program to toddlers and teens in a low-income neighborhood (Groese, 2002).

- The number of reported gang-related activities dropped to only two reports during one year compared to the 10-20 reported in previous years after a Tulare county elementary school began an after-school program for 200 students (FCIK, 2001).

- A study of after-school programs in 12 high-risk California communities found that among kids participating in the programs, vandalism and stealing dropped by two-thirds, violent acts and carrying concealed weapons fell by more than half, and arrests and being picked up by the police were cut in half (FCIK, 2001).

- A 57% drop in violent acts, a nearly 60% decrease in theft, and a 68% reduction in vandalism was associated with children completing the 2001 California Juvenile Crime Prevention Demonstration after school program (FCIK, 2001).

- Of the 1,592 Boys & Girls Club alumni surveyed, 52% indicated "participating in the Club really saved my life" and over two-thirds stated "the Club was the only place to go in my community." Alumni stated that their involvement in the Club resulted in 80% of them "learning right from wrong" and 70% "developing the ability to avoid difficulty with the law". This national survey of Boys & Girls Club alumni suggests that the impact of daily, professionally-run, educational and recreational after-school programs can be "life-saving" for a large segment of America's youth (B&GCA, 1999, Sept. 15).

- In 1998, a neighborhood in Austin, Texas, saw a 44%reduction in juvenile crime following the opening of a recreation center and the introduction of the Roving Leader Program (TPL, 2001).

- In 1994, crime in Fort Worth, Texas, dropped by 28% in a one-mile radius of community centers that offered recreational basketball programs. At five community centers where the basketball programs did not exist, crime increased an average of 39% (TPL, 2001).

During the last few decades, there have been substantial increases in drug use and violent crimes among youth, accelerated school dropout rates and teen pregnancy. While declines in these negative trends have occurred in the last few years, the rates are still unacceptably high. These dangerous trends are affecting California and its future. Participating in outdoor recreation is an effective way to address these already prevalent problems; park and recreation programs should be one of the key components of a community's investment in its youth.

Conclusion

The information compiled here will be of value to policy makers, park and recreation providers, law enforcement personnel, health care providers, and educators. However, additional research documenting the physical, mental and social benefits of parks and recreation is greatly needed.

The information presented will help policy makers understand the linkages between recreation opportunities and healthy communities. Parks and recreation facilities help build a community's socioeconomic status by bringing people together and encouraging safer, cleaner neighborhoods. By understanding the links between recreation and strong communities, policy makers can effectively evaluate programs and budgets, formulate and analyze policies and make investment decisions that support recreation areas, facilities and programs in their communities.

Park and recreation providers are intuitively aware of the many individual and community benefits associated with recreation and leisure activities. This report can help them substantiate their claims of the benefits derived from their programs by detailing measurable outcomes from numerous studies. This can be a valuable resource to providers in gathering support for their programs.

Health care providers can benefit from this information by actively promoting recreation programs that serve the health needs of individuals that inturn benefit the entire community. This can be accomplished through partnerships with recreation service providers. This report also provides incentives to law enforcement personnel and educators to support recreation resources as documented solutions for reducing crime and juvenile delinquency while enhancing learning. By incorporating recreation into their community programs they can expand their existing resources for supporting individuals and their communities.

Educators, law enforcement and health care personnel will hopefully see park and recreation service providers as active partners in support of their mission. Finally, local policy makers should challenge their park and recreation providers to supply the individual and community benefits demonstrated in this study, and properly support them when they do.

As documented in this and in other studies, park and recreation lands, facilities and programs positively affect many facets of Californians' lives. There is a growing amount of quantitative data and studies that support the qualitative and anecdotal evidence of the many benefits of recreation. These studies document how physical activity helps to control obesity, boost the immune system, diminish the risk of disease and increase life expectancy. And, like improvements to our physical well-being, many studies document that participation in recreation activities is an important contributor to improved mental health and quality of life. As shown in these studies, recreation can aid in reducing depression, relieving stress, improving self-esteem and personal growth. In this increasingly fast paced world, park and recreation lands, facilities and programs provide the opportunity for something we desire most… the chance to take a breath and to relax - to refresh our mind, body and spirit.

Beyond just the benefits that accrue to individuals, recreation is important, verifiable assets to our communities. Recreation programs offer cost-effective means for addressing some of our most troubling problems, particularly with regard to California's youth. As reported in this study, park and recreation programs can do much to reduce juvenile delinquency and crime, combat the use of drugs and alcohol, reduce teen pregnancy and school drop-outs, and promote learning. By providing opportunities to strengthen family bonds, promote cultural diversity and understanding, and stimulate a greater acceptance of others, recreation opportunities can build better and more livable communities.

The most significant conclusion to be derived from this report is that these benefits can act together to greatly enhance the benefits. For example, a recreation program directed at youth obesity can increase self-esteem, reduce the use of alcohol, build family bonds, and promote volunteerism, all at the same time. The manner in which combined benefits may be gained is almost endless. And, while not the subject of this study, clearly this can have a positive economic impact and benefit to the community as well. This aggregate impact makes recreation one of the most cost-effective public services available to decision-makers.

"California is growing in population more rapidly than any other state...Unless a comprehensive plan for the preservation of recreational and scenic areas is set in motion, our children and our children's children will want for the opportunities for out of door life that make for sound bodies, clear brains and good citizenship." ~ Duncan McDuffie, January 1925

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