Strategic Plan for the Prevention of Obesity in Texas: 2005-2010

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TEXAS DEPARTMENT OF STATE HEALTH SERVICES

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COMMISSIONER

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March 10, 2006

Dear Partner in Obesity Prevention in Texas:

The number of overweight and obese Texans continues to increase, as do the costs associated with the epidemic. In 2004, an estimated 10.2 million (63%) Texas adults were overweight or obese. If current trends continue, 20 million (75%) Texas adults might be overweight or obese by the year 2040. When one considers the number of chronic diseases associated with overweight and obesity and the costs associated with those diseases, including real costs and the impact on quality of life, the outlook for the physical and fiscal health of Texas is bleak.

Many partners are currently working to curb the obesity epidemic. And partnership is the key to preventing and controlling the increase in obesity rates. The *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* outlines how all partners – including families, communities and local governments, worksites, schools and child care centers, the healthcare industry, state government and statewide organizations – can and do play a role in the prevention of obesity.

Individual behavior change is only one part of the obesity prevention picture. The physical environment and local and state policies must be modified to make eating healthy and being physically active the easy choice. Worksites must make it easier for employees to incorporate healthy eating and physical activity into their workday. Communities should be designed to promote walking, biking, and safe play areas for residents. Healthcare and health insurers must support preventive health measures in addition to the treatment of chronic diseases. And families must do their part to ensure a social system that supports healthy behaviors.

I encourage you to review this document and choose your part in the prevention of obesity in Texas. Together, we can combat the obesity epidemic.

In Partnership,

Eduardo J. Sanchez, M.D., M.P.H.
Commissioner

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Executive Summary

The obesity epidemic continues to be one of the most important health problems facing Texas today. The prevalence of overweight and obesity among Texas children and adults is higher than the national average and continues to increase. Obesity and overweight contribute to many chronic diseases such as heart disease and diabetes as well as emotional problems such as low self-esteem and depression. Health problems associated with obesity burden not only the individual, but also the healthcare system and workplace. In 2001, costs associated with overweight and obesity in Texas adults totaled $10.5 billion and are estimated to reach $40 billion by 2040 if something is not done.

In order to curtail the obesity epidemic, public and private partners must work together on common goals. If we work together, great things can be achieved. The *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* lays the foundation for everyone to do his or her part to prevent obesity.

The *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* builds upon the original *2003 Strategic Plan* created by the 2001-2003 Statewide Obesity Taskforce. The vision, mission, and goals of the original *2003 Strategic Plan* remain the same:

Vision: All Texans have a healthy weight by being physically active and eating healthy.

Mission: To reduce the burden of weight-related disease by decreasing the prevalence of obesity and increasing healthy eating and safe physical activity of all Texans.

Texas Goals:

Goal 1: Increase awareness of obesity as a public-health issue that impacts the quality of life of families.

Goal 2: Mobilize families, schools, and communities to create opportunities to choose lifestyles that promote healthy weight.

Goal 3: Promote policies and environmental changes that support healthful eating habits and physical activity.

Goal 4: Monitor obesity rates, related behaviors and health conditions for planning evaluation and dissemination activities.

During the revision process, measurable objectives (referred to as Proposed Texas Targets) were created for benchmarking achievement of the Texas goals. Specific strategies and action items were developed for various settings (family, schools and childcare centers, communities and local governments, worksite, businesses and industry, healthcare industry, and state government and statewide organizations). Stakeholders listed in the Acknowledgements section rated each strategy (according to level of importance) and action item (according to level of importance and ease of implementation). It is our hope that individuals and organizations will implement strategies and action items that relate to their sphere of influence.

The *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* is a working document. The Texas Department of State Health Services (DSHS) and the Texas Activity and Nutrition (TexAN) Coalition will track the implementation of the *Strategic Plan*. Addendums will be created as needed and the document will be revised every five years.

Partnership is key to prevention. In order to succeed in achieving the goals and objectives set forth by this *Strategic Plan*, everyone must do their part. The DSHS and the TexAN Coalition will choose to focus on several strategies and action items. The rest will be up to our partners across the state to adopt and accomplish.

Foreword

History of the Plan

On October 1, 2000, the Texas Department of Health (TDH) received a three-year grant from the Centers for Disease Control and Prevention (CDC) to support nutrition and physical activity programs to prevent obesity and related chronic diseases in Texas. One of the planning activities funded by this grant was the formation of a Statewide Obesity Taskforce to develop a strategic plan to address the problem of obesity in Texas. The taskforce members represented a breadth of organizations — from research institutes to community-based organizations — serving diverse populations and a variety of geographic areas of Texas.

The Statewide Obesity Taskforce developed the initial *Strategic Plan for the Prevention of Obesity in Texas* during 2001–2003, beginning with an assessment of Texas data and existing interventions and initiatives addressing obesity prevention and treatment. Based upon this assessment, the taskforce decided to focus the plan on preventing obesity in children. This focus was expanded to include families with children because adult family members have great influence over a child's diet and physical activity. The taskforce also decided that a focus on prevention, rather than treatment, would be more successful in reducing obesity in Texas.

Specifics on the development of the original *Strategic Plan* can be found in the Foreword (pg 9) of the original document.[1] The Statewide Obesity Taskforce was disbanded after the release of the *2003 Strategic Plan*.

In 2002, TDH convened partners in Texas' public health system to form the Texas Strategic Health Partnership (TSHP). The TSHP identified 12 priority areas/goals for improving the health of Texans. The first goal was to improve the health of all Texans by promoting healthy eating and safe physical activity. The group tasked with this goal became the Goal A Workgroup of the TSHP. The Goal A Workgroup took on the implementation of the *2003 Strategic Plan for the Prevention of Obesity in Texas.*

Ongoing Collaboration

The successful implementation of the *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* will take place through ongoing collaboration with state and local partners, including agencies, organizations and communities. The implementation of *the plan* will be made possible through communication, support, surveillance, assessment and evaluation.

The membership of the Goal A Workgroup was broad, including original members of the Statewide Obesity Taskforce, individuals from academia, public and private schools, businesses, healthcare, non-profit organizations, professional organizations, local health departments, school districts, and other state agencies. By the end of August 2004, the workgroup accomplished the following: formulation of the document titled "A Health Communication Plan to Address Obesity in Texas" which was the result of formative research with urban Hispanic families in Texas; revision of a community coalition-building guide to create the Families and Weight: What Communities Can Do guide used to form several community coalitions; and cataloging data sources related to nutrition, physical activity, and obesity.

As a result of the consolidation of TDH and other state agencies into the Texas Department of State Health Services (DSHS) in September of 2004, formal work by the Goal A Workgroup was delayed, and members were redirected to revise the *2003 Strategic Plan for the Prevention of Obesity in Texas.* After the release of this publication, the workgroup will join TexAN Coalition and continue to implement the revised *Strategic Plan.*

Revising the Plan

In 2003, the TDH entered into a five-year funding agreement with the Centers for Disease Control and Prevention (CDC) to continue efforts to reduce obesity and prevent chronic diseases. As part of this agreement, the CDC directed TDH to revise the *2003 Strategic Plan for the Prevention of Obesity in Texas* to expand its focus to all age groups, including strategies for breastfeeding and reduction in TV viewing, and create S.M.A.R.T. objectives (specific, measurable, achievable, relevant, and time-based). The revised plan integrates feedback from members of the initial Statewide Obesity Taskforce as well as other key stakeholders involved in preventing obesity in Texas (listed in the Acknowledgements section). The process of revising the *2003 Strategic Plan* is described below.

1. Telephone interviews were conducted with the original Statewide Obesity Taskforce members and other partners from the Texas Strategic Health Partnership in Spring 2005.
2. To involve more community members and stakeholders, DSHS convened a meeting in Austin on June 23, 2005,

to review the input from the phone interviews. Of the 100 invited, 49 attended the full-day meeting.

3. The June 23, 2005 meeting resulted in additional strategies, which were emailed out as a survey for all stakeholders to rate and provide input.
4. All input from the phone interviews, emailed surveys and the stakeholder meeting were incorporated into the revised *Strategic Plan*.
5. The revised *Strategic Plan* was then reviewed by the DSHS Nutrition and Physical Activity Workgroup (NUPAWG) and DSHS senior management.
6. The final document was released at the Texas Public Health Association's annual conference on April 24, 2006 in Plano, Texas. Attendees received a hard copy of the plan. Copies were also sent to Texas Local Health Departments, Texas Department of State Health Services Regional Offices, and partners in the revision process. The plan will also be available electronically on www.eatsmartbeactiveTX.org and www.dshs.state.tx.us.

Progress made since the release of the 2003 Strategic Plan for the Prevention of Obesity in Texas

In addition to the accomplishments of the Goal A Workgroup, many other partners have made great strides toward the prevention of obesity in Texas since the release of the *2003 Strategic Plan*. The Texas Department of Agriculture created the Square Meals program and introduced the Texas Public School Nutrition Policies. Two Texas communities (Austin and San Antonio) received Steps to a Healthier US grants to fund obesity prevention initiatives. The Texas Legislature passed laws requiring the implementation of coordinated school health programs in elementary and middle schools. DSHS received continued funding to coordinate obesity prevention efforts in Texas and to work with communities to form coalitions to promote nutrition and physical activity for obesity prevention. Several community coalitions have been formed including the San Angelo Obesity Prevention Coalition, the Wharton County Fit Kidz Coalition, and the LEAN Coalition in Rusk County. Many of these activities are featured on the following website: www.eatsmartbeactiveTX.org.

Target Audience for the Plan

The *Strategic Plan* is for any organization or individual who wants to help reduce the growing number of Texans who are overweight or obese. Target audiences include but are not limited to:

- State and local government agencies
- Schools and childcare centers
- Media outlets
- Community programs, partners, and health-based coalitions
- Departments of urban/regional planning and development, economic development, transportation, and parks and recreation
- State and local elected officials
- Health care professionals
- Worksites and worksite wellness programs
- General public interested in promoting healthy eating and safe physical activity in Texas

Implementation, Evaluation, and Future Revision of the Strategic Plan

The prevention of obesity in Texas can only occur if multiple partners join in the effort and take responsibility for strategies and action items that can be included in their day-to-day operations. In 2006, the Goal A Workgroup of the Texas Strategic Health Partnership (TSHP) will transition into the Texas Activity and Nutrition (TexAN) Coalition. The purpose of the TexAN Coalition will be to assist in the implementation of the *Strategic Plan*. A steering committee for the TexAN Coalition will be formed to direct the work of the coalition. The DSHS Nutrition, Physical Activity, and Obesity Prevention (NPAOP) program has agreed to provide staff support to oversee partnership efforts, to monitor progress towards achieving the goals and objectives in the *Strategic Plan* using annual surveys, staff reporting and reviews of related data being collected statewide, and to revise the plan every five years. Evaluation data on progress towards accomplishment of goals and objectives and any updates to the *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* will be available on www.eatsmartbeactiveTX.org.

Our Environment Affects Our Choice

In order to design successful interventions and programs that result in sustainable behavior change, we must take into account an individual's environment and the variables that affect a person's decision. The Social-Ecological Model explains the dynamic interplay between an individual and his or her environment. Public health professionals and others who develop interventions and programs to promote healthy eating and safe physical activity use the Social-Ecological Model to increase the effect and sustainability of the behavior change targeted by the intervention.

Social-Ecological Model

Following is an illustration of the different levels of the Social-Ecological Model.

"Many people believe that dealing with overweight and obesity is a personal responsibility. To some degree they are right, but it is also a community responsibility. When there are no safe, accessible places for children to play or adults to walk, jog or ride a bike, that is a community responsibility…When we do not require daily physical education in our schools that is also a community responsibility. There is much that we can and should do together." – David Satcher, The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, 2001

Successful interventions target multiple levels of the Social-Ecological Model.

Individual: At the individual level, it is important to target psychological and cognitive factors that influence behavior such as knowledge, attitudes, beliefs, and personality traits. Interventions targeting the individual level of the Social-Ecological model impact these psychological and cognitive factors.

Interpersonal and Group: The interpersonal level of the Social-Ecological model targets the social support around the individual, like family, friends and peers. Interventions that target the interpersonal level seek to strengthen the social networks and support systems to help an individual feel confident and supported in making healthy choices.

Institutions and Organizations: This level of the Social-Ecological model deals with the settings in which individuals work, play, and live. Schools, worksites, churches, businesses, and other settings influence an individual's behavior through rules, regulations, policies, and procedures. For example, worksites can require healthy options in vending machines and offer flex-time to employees to encourage physical activity. Restaurants and businesses can adopt policies to allow mothers to breastfeed their child while in their establishment. Schools can adopt rules on the time of day children have access to vending machines.

Community: The community level of the Social-Ecological model aims to influence social norms. For example, a community with a bus transit system can add bicycle racks to buses to encourage individuals to bike to the bus stop (increases social norm of incorporating physical activity into the work day). Community-wide media campaigns such as Public Service Announcements targeting nutrition and physical activity impact groups of individuals. Partnerships and collaborations can be formed between local government and community organizations to benefit the entire community.

Societal or Public Policy: This level deals with local, state and federal policies that impact healthy behaviors. Interventions at this level often include the education of policy makers and advocacy for public policy causes related to nutrition and physical activity. It can also include policy changes made within an organization.

Making changes in the environment at each of these levels supports adoption of healthy behaviors at the individual level. Participants such as state and local policy makers, transportation officials, city planners, businesses, health care providers, health insurers and public health professionals must be engaged on a larger scale to change the environment. Working together, Texans can achieve the key health outcomes described in this *Strategic Plan* and ensure that opportunities for daily physical activity and healthy eating are available for all ages within our communities.

Background

The Obesity Epidemic

"As a society, we can no longer afford to make poor health choices such as being physically inactive and eating an unhealthy diet; these choices have led to a tremendous obesity epidemic. As policy makers and health professionals, we must embrace small steps toward coordinated policy and environmental changes that will help Americans live longer, better, healthier lives."

Vice Admiral Richard H. Carmona, MD, MPH, FACS
U.S. Surgeon General [3]

Nationwide, there is a concern about the increasing percentage of adults and children that are overweight or obese. In the United States between 1999-2002, 65% of adults were overweight or obese, 31% of children aged 6-19 were at-risk-for overweight, and 16% of children of the same age were overweight.[3] Since 1980, the rate of overweight has doubled in children and tripled in adolescents.[4,5] Because overweight and obesity can lead to more complicated health issues such as diabetes and heart disease, which in turn reduce the individual's quality of life and lifespan[6] the Surgeon General issued a call to action to prevent and decrease overweight and obesity in 2001.[7] The call to action suggests that excess caloric intake and inadequate levels of physical activity are the greatest reasons for the increasing incidence of obesity.

The prevalence of overweight and obesity is also increasing among adults and children in Texas. In 2004, 25.7% of Texas adults were obese (BMI ≥ 30); in 2000, 23.1% of Texas adults were obese; in 1990, the prevalence of obesity in Texas adults was only 12.3%.[10] According to a report released in 2005, Texas tied for the 6th highest rate of increase of obesity in adults in the United States.[12]

Currently, the Centers for Disease Control and Prevention (CDC) does not use the term obese to describe excess weight in children; instead, CDC supports the use of the terms overweight and at-risk-for-overweight when describing children with excess weight. For children, overweight refers to BMI at or above the 95th percentile by age and gender and at-risk-for-overweight is defined as BMI at or above the 85th percentile but less than the 95th percentile for age and gender. Many individuals and groups in the scientific community disagree with using overweight and at-risk-for overweight to describe children, and instead use "obesity" to describe children with a BMI at or above the 95th percentile and "overweight" interchangeably with "at-risk-for overweight". For this document, if "obese", "obesity", or "overweight" is used to describe children, it means a child or children with a BMI at or above the 95th percentile by age and gender. For the *Strategic Plan*, the terms "obese" or "obesity" will only be used to describe children when a scientific article that is being cited uses those terms.

In 2005, Texas reported it had the 6th highest prevalence in adult obesity in the U.S.

The prevalence of childhood overweight was greater in Texas in 2001 than the U.S. rates reported for the 2001-2002 National Health and Nutrition Examination Survey (NHANES).[3] Nationally, 15.8% of children age 6-11 were overweight and 16.1% of children age 12-19 were overweight.[3] In comparison, the overall prevalence of overweight in Texas schoolchildren was 38.7% for fourth-graders, 37.1% for eighth-graders, and 29.4% for eleventh-graders in 2000-2001.[12] The highest prevalence of overweight was reported for Hispanic boys at all grade levels and African-American girls in the fourth and eleventh grades.[12] In recent years, seven additional studies were completed in Texas that support these data.[13,14]

Obesity and overweight is the leading cause for preventable chronic disease.

Consequences of Being Overweight or Obese

Being overweight or obese is considered the leading cause of some of the most common and costly medical problems treated today. Three of the five leading causes of death in Texas in 2001 were for chronic diseases linked with obesity, including heart disease, stroke and cancer.[15,16] Other diseases and conditions associated with being overweight or obese include type 2 diabetes, arteriosclerosis, hypertension, hyperlipidemia, nonalcoholic steatohepatitis, sleep apnea, breast cancer, gastroesophageal reflux, osteoarthritis, aseptic necrosis of the hip, pregnancy complications, and birth defects.[7,17-22] These diseases affect both adults and children.[23,24] Many overweight adults and most overweight children have low self-esteem, and a large number are depressed.[25] Along with the increase in the prevalence of obesity comes increases in related chronic diseases and disease risk factors.[9,26,27]

A weight gain of 10 to 20 pounds increases the risk of chronic diseases such as coronary heart disease, stroke and high blood pressure.

Cardiovascular Disease

Cardiovascular disease is the number one killer of Americans, causing 37.3% of all deaths in the U.S. in 2003.[28] In Texas in 2003, 26.9% of all deaths were attributable to heart disease, making it the leading cause of death among Texans.[29] Cardiovascular disease includes high blood pressure, coronary heart disease, and stroke. Obesity is one of nine modifiable risk factors for coronary heart disease.[30,31] Obesity is also associated with stroke and high blood pressure. Gaining as little as 10 to 20 pounds of excess weight increases the risk of coronary heart disease, stroke and high blood pressure in women (1.25 times) and men (1.6 times).[15] It is more likely that obese individuals will develop atherosclerosis, which is the buildup of fatty tissue and cellular debris in blood veins. This buildup increases blood pressure and the likelihood of stroke.

Cancer

Cancer was the second leading cause of death in Texas in 2003 accounting for 21.9% of deaths.[31] The American Cancer Society (ACS) estimates that approximately one in three women and one in two men will develop some form of cancer in their lifetimes. According to ACS about one-fourth of these cancers are preventable because they are related to poor nutrition, physical inactivity, obesity, and other lifestyle factors.[16]

Excess body weight is known to increase the risk of certain cancers such as breast, cervical, ovarian, endometrial, colon, kidney, gallbladder, prostate, and esophageal.[32,33] The relationship between breast cancer and obesity in postmenopausal women is particularly alarming. Postmenopausal obese women who do not use hormones have a 1.5 times greater risk of developing breast cancer than women with a normal BMI.[33] Obese women in general are more likely to die from breast cancer[33] and are two to four times more likely to develop uterine cancer.[32,33] Although it is unclear why obesity is a risk factor, it is likely that prolonged high levels of estrogen and insulin contribute.[33] A woman who is not obese but carries a large amount of fat over her abdomen (apple shaped versus pear shaped) is at increased risk for developing colon cancer.[33]

One of the contributing factors to a higher incidence of cancer in overweight individuals is a lower rate of cancer screening in this group. When screening does occur, physical barriers such as excess tissue make correct diagnosis more difficult. This causes cancer to be more advanced when it is detected.[104]

Diabetes

Nearly 21 million Americans are now living with diabetes, a 14% increase since 2003, according to the CDC in October 2005.[34] The 21 million include more than 6 million who do not know they have the disease. Another 41 million have pre-diabetes, a condition that indicates an increased risk for developing both type 2 diabetes and cardiovascular disease.[34] In total – at least one in five Americans has or is at serious risk for developing diabetes, the sixth leading cause of death in the United States. It is also the sixth leading cause of death in Texas.[35] Type 1 diabetes usually presents in children and young adults. It occurs when the body's immune system destroys pancreatic beta cells that produce insulin. Insulin is the hormone that allows blood sugar to enter the cells for energy. Type 2 diabetes accounts for over 90% of all diagnosed cases of diabetes.[36] The condition usually begins

Diabetes is the 6th leading cause of death in Texas.

as insulin resistance, a disorder in which the cells do not use insulin effectively. Certain cells develop resistance to the insulin, and the pancreas responds by releasing more. In time, the pancreas loses its ability to produce insulin. Uncontrolled diabetes of either type may lead to serious complications such as heart disease, kidney failure, lower extremity amputations, and blindness. Known risk factors include obesity, physical inactivity, older age, race/ethnic group heritage and family history. Many cases of type 2 diabetes are considered "preventable" because a major risk factor for type 2 diabetes is overweight or obesity. An alarming trend finds that, with the rising rates of childhood overweight, more youth are diagnosed with type 2 diabetes at younger ages.[6]

Overweight children have an increased risk for type 2 diabetes. In one recent study, 25 percent of obese children (BMI at or above the 95th percentile for age and sex; CDC refers to this as 'overweight') and 21 percent of obese adolescents had evidence of impaired glucose tolerance.[9] If left untreated, impaired glucose tolerance can progress to the development of type 2 diabetes as well as cardiovascular disease. Other studies found an association between overweight and fatty liver development in children and adolescents.[37-39] Diabetes has a detrimental impact on the health of children. In a recent review of mortality and survival from type 2 diabetes, the reduction of life expectancy in a child who develops this disease before the age of 15 was 27 years, and 23 years if the disease developed between 15 and 19 years of age.[40]

Reducing one pound of weight decreases four pounds of pressure on the knee join.

Osteoarthritis

Excess body weight predisposes the joints and connective tissue to be injured more frequently and increases their likelihood of deterioration.[41] If joints are not moved sufficiently, their range of motion can become restricted and there is an increased likelihood that arthritis will develop.[42] When this occurs, the individual is less likely to move the joint, further reducing physical activity and increasing proneness to obesity. This exacerbates the cycle of excessive weight and physical limitations. Additionally, overweight and obese people tend to have poor alignment of the bones at the knee, which increases pressure around the knee and the likelihood of osteoarthritis in that joint.[41] Reducing one pound of weight decreases four pounds of pressure on the knee joint.[43] Overweight and obese people are also more likely to be diagnosed with arthritis than normal weight individuals. This becomes a quality of life issue, in that surgery and chronic pain are often inevitable.

Costs Associated with Overweight and Obesity

Health problems associated with obesity burden the healthcare industry and the workplace. The total cost associated with obesity among Texas adults was estimated to be $10.5 billion in 2001.[44] This figure includes estimates for health care expenditures, loss of productivity, and mortality. If the Texas population continues to grow at its current rate, overweight and obesity in Texas could cost between $26.3 and $40 billion in the year 2040.[44] Beyond being a problem for individuals, obesity has become a problem for society.

America spent over $117 billion in 2000 for both direct and indirect health costs associated with obesity.[7] Direct costs are those associated with prevention, diagnosis and treatment of obesity. Indirect costs include lost productivity and lost income in adults and lost productivity at school for children. The treatment of obesity in adults is expensive. In 1999, Americans spent $321 million on prescription medicines to treat obesity and perhaps at least as much on nonprescription herbal and dietary supplements.[45,46]

A recent study from the CDC attempted to evaluate the economic burden of obesity in children between the ages of 6 and 17.[47] Three health problems associated with obesity — diabetes, sleep apnea and gallbladder disease — were studied. Results from the National Hospital Discharge Survey (1979–99) showed (based on discharge rates) a doubling of diabetes, a tripling of gallbladder disease, and a fivefold rise in sleep apnea. Asthma and some mental disorders were the most common principal diagnoses when obesity was listed as a secondary diagnosis. Obesity-associated annual hospital costs among children (based on a 2001 constant U.S. dollar value) for the three diseases studied increased more than threefold, from $35 million during 1979–1981 to $127 million during 1997–99.[48]

There are currently no data on the cost of overweight for children in Texas, but given the fact that the majority of overweight children grow up to be obese adults means the incidence and cost of obesity will continue to rise.

If the Texas population continues to grow at its current rate, overweight and obesity in Texas could cost between $26.3 and $40 billion in the year 2040.[44]

Obesity has become one of the most important health problems facing Texas today.

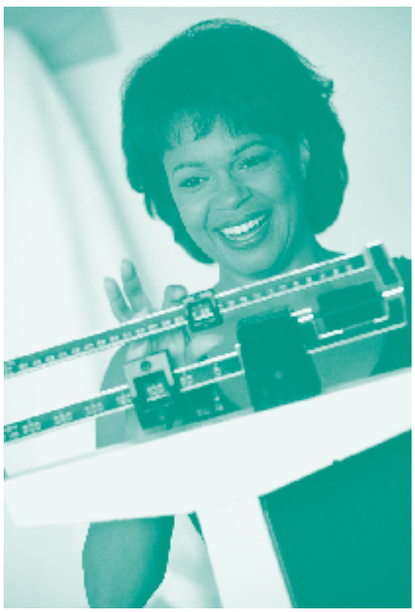
Treatment of Obesity

Treating obesity is part of the solution for halting the obesity epidemic, but obesity treatment is costly, challenging, and often ineffective. Even the best therapeutic programs produce only a modest weight loss of 5 to 10% of pretreatment weight. Long-term success is poor, with most patients drifting back to their pretreatment weight or higher.[49,50] The treatment of obesity in children and adolescents is just as challenging as in adults.[49,51,52] The treatments that are recommended for children are lifestyle modification including diet and exercise, behavior therapy, and when appropriate, pharmacological or surgical interventions. The most comprehensive weight-loss program for children in Texas has had limited success in reducing weight. Only one out of five children referred to this program actually finished it and, of those who lost weight, many quickly gained it back.[53]

Given that a majority of Americas are overweight or obese and those numbers continue to increase, research on weight loss and weight loss maintenance must continue simultaneously with prevention.

Prevention of Obesity

There are multiple strategies that can be targeted to individuals throughout their life span that can prevent them from becoming overweight or obese. In addition to raising awareness about the causes of obesity, its consequences and how to prevent it, it is imperative to provide a supportive environment that reinforces and is conducive to eating healthy and being physically active.



Breastfeeding should be encouraged by health care providers and health educators, from pre-natal visits to the hospital to the home, worksites and community. During early childhood, a child's weight reflects the eating and activity environment provided by the child's parents and childcare providers. Parents and childcare providers are responsible for establishing the initial healthy behaviors. Strategies to empower the parents and childcare providers to model and promote healthy behaviors for these children can set the initial foundation for the prevention of obesity. Breastfeeding is the initial step in establishing healthy behaviors and preventing

obesity in children. Education on food introduction, age-appropriate portion sizes and nutrition requirements should also be provided. Families should be encouraged to take time to plan and create healthy meals for all family members.

While in school, children are influenced by what is taught about food, the food environment (including meals they are served and food they have access to via vending and concessions), It is generally recognized that habits developed early in life have a profound influence on activities later in life. Studies conducted several decades ago showed that a child who was overweight at 6 years of age had a 25% chance of being overweight as an adult. A child who was overweight at 12 years of age had an even greater risk (75%) of being overweight as an adult.[54,55] Parents should be encouraged to model healthy behaviors through eating healthy, exercising and limiting sedentary activities like television viewing. They should be encouraged to spend time being physically active with their kids.

Additionally, strategies targeting young adults and college students should encourage prevention of unhealthy weight gain and help set a healthy foundation for life on their own. Communities and worksites should also support the prevention of obesity among their residents, employees and their families. Prevention strategies should target all individuals at all stages of their life. Policies and environments that support healthy behavior should be established to sustain healthy choices.

The *Strategic Plan of the Prevention of Obesity in Texas: 2005-2010* contains information on key modifiable behaviors that can be targeted with recommended interventions to prevent obesity in Texans. These lifestyle behaviors include healthy eating, consuming adequate amounts of fruits and vegetables, being physically active, breastfeeding, and limiting sedentary activities, all within the context of calorie balance. This document outlines some initial steps toward decreasing the prevalence of obesity in Texas through prevention.

National Recommendations for Obesity Prevention, Healthy Eating, and Physical Activity

The Centers for Disease Control and Prevention (CDC) strongly recommends that obesity prevention strategies focus on five highly preventable risk factors – calorie imbalance, insufficient fruit and vegetable consumption, physical inactivity, lack of adequate breastfeeding and increased screen time and sedentary behaviors. In this section, the current evidence-based recommendations for these risk factors are discussed.

Calorie Balance

Weight management is achieved through calorie balance. Calorie balance occurs when the number of calories taken in through food equals the number of calories burned through daily activity. One must achieve calorie balance in order to maintain body weight. Key behaviors that contribute to calorie balance include monitoring portion sizes, reducing the consumption of sweetened beverages, increasing fruit and vegetable consumption, increasing physical activity, and reducing screen-time and other sedentary activities. Furthermore, according to the 2005 Dietary Guidelines for Americans, poor diet and physical inactivity resulting in energy imbalance (more calories consumed than expended) are the most important factors contributing to the increase in overweight and obesity.[56] Several societal shifts have occurred that create an environment conducive to tipping the calorie-balance scale.[56]

Soft drink and sweetened beverage consumption have been associated with an increase in energy intake and being overweight. Annual soft drink production in the United States has increased from approximately 100 cans (12 oz.) per person in the 1940's and 1950's to nearly 600 cans per person (approximately 56.25 gallons) in the 1990's.[57,58] Sugar-sweetened beverage consumption has particularly increased among children and adolescents.[59]

Maintain body weight through: portion size control, reduced sweetened beverage consumption, increased fruit and vegetable consumption, increased physical activity and reduced screen time.

3500 calories = 1 pound

3500 calorie excess = gain of 1 pound

3500 calorie deficit = loss of 1 pound.

Dramatic increases have also occurred in the consumption of food prepared away from home in the United States. In 1992, 38% of all money spent on food was spent on food eaten away from home; this is an increase from 20% reported in the 1970's.[60] Frequent food consumption away from home is associated with a diet high in fat and calories. Excess calories are more likely to be consumed when eating away from home than when eating at home.[61-63]

Portion sizes have also increased in restaurants and fast food chains and even grocery stores. According to a study comparing current portion size offerings to recommended serving sizes from the United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA), portion sizes were between 28% and 700% larger than the recommendations.[64] Increased portion sizes are positively associated with an increase in calories consumed of each food item and thus can be associated with increased calorie consumption. Unless increased energy expenditures counter this increase in energy consumption, weight gain will likely occur.[65,66]

The key to controlling body weight is eating fewer calories while increasing physical activity. Lifestyle changes that include a healthy diet and physical activity are crucial for both weight loss and maintenance. Since most adults gain weight slowly over time, a small decrease in calorie intake accompanied with regular physical activity can help prevent weight gain. For example, a reduction of 50 to 100 calories per day may prevent gradual weight gain for most adults when compared to the calorie reduction for weight-loss, which generally consists of a minimum decrease of 500 calories per day. There are differences in the calorie reduction needed to prevent weight gain as opposed to achieve weight loss. For example, the 2005 Dietary Guidelines for Americans suggests that the physical activity needed to prevent weight gain is about 60 minutes of moderate to vigorous physical activity per day, but 60 to 90 minutes a day is needed to keep any weight that is lost from being regained. When it comes to controlling body weight, it is total calories consumed that count, not the proportion of fat, carbohydrate, or protein consumed. The USDA provides the Dietary Guidelines for Americans and My Pyramid as excellent guidelines for healthful eating.[56,67] In addition to balanced food choices, it is recommended that individuals always follow a diet that is within the Acceptable Macro Nutrient Range (AMNR) as specified in the 2005 Dietary Guidelines for Americans.[56]

Healthy Eating
Dietary Guidelines for Americans, 2005[56]

The sixth edition of the Dietary Guidelines for Americans was issued January 12, 2005.[56] Based on these revised dietary guidelines, a new food guide pyramid, called "MyPyramid" was released in April 2005.[67] The Dietary Guidelines for Americans are a set of eating and exercising recommendations for good health; the food guide pyramid is a graphic symbol – an icon – that is part of the educational materials explaining how to follow the Dietary Guidelines. The 2005 Dietary Guidelines made several key recommendations, which include:

- Make smart food choices from every food group,
- Find balance between food and physical activity,
- Get the most nutrition out of your calories, and
- Know the facts, use the food label.

Two examples of eating patterns that are consistent with 2005 Dietary Guidelines for Americans are the USDA Food Guide ("MyPyramid") and the DASH (Dietary Approaches to Stop Hypertension) Eating Plan (see Appendix A and Appendix B).

Make Smart Food Choices from Every Food Group

Make smart food choices from every food group each day, and emphasize vegetables, fruits, whole grains, and fat-free/low-fat milk and milk products. Include lean meats, poultry, fish, beans, eggs and nuts as well. Choose foods that are low in saturated fat, trans fats, dietary cholesterol, salt and added sugars. The following are recommended daily amounts:

- Eat a variety of vegetables – 2.5 cups – emphasis on dark green, orange, legumes, starchy, and others throughout the week
- Focus on fruits - 2 cups
- Eat calcium-rich foods - 3 cups
- Make half your grains whole - 3 ounces
- Go lean with protein
- Know the limits on salts, fats and sugars - read labels, choose and prepare foods low in saturated fat, trans fat, salt and sugars

Instead of French Fries, order a side salad, steamed vegetables, fruit cup, or baked potato.

Be physically active for at least 30 minutes most days of the week – more to achieve and maintain weight loss.

Find balance between food and physical activity

To achieve calorie balance, it is vital to find balance between diet and physical activity. Increasing the intensity of physical activity can have health and weight benefits. The Dietary Guidelines also state that children and teenagers should be active 60 minutes a day for most days.[56] More information on physical activity recommendations is included later in this section.

Get the most nutrition out of your calories

To understand what you are eating and know the facts, read the label. When reading labels, focus on keeping the amount of saturated fat, trans fat, sodium, and dietary cholesterol as low as possible. Be sure to include enough fiber, vitamins A and C, calcium, potassium, folic acid, and iron. Pay attention to the percentage of Daily Value (%DV) column. The %DV is based on 2000 calories as A Recommended Daily Intake but can be used as a good frame of reference. (see appendix A)[56]

USDA suggests the following messages be used for consumer education related to the 2005 Dietary Guidelines for Americans:

- Check servings and calories
- Make your calories count
- Don't sugar coat it
- Know your fats

Eat Nutrient Dense Foods - Using the Food Label

Meeting nutrient recommendations must go hand-in-hand with keeping calories under control. Nutrient dense foods are those that provide substantial amounts of vitamins and minerals (micronutrients) and relatively fewer calories. Foods that are low in nutrient density provide calories but have small amounts of micronutrients, such as sweetened beverages and other foods with added sugars, fried foods, foods with saturated and trans fats, and alcohol. The more food with low nutrient density one consumes, the more difficult it becomes to eat enough nutrients to stay healthy without gaining weight, therefore, selecting low-fat foods that are also free of added sugar provides individuals with the means to achieve nutrient needs without over-consumption of calories.[56]

All people should strive to consume primarily nutrient dense foods selected from each food group within an appropriate calorie range, with small amounts of calories from added fats and sugars, and alcohol. Nutrient dense foods include whole grains, fruits, vegetables, legumes, fat-free dairy products, and meats and other protein sources that are low in fat and saturated and trans fats. Individuals can meet recommended intakes within energy needs by adopting a balanced eating plan such as the DASH Eating Plan and the USDA Food Guide (see appendix B).[56]

The Nutrition Facts label or "food label" is an excellent way to determine the nutrient density of foods. The Nutrition Facts label is printed on the outside of all packaged foods and can also be found with many unpackaged or prepared foods. Food manufacturers are required to provide information on the nutrients in each food, which allows the consumer to make an educated decision on what and how much of foods he or she chooses to eat. The label includes information on serving size, calories per serving, servings per package, total fat and type of fat, cholesterol, sodium, total carbohydrate (including dietary fiber and sugars), protein, and some of the product's vitamin and mineral content. The Nutrition Facts label also include the %Daily Value of each nutrient based on a 2000 calorie diet.

For more information on the Food Label go to: http://www.cfsan.fda.gov/~dms/foodlab.html

Fruit and Vegetable Consumption

While most Americans know that they should consume at least five servings of fruits and vegetables a day,[68] only one in five achieve that minimum.[69] Current fruit and vegetable consumption rates fall short of federal recommendations in the 2005 Dietary Guidelines for Americans. Most Americans eat only 3.6 servings of fruits and vegetables each day, falling short of the age-appropriate recommendation of 9 to 10 servings per day for most adults. Children do not fare well either, as 45% of kids eat no fruit and 20% eat less then one vegetable per day, falling short of the 4 cups or 8 servings they need each day.[70]

Fruit and vegetable consumption rates for Texans are similar to national rates, with just 22.5% of Texas adults consuming the recommended minimum of five daily servings of fruits and vegetables.[71] All ethnic groups reported similar intakes of fruits and vegetables, with Hispanics reporting the lowest with only 20.4% consuming at least five servings a day. Although a diet rich in fruits and vegetables can help prevent obesity and some chronic diseases, 88% of people who responded to a 1998 survey conducted by the Texas Department of Health (TDH) did not eat five servings of fruits and vegetables a day. Other data indicated that 86% of women participating in the Texas Special Supplemental Nutrition Program for Women Infants and Children (WIC) did not eat five or more fruits and vegetables a day, and only 7%–9% of children had eaten the recommended servings on the previous day.[72]

What are the current vegetable and fruit intake recommendations?

The 2005 Dietary Guidelines recommend that Americans consume a sufficient amount of fruits and vegetables while staying within energy needs. Two cups of fruit and two and one-half cups of vegetables per day are recommended for a reference-2000 calorie intake, with higher or lower amounts needed depending on an individual's calorie level (see appendix A). Men and women of all ages should choose a variety of fruits and vegetables, eating dark green, orange/yellow, red, blue/purple, and white selections each day.

- For a 2000-calorie diet (the reference calorie plan used throughout the 2005 Dietary Guidelines) 4½ cups (nine servings) of fruits and vegetables are recommended daily, with higher or lower amounts depending on the calories needed.
  - This results in a range of 2½ to 6½ cups (5 to 13 servings) of fruits and vegetables each day for the 1200 to 3200 calorie level range.
- Fruits and vegetables provide a variety of vitamins, minerals, phytochemicals, and fiber.
- Fruits and vegetables combined should equal more servings than any other food group. This means about half of what is eaten at every meal or snack should be fruits and vegetables.
  - A good rule of thumb is to fill half the plate with colorful fruits and vegetables at every meal and snack.
  - Aim for about 5 cups of fruits and vegetables a day.
    - The recommended amount varies with age, gender and activity, but 5 cups a day is a good target for most moderately active adults and teens.
    - Young children (2-3 years) should aim for 2 to 3 cups a day and older children (4-13 years) should aim for 3 to 5 cups a day.
  - **Variety** - Choose a variety of fruits and vegetables from each of the 5 color groups (blue/purple, green, white, yellow/orange, red).
  - **Serving Sizes** - Half a cup is the general guideline for a serving. The exceptions are leafy salad greens where one cup is a serving and dried fruit where a quarter of a cup is a serving.

"Focusing on a positive message like 'eat more fruits and vegetables' without emphasizing what you can't eat, allows people to lower their calorie intake naturally." (2005 Dietary Guidelines)

"While fruit and vegetable intake has increased over the years, the rate of intake is still very low. In fact, at the current rate, it would take over a century to close the consumption gap."[69]

Weight Management and Fruit and Vegetable Consumption

Fruits and vegetables play a key role in weight management because they are naturally low in calories and high in fiber and water. Fruits and vegetables provide a fuller feeling on fewer calories than eating the same amount of many other foods. The fiber and water in fruits and vegetables produce a high level of satiety and a feeling of fullness. Studies show that a calorie-controlled low-fat diet that allows unlimited consumption of fruits and vegetables can lead to sustained weight loss.[56] This is possible because controlling hunger is critical to weight loss. When people eat more low-calorie foods, such as fruits and vegetables, they naturally eat fewer high-calorie foods.[56]

To increase the consumption of fruits and vegetables, people need motivation, opportunity, and ability. Environmental and policy approaches are integral to enable people to make healthy food choices. Key strategies and actions to incorporate these changes are listed in this plan (starting on page 43). It is critical that all sectors of the state's population take action to promote the consumption of a variety of fruits and vegetables by all Texans, every day.

Breastfeeding

Breast milk is the most complete form of nutrition needed for a baby's growth and development. Breastfeeding is a very important factor in reducing the likelihood of obesity in children and on to adulthood. Many national and international health authorities firmly adhere to the position that breastfeeding ensures the best possible health, as well as the best developmental and psychosocial outcomes for the infant.[73-76]

Breast milk alone is sufficient to support optimal growth and development for approximately the first 6 months after birth. For infants younger than 6 months, the American Academy of Pediatrics (AAP) states that water, juice, and other foods are generally unnecessary. Exclusive breastfeeding is defined as an infant's consumption of human milk with no supplementation of any type (no water, no juice, no non-human milk, and no foods) except for vitamins, minerals and medications.[74]

Even when babies enjoy discovering new tastes and textures, solid foods should not replace breastfeeding, but merely complement breast milk as the infant's main source of nutrients throughout the first year. Beyond one year, as the variety and volume of solid foods gradually increase, breast milk remains an ideal addition to the child's diet. The AAP recommends that breastfeeding continue for at least 12 months, and thereafter for as long as the mother and baby desire.[74] The World Health Organization recommends continued breastfeeding up to two years of age or beyond.[77]

Several studies have shown that children who were breastfed were less likely to become obese. Children who were breastfed for at least 7 months were 20% less likely to become obese than children who were breastfed for only 3 months. These studies have concluded that the longer a child is breastfed the lower the probability that the child will become overweight; specifically, breastfeeding for six months provides children with long-term health benefits.[78] These researchers have also concluded that promoting breastfeeding is a reasonable prevention strategy. Possible mechanisms by which breastfeeding reduces overweight in children include learned self-regulation of energy intake and metabolic programming involving insulin, leptin, or protein.

"Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond. Exclusive breastfeeding from birth is possible except for a few medical conditions, and unrestricted exclusive breastfeeding results in ample milk production."
~ Global Strategy on Infant and Young Child Feeding[73]

Breastfeeding provides benefits for the child, mother, environment and society. Children who are breastfed as compared to formula fed children typically: score higher on cognitive and IQ tests, are less likely to suffer from infectious illnesses and their symptoms, suffer less often from some forms of cancer, have a lower risk of type 1 diabetes, are significantly protected against asthma and eczema, have fewer cavities and are less likely to require braces; and have a lower risk of obesity in childhood and adolescence.[79] Mothers who breastfeed as compared to those who do not are more likely to return to pre-pregnancy weight, to have a reduced risk for long-term obesity, are reported to be more confident and less anxious, and are more likely have a reduced risk for many chronic diseases.[79]

In addition to specific health advantages for infants and mothers, there are many economic, societal, and environmental benefits that result from breastfeeding, including the potential for: decreased annual health care costs of 3.6 billion dollars in the United States, decreased costs for public health programs such as the WIC program, decreased parental and employee absenteeism and associated loss of family income, increased family harmony due to decreased infant illness, decreased disposal of formula cans and bottles, and decreased energy demands for production and transportation needs for artificial feeding products.[74,80] The potential impact of these savings is significant for the country and state and could in turn provide funds for lactation consultants, environmental changes, and breast pumps and other equipment, thereby providing more opportunities for mothers to breastfeed and pump in public and at worksites.[74]

Despite the benefits, the rates of breastfeeding are low. This could be explained by the lack of support, lack of basic knowledge about breastfeeding, lack of knowledge of the benefits of breastfeeding, and lack of public acceptance. Breastfeeding is discontinued for two main reasons - breastfeeding difficulties such as perceived low milk and/or the need to return to work. Commonly cited obstacles to initiation and continuation of breastfeeding include: misinformation and insufficient pre-natal education, early hospital discharge; lack of follow-up care, maternal employment, lack of family and societal support, media portrayal of bottle-feeding as normative, commercial promotion and hospital distribution of free formula, and lack of guidance and encouragement from healthcare professionals. This plan contains strategies to help remove these barriers and increase the incidence of breastfeeding in Texas.

According to findings from the 2003 CDC National Immunization Survey, a nationally representative sample of the U.S. population, 70.9% of all infants were breastfed at some point in time, 36.2% of infants were breastfeeding at 6 months, and 17.2% of infants were still breastfeeding at 1 year.[81] Almost one in three infants are exclusively breastfed during the first four months of life.[77] Data indicate that the rate of initiation and duration of breastfeeding in the United States are well below the Healthy People 2010 goals. Exclusive breastfeeding rates have shown little or no increase since 1990. Similarly six months after birth the proportion of infants who are exclusively breastfed has increased at a much slower rate than that of infants who received mixed feedings.[82]

In order to encourage more women to breastfeed, healthcare professionals, social, and political leaders need to work together to make breastfeeding easier and more accepted. Greater numbers of women are choosing to breastfeed, but those numbers vary greatly among racial/ethnic groups and when considering economic and educational differences. Breastfeeding rates can be increased through culturally appropriate and skilled lactation support, worksite support, accommodations in childcare and work settings, and appropriate legislation.[79] Enthusiastic support, involvement from a broad spectrum of groups, and the promotion and practice of breastfeeding are essential to the achievement of optimal infant and child health, growth and development.

Many terms related to physical activity are used interchangeably. The definitions below are provided to differentiate between physical activity, exercise, physical fitness, and physical education.

Physical Activity - any bodily movement produced by skeletal muscles that results in an expenditure of energy.

Exercise - physical activity that is planned or structured. It involves repetitive bodily movement done to improve or maintain one or more of the components of physical fitness—cardiorespiratory endurance (aerobic fitness), muscular strength, muscular endurance, flexibility, and body composition.

Physical Fitness - a set of attributes a person has in regards to a person's ability to perform physical activities that require aerobic fitness, endurance, strength, or flexibility and is determined by a combination of regular activity and genetically inherited ability.

Physical Education – taught through a well-defined curriculum by highly qualified physical education teachers and provides physical activity to all children and teaches them the skills and knowledge needed to establish and sustain an active lifestyle.

Promotion of physical activity

Since the onset of the Industrial Age in America, physical activity has been slowly engineered out of every day life. Machines now perform the majority of physical labor previously required of workers in industry and farming. As urban sprawl has pushed residents further away from their workplaces, schools, shopping, and entertainment areas, commuting by walking or bicycling in large cities is nearly impossible or nonexistent. Additionally, physical education in school is no longer required in most grade levels. These changes have reduced the amount of physical activity individuals get during their work or school day. For many, it is difficult to get enough physical activity to maintain health.

Regular physical activity improves the quality of life of all people young and old. It increases energy for daily activities, boosts sense of wellbeing, and preserves body function, strength and ability during the aging process. Adequate physical activity reduces the risk of cardiovascular disease, diabetes, obesity and high blood pressure. People who participate in some form of physical activity on a regular basis experience additional benefits such as a reduction in the frequency of common colds, decreased pain from arthritis, decreased blood lipids and a decrease in obesity.[83] Furthermore, physical activity also has a positive effect on mental health by decreasing feelings of anxiety and depression.[83]

Despite all of the known benefits, the majority of Texans do not get enough physical activity on a daily basis. It is estimated that more than 55% of adult Texans do not meet recommended levels for physical activity and more than 27% are completely inactive. The highest levels of inactivity were in women (30.7%), older adults (34.7%), and Hispanics (37.3%).[84] About a third (32.1%) of Texas high school students report insufficient levels of physical activity, with high school girls (39%) reporting the highest levels of insufficient physical activity. Additionally, only half (50.9%) of Texas high school students are enrolled in a physical education (PE) class for one or more days a week, and of those who are enrolled, only a modest 84.6% actually exercise more than 20 minutes while in PE class.[84]

How much physical activity is needed?

There are different recommendations for physical activity based on age, and all of them assume that a person is healthy, with no musculoskeletal injuries, chronic diseases, conditions

or disabilities. Persons with special conditions should consult with their physician, a certified personal trainer, and/or an exercise physiologist before beginning any new physical activity program.

Physical Activity Recommendations for Infants and Young Children (birth – age 5)

In 2002, the National Association for Sport and Physical Education published Active Start: A Statement of Physical Activity Guidelines for Children Birth to Five Years.[85] These guidelines were developed by specialists in motor development, movement, and exercise physiology, and cover the physical activity needs of young children during the first years of life. Since children's development needs change as they grow, the guidelines are divided into three categories: infants, toddlers, and preschoolers.

Infants

- Infants should interact with parents and/or caregivers in daily physical activities that are dedicated to promoting the exploration of their environment.
- Infants should be placed in safe settings that facilitate physical activity and do not restrict movement for prolonged periods of time.
- Infants' physical activity should promote the development of movement skills.
- Infants should have an environment that meets or exceeds recommended safety standards for performing large muscle activities.
- Individuals responsible for the well being of infants should be aware of the importance of physical activity and facilitate the child's movement skills.

Toddlers

- Toddlers should accumulate at least 30 minutes daily of structured physical activity.
- Toddlers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping.
- Toddlers should develop movement skills that are building blocks for more complex movement tasks.
- Toddlers should have indoor and outdoor areas that meet or exceed recommended safety standards for performing large muscle activities.

- Individuals responsible for the well being of toddlers should be aware of the importance of physical activity and facilitate the child's movement skills.

Preschoolers

- Preschoolers should accumulate at least 60 minutes daily of structured physical activity.
- Preschoolers should engage in at least 60 minutes and up to several hours of daily of unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping.
- Preschoolers should develop competence in movement skills that are building blocks for more complex movement tasks.
- Preschoolers should have indoor and outdoor areas that meet or exceed recommended safety standards for performing large muscle activities.
- Individuals responsible for the well being of preschoolers should be aware of the importance of physical activity and facilitate the child's movement skills.

Physical Activity Recommendations for Children and Adolescents (age 6 – 18)

Physical activity helps children and adolescents grow into a healthy weight, improve fitness, build a bone mass needed in adulthood, boost self-esteem, and reduce anxiety and stress. It is recommended that children and adolescents participate in at least 60 minutes of moderate-intensity physical activity on most, if not all, days of the week. Additionally, all children and adolescents should be encouraged to be active through play or other activities throughout the day.

Physical Activity Recommendations for Adults (age 19 – 64)

To help reduce the risk of chronic disease, adults should engage in a minimum of 30 minutes of moderate-intensity activity on most, if not all, days of the week.[56,83,86] Many people may need to engage in up to 60 minutes of daily moderate to vigorous physical activity, while not exceeding daily caloric intake requirements, to prevent unhealthy weight gain. Furthermore, those who have lost a large amount of weight as an adult may need to do at least 60-90 minutes of moderate-intensity physical activity on a daily basis, while not exceeding caloric requirements, to sustain their weight loss.[56]

Adults should supplement their physical activity program with strength training at least two days out of the week.[83] This type of physical activity has many benefits including enhanced athletic performance, prevention and/or rehabilitation of injury, weight management, prevention or treatment of osteoporosis, stress management, and reduction of the risk of falling as people age.[86]

Physical Activity Recommendations for Older Adults (age 65+)

Regular physical activity helps older adults age successfully. It can prevent and help treat many of the disease and chronic medical conditions associated with aging, like diabetes, arthritis, osteoporosis, high blood pressure, and depression. Motivating older adults to be active is a challenge, not only because they face the same obstacles to activity that all adults face, but they usually have additional special concerns. Aerobic exercise, strength, balance, and flexibility training are all critical elements to an older adult's physical activity program.

The Centers for Disease Control and Prevention and the American College of Sports Medicine[87] recommend at least 30 minutes of moderate-intensity physical activity on most days of the week for all adults. Older adults can meet this recommendation using a variety of activities that include:

- **Aerobic exercise:** moderate-intensity at least 3-5 days a week
- **Strength:** do strength training activities 2-3 days a week
- **Flexibility:** stretch every day

Encouraging Texans to be more physically active is more than knowing and understanding the recommendations for different ages. Motivating people to be physically active, and supporting this behavior, is imperative to sustainable behavior change. Fortunately, there are proven strategies that communities can use to encourage and support physical activity, making it the easier, more fun choice than being sedentary.

Measure physical activity intensity with the "Talk Test": The Talk Test makes it easy to find your physical activity intensity. A person who is active at a light intensity level should be able to sing while doing the activity. One who is active at a moderate intensity level should be able to carry on a conversation comfortably while engaging in the activity. If a person becomes winded or too out of breath to carry on a conversation, the activity can be considered vigorous.

Evidence-Based Physical Activity Interventions

The Guide to Community Preventive Services (often referred to as "The Community Guide") is a key resource for evidence-based recommendations for population-level promotion of physical activity. The Task Force on Community Preventive Services is an independent, non-Federal task force consisting of 15 multidisciplinary members representing local and state entities. The Task Force reviews the available evidence on the effectiveness and cost-effectiveness of physical activity practices and develops recommendations for state and local programs.[88]

The Task Force has given the following physical activity interventions a strong recommendation, meaning there is solid evidence demonstrating effectiveness of the intervention:

- **Community-wide campaigns:** These large-scale, highly visible, multi-component campaigns direct their messages to large audiences using a variety of approaches, including television, radio, newspapers, movie theaters, billboards, and mailings.
- **Individually adapted health behavior change programs:** These programs are tailored to a person's specific interests or readiness to make a change in physical activity habits. Teaching behavioral skills such as goal setting, building social support, self-rewards, problem solving, and relapse prevention all assist individuals in learning to incorporate physical activity into their daily routines.
- **School-based physical education:** This approach seeks to modify school curricula and policies, and to increase the amount of time students spend in moderate to vigorous activity while in physical education (PE) class. Schools can accomplish this either by increasing the amount of time spent in PE class, or by increasing students' activity levels during PE classes.
- **Social support interventions in community contexts:** The goal of this approach is to increase physical activity by creating or strengthening social networks. Examples include exercise buddies, exercise contracts, and walking groups.
- **Creating or improving access for physical activity combined with informational outreach:** This approach ensures that the physical environment is conducive to physical activity, such that places where

people can be physically active are readily available, accessible, and acceptable. Examples would include attractive sidewalks, stairwells, walking or biking trails, and exercise facilities in communities or in the workplace. Informational outreach strives to make people aware of available resources, encourages them to take local action, or provides training, seminars, counseling, or risk screening so that resources are well used. The goal is to improve quality of life and achieve livable communities.

The Task Force has also recommended the use of point-of-decision prompts showing sufficient evidence that it is effective in increasing physical activity levels. Motivational information is provided at the place where an individual is likely to be making a choice or action. For example, by locating signs close to elevators and escalators, people are encouraged to use safe and accessible stairs as a physically active alternative to the elevator. Worksite programs have been evaluated as well, and the Task Force has determined there is sufficient evidence that when nutrition and physical activity interventions are combined, they are effective in helping employees lose weight and keep it off in the short term.

Point of decision prompts should be used to encourage increased physical activity such as taking the stairs or walking during a break.

More work on the development of these recommendations is underway. The Task Force is currently reviewing the effectiveness of the following strategies, which to date are showing clear promise for effectiveness.

- Transportation policy and infrastructure changes to promote non-motorized transit
- Urban planning approaches, such as zoning and land use

Additional research is needed on several strategies the Task Force reviewed but concluded that there is insufficient evidence for effectiveness. This does not mean that these strategies are ineffective, only that more research is needed to determine if these strategies are not only effective at changing behavior but are also cost effective.

The Community Guide recommendations offer a firm foundation that key partners and stakeholders in any community can use in a variety of settings to increase physical activity. Additional specific, setting-based recommendations for physical activity promotion are offered in the Strategies and Action Items section of this plan in Chapter 7.

Reduction in Screen Time

A complementary strategy to increasing physical activity and improving calorie balance involves reducing "screen time," or, time spent sitting in front of a computer, video game or TV screen. Although extensive research has only been done on the impacts of television viewing on obesity, other activities such as playing video games or surfing the internet share the characteristic of long hours spent being sedentary. [89] Television viewing is also associated with increased food and calorie intake, though it is not certain whether this is due to food advertising or as a common accompaniment to watching television. [89]

On average children spends 4.5 hours a day in front of a screen, and approximately 2.5 hours of this is spent watching television.[90,91] Children 2 to 7 years old average 2 hours of television viewing time per day. Children aged 8 to 13 average almost 3.5 hours and teens 14 to 18 years of age average approximately 2.75 hours of television per day.[90] In addition to television viewing, children also spend time at computers, on the Internet, and on personal gaming devices. The longer children spend in front of a screen on a daily basis, the more likely they are to be overweight.[92-94] Children with screen times greater than 4 hours had a higher incidence of overweight as compared to those that had only one hour per day.[92] The good news is that children who reduce their screen time also show a reduction in weight.[95,96]

The home environment or typical family behavior may support the displacement of active time with sedentary screen time. If there are televisions or computers in every room, if screen time is not monitored, or if parents themselves spend large amounts of time watching television or being on a computer, children are more likely to have high screen times.[90,91] Additionally, if the neighborhood environment is not conducive to safe outdoor physical activity, children and adults will spend more time indoors in passive entertainment.

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity recommends that children watch no more than two hours of television per day.[7] Reducing the amount of time that both adults and children spend in front of a screen can be facilitated through the creation of awareness of alternatives, creation of environments that are conducive to family physical activity, and through limiting daily screen time.

Texas Goals and Proposed Texas Targets

Four overarching goals were established during the creation of the *2003 Strategic Plan for the Prevention of Obesity in Texas.*

Goal 1: Increase awareness of obesity as a public-health issue that impacts the quality of life of families.

Goal 2: Mobilize families, schools, and communities to create opportunities to choose lifestyles that promote healthy weight.

Goal 3: Promote policies and environmental changes that support healthful eating habits and physical activity.

Goal 4: Monitor obesity rates and related behaviors and health conditions for planning evaluation and dissemination activities.

During the revision of the 2003 *Strategic Plan*, measurable objectives (referred to as Proposed Texas Targets) were created to evaluate the progress made towards accomplishing the Texas goals. The Proposed Texas Targets were based on Healthy People 2010 (HP2010) objectives and Texas baseline data.

The Proposed Texas Targets (PTTs) are listed in Table 1, along with the current baseline data for Texas (if available) and the HP2010 objective upon which the PTT is based. More information on the link between the PTT and the HP2010 objectives can be found in Appendix C. The table also links the PTTs to the areas of the Strategic Plan that contain strategies and action items to accomplish the PTT.

For areas in which data are listed as “currently unavailable,” statewide partners will be brought together to find sources for these data or to develop sources for collecting these data in the future.

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT1: By 2010, 95% of middle, junior high, and senior high schools in Texas will provide education to prevent unhealthy dietary practices and physical inactivity.	Data currently unavailable.	Family School Community State	7-2
PTT2: By 2010, 25% of college and university students in Texas will receive information from their institution about inadequate physical activity and dietary patterns that cause disease.	Data currently unavailable.	School Community State	7-3
PTT3: By 2010, 75% of worksites in Texas in each size category (see Appendix C) will offer a comprehensive employee health promotion program to their employees.	Data currently unavailable.	Community Worksite State Business	7-5
PTT4: By 2010, all Texas employers with employee health promotion programs will have a participation rate of at least 75%.	Data currently unavailable.	Community Worksite State Business	7-6
PTT5: By 2010, 75% of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia includes counseling or education related to diet and nutrition.	Data currently unavailable.	Healthcare State	19-7
PTT6: By 2010, 50% of local health departments in Texas will have established culturally appropriate and linguistically competent programs focused on nutrition and overweight and physical activity and fitness.	Data currently unavailable.	Community State	7-11
PTT7: By 2010, 90% of older adults will have participated in at least one organized health promotion activity in the preceding year.	Data currently unavailable.	Community Worksite State	7-12
PTT8: By 2010, 35% of school-age children and adolescents in Texas will get at least 30 minutes of moderate physical activity 5 or more days per week.	In 2004-2005, 16 % of 4th graders, 30% of 8th graders, and 29% of 11th graders in Texas reported getting at least 30 minutes of moderate physical activity 5 or more days per week (SPAN III).[97] In 2005, 23% of Texas adolescents in grades 9-12 reported participating in moderate physical activity for at least 30 minutes on five or more days per week (2005 YRBS).[84]	Family School Community State	22-6

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT9: By 2010, 85% of school-age children and adolescents in Texas will get at least 20 minutes of vigorous physical activity 3 or more days per week.	In 2004-2005, 68% of 4th graders, 77% of 8th graders, and 64% of 11th graders in Texas reported getting at least 20 minutes of vigorous physical activity 3 or more days per week (SPAN III).[97] In 2005, 64% of Texas adolescents in grades 9-12 reported participating in vigorous physical activity on at least three days per week for 20 minutes (2005 YRBS).[84]	School State	22-7
PTT10: By 2010, 25% of Texas public and private schools will require daily physical education for all students.	Data currently unavailable.	School State	22-8
PTT11: By 2010, 50% of all school-age children and adolescents (K – 12th grade) in Texas schools will be enrolled in and attend a physical education class daily.	In 2004-2005, 22% of 4th graders, 51% of 8th graders, and 33% of 11th graders in Texas reported attending daily PE class 5 days per week (SPAN III).[97] In 2005, 51% of Texas adolescents in grades 9-12 reported being enrolled in physical education class and 36% attending physical education class daily (2005 YRBS).[84]	School State	22-9
PTT12: By 2010, maintain at 85% or higher the proportion of all school-age children and adolescents who spend at least 20 minutes of physical education class time being physically active.	In 2004-2005, 88% of 8th graders and 91% of 11th graders in Texas reported spending at least 20 minutes of physical education class being physically active (SPAN III).[97] In 2005, 85% of Texas adolescents in grades 9-12 reported exercising or playing sports for at least 20 minutes during a physical education class (2005 YRBS).[84]	School State	22-10

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Ccorresponding Strategies and Action Items	HP2010
PTT13: By 2010, 25% of all trips made by adults of one mile or less will be made by walking.	In 2001, 6.7% of trips made by Texas adults of one mile or less were made by walking (National Household Travel Survey, 2001)[98]	Community State	22-14a
PTT14: By 2010, 50% of all trips made by children or adolescents to school of one mile or less will be made by walking.	In 2001, 6.4% of all trips to school by Texas children of one mile or less were made by walking (National Household Travel Survey, 2001)[98]	Family School Community State	22-14b
PTT15: By 2010, 2% of trips of 5 miles or less made by adults will be made by bicycling.	Data currently unavailable.	Community State	22-15a
PTT16: By 2010, 5% of all trips made to school of 2 miles or less will be made by bicycling.	Data currently unavailable.	Family School Community State	22-15b
PTT17: By 2010, 70% of Texas adults will consume at least 3 servings of vegetables daily with at least one-third being dark green or orange vegetables.	In 2004, 44% of Texas adults reported consuming 3 or fewer servings of fruits and vegetables daily (BRFSS 2003).[71]	Family School Community Worksite Business Healthcare State	19-6
PTT18: By 2010, 50% of school-age children in Texas who eat three or more servings of vegetables daily.	In 2004-2005, 13% of 4th graders, 6% of 8th graders, and 5% of 11th graders in Texas reported eating 3 or more servings of vegetables daily (not including chips or fries)(SPAN III).[97] In 2005, 81% of Texas adolescents in grades 9-12 reported consuming less than 5 vegetables and/or fruits per day (YRBS 2005).[84]	Family School Community State	19-6
PTT19: By 2010, the percentage of adult Texans who eat five or more servings of fruits and vegetables daily will increase by 5%	In 2003, 44% of Texas adults reported consuming 3 or less daily servings of fruits and vegetables daily and 22.5% reported eating five or more servings of fruits and vegetables daily (BRFSS 2003).[71]	Family Community Worksite Business Healthcare State	19-6

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT20: By 2010, 75% school-age children in Texas eat two or more servings of fruit daily.	In 2004-2005, 60% of 4th graders, 47% of 8th graders and 39% of 11th graders in Texas reported consuming at least 2 daily servings of fruits (including 100% fruit juice) (SPAN III).[97] In 2005, 85% of Texas adolescents in grades 9-12 reported consuming one or more servings of fruit per day (YRBS 2005).[84]	Family School Community Healthcare State	19-5
PTT21: By 2010, 90% of all school children will have access to school meals and snacks that contribute to good overall dietary quality.	In 2004-2005, 90% of 4th graders, 83% of 8th graders, and 57% of 11th graders in Texas reported eating school lunch either sometimes or always (SPAN III).[97] In 2004-2005, 86% of 4th graders, 67% of 8th graders, and 62% of 11th graders in Texas reported that they thought that the school lunch served in the cafeteria was sometimes or always nutritious (SPAN III).[97]	School Community Business State	19-15
PTT22: By 2010, the percentage of school-age children in Texas who watch 3 or more hours of television each day will decrease by 5% of baseline (see Current Status in Texas).	In 2004-2005, 32% of 4th graders, 52% of 8th graders and 44% of 11th graders in Texas reported viewing 3 or more hours of television each day (SPAN III).[97] In 2004-2005, 63% of 4th graders, 82% of 8th graders, and 72% of 11th graders in Texas reported participating in 3 or more hours of sedentary activities per day (including TV viewing, computer use, and video games)(SPAN III).[97] In 2005, 41% of Texas adolescents in grades 9-12 reported watching television three or more hours per day during an average school day (YRBS 2005).[84]	Family School Community State	22-11

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT23: By 2010, 85% of worksites will offer nutrition or weight management classes or counseling to their employees.	Data currently unavailable.	Worksite Healthcare State	19-16
PTT24: By 2010, reduce to 20% the proportion of adults age 18 and older who engage in no leisure-time physical activity.	In 2004, 26.1% of Texas adults age 18 years and older reported engaging in no leisure-time physical activity (BRFSS 2004).[99]	Family Community Worksite Business Healthcare State	22-1
PTT25: By 2010, 50% of adults age 18 or older will meet the recommended levels of moderate-vigorous physical activity.	In 2004, 44.1% of Texas adults aged 18 years or older met the recommended levels of moderate or vigorous physical activity (BRFSS 2004).[99]	Family Community Worksite Business Healthcare State	22-2
PTT26: By 2010, 30% of adults age 18 or older will engage in vigorous physical activity three or more days per week for at least 20 minutes per occasion.	In 2003, 26% of Texas adults 18 years or older reported engaging in vigorous physical activity 3 or more days per week for at least 20 minutes per occasion (BRFSS 2003).[71]	Family Community Worksite Business Healthcare State	22-3
PTT27: By 2010, 65% of students in grades 9 through 12 and 85% of adults age 18 and older will spend 3 or fewer hours viewing television per day.	In 2005, 41% of Texas adolescents in grades 9-12 reported watching television 3 or more hours per day on an average school day (YRBS 2005).[84] The SPAN III survey reported similar findings, with 44% of 11th graders in Texas reporting watching TV three or more hours per day.[97] In 2004, 27.7% of adult Texans reported spending 4 or more hours per day viewing television (BRFSS 2004).[99]	Family School Community State	22-11
PTT28: By 2010, no more than 25% of adults age 18 or older will, on a typical day, spend 4 or more hours sitting and watching television, videos, or using a computer outside of work.	In 2004, 28% of Texas adults reported spending 4 or more hours on a typical day sitting and watching television, videos, or using a computer outside of work.[100]	Family School Community State	N/A

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT29: By 2010, 50% of school facilities in Texas will be made available for community recreational activities after school and on weekends.	Although there is no data on the access of schools for community use after school hours, 21% of adult Texans surveyed in 2004 indicated that they use school facilities that are open for public recreation activities (BRFSS 2004).[99]	School Community State	22-12
PTT30: By 2010, 75% of worksites in Texas will offer employer-sponsored physical activity and/or fitness programs at the worksite or through their health plans.	Data currently unavailable.	Community Worksite State	22-13
PTT31: By 2010, 75% of mothers in Texas will be breastfeeding their babies at hospital discharge, 50% of mothers will be breastfeeding their babies at 6 months postpartum, and 25% of mothers will be breastfeeding their babies at one year.	In 2002, 67.3% of Texas mothers breastfed their infants at discharge and 30% were breastfeeding their infants at 6 months. (Ross Products Division – Mothers Survey)[101]	Family School Community Worksite Business Healthcare State	16-19
PTT32: By 2010, 25% of Texas communities will make at least one environmental change to support access to healthy foods or increase access to safe physical activity.	Data currently unavailable.	Community Business State	N/A
PTT33: By 2010, 25% of Texas communities will institute at least one public policy that improves access to healthy foods or increases access to opportunities for safe physical activity.	Data currently unavailable.	Community Business State	N/A
PTT34: By 2010, the Texas Department of State Health Services along with key partners will develop a policy resource guide identifying possible policy solutions and options for Texas related to improving access to healthy foods and opportunities for safe physical activity.	Data currently unavailable.	State	N/A
PTT35: By 2010, 50% of all school districts in Texas will implement stronger school physical education standards consistent with the national standards for K-12, including education and certification standards for physical education instructors.	Data currently unavailable.	Schools Community State	N/A

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT36: By 2010, 25% of Texas communities will develop local bicycle and pedestrian plans to facilitate improvements to zoning ordinances, street and community design, traffic laws, and public transportation infrastructure to make it safer and more convenient for pedestrians and bicyclists	Data currently unavailable.	Community State	N/A
PTT37: By 2010, 50% of all school districts in Texas will develop and implement a "Safe Routes to School" plan.	Data currently unavailable.	School Community State	N/A
PTT38: By 2010, Texas will provide an equal level of transportation funding to projects that improve or develop alternate modes of transportation (walking or bicycling) as that given to new road and highway development. Examples of initiatives include Safe Routes to School construction projects.	Data currently unavailable.	State	N/A
PTT39: By 2010, DSHS will develop systems for data collection, monitoring, and reporting of obesity prevention activities will be created and implemented. The information collected will be used for evaluation and dissemination of future obesity prevention activities.	Data currently unavailable.	State	N/A
PTT40: By 2010, DSHS will secure consistent funding for the continuation of surveillance of obesity and overweight and related risk factors in adults and children in Texas.	Data currently unavailable.	State	N/A
PTT41: Between 2005 and 2010, the prevalence of at-risk-for overweight and overweight among school age children in Texas schools will not increase.	In 2004-2005, 19% of 4th graders, 19% of 8th graders, and 17% of 11th graders in Texas were considered at-risk-for overweight and 23% of 4th graders, 20% of 8th graders, and 19% of 11th graders were overweight (SPAN III).[97] In 2005, 15% of Texas adolescents in grades 9-12 were at risk of being overweight and 13.9% were overweight (YRBS 2005).[84]	Family School Community Healthcare State	19-3

Table 1: Proposed Texas Targets (PTTs)

Proposed Texas Target	Current Status in Texas	Corresponding Strategies and Action Items	HP2010
PTT42: By 2010, 42% of Texas adults will be at a healthy weight.	In 2004, 37.1% of Texas adults aged 18 years and older were at a healthy weight (defined as a body mass index [BMI] above 18.5 and less than 25) (BRFSS 2004).[99]	Family Community Worksite Business Healthcare State	19-1
PTT43: Between 2005 and 2010, the prevalence of adults in Texas who are overweight or obese will not increase.	In 2004, 25.8% of Texas adults aged 18 years and older were identified as obese (defined as a BMI of 30 or more) (BRFSS 2004).[99]	Family Community Worksite Business Healthcare State	19-2

Strategies and Action Items to Achieve Texas Goals and Proposed Texas Targets

In order to achieve the goals and objectives set forth in Chapter 6: Texas Goals and Proposed Texas Targets, state agencies, individuals, communities, worksites, the healthcare industry, schools/childcare centers and families must do their part. The Texas Activity and Nutrition (TexAN) Coalition will choose several strategies and action items upon which to focus its efforts. It is anticipated that partners throughout Texas will do likewise by incorporating specific strategies and action items into annual work plans.

These strategies and action items were compiled by DSHS through collecting input from key stakeholders across Texas (described earlier) and referring to national and state consensus documents that define evidence-based strategies for preventing obesity. Stakeholders were asked to rank the strategies and action items on a scale between 1 and 5 (1 being most important to 5 being least important). Action items were also rated by ease of implementation 1 (easy) to 5 (difficult). As indicated by the ratings, some of these strategies could be accomplished in a short period of time with relative ease. Others will require substantial resources, time, and commitment on the part of all involved.

The following national and state documents were used to develop many of the strategies and action items listed below: U.S. Dietary Guidelines for Americans 2005,[56] Produce for Better Health National Action Plan,[102] the Guide to Community Preventive Services,[88] "Health in the Balance: Preventing Childhood Obesity" Institute of Medicine report,[89] The Surgeon General's Call to Action To Prevent and Decrease Overweight and Obesity, 2001,[8] the National Blueprint for Increasing Physical Activity Among Adults Age 50 and Older,[103] *2003 Strategic Plan for the Prevention of Obesity in Texas*,[1] and the American Academy of Pediatrics' Policy Statement, "Breastfeeding and the Use of Human Milk."[74]

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Family (F)

Families provide the foundation upon which children's lifelong behavior develops and provide support for healthy eating and physical activity. Members of families include children, parents, grandparents, extended family members, and other individuals that may be viewed as part of a family. The following section explains how families can help prevent obesity.

Strategy F1: Encourage healthy eating for all family members when eating at home and away from home. (Importance: 1.0)

Action Items:

a. Limit the consumption of sugar-sweetened beverages. (Importance: 1.5, Ease: 3.0)

b. Encourage children to try a variety of different foods. (Importance: 1.6, Ease: 3.1)

c. Teach children how to make good choices for breakfast, lunch, and snacks at school. (Importance: 1.6, Ease: 2.6)

d. Include at least two servings of vegetables and/or fruits at every meal on a daily basis. (Importance: 1.6, Ease: 2.7)

e. Eat meals together as a family. (Importance: 1.7, Ease: 3.0)

f. Stop eating when you are full, and encourage children to do likewise. (Importance: 1.7, Ease: 2.0)

g. Choose whole grain breads, cereals, pastas, and rice on a regular basis. (Importance: 1.7, Ease: 2.4)

h. Make healthy snacks readily available between meals, such as fruits, vegetables, whole grain crackers, and low fat dairy products. (Importance: 1.7, Ease: 2.4)

i. Choose water, low fat or nonfat milk, or juice instead of sweetened beverages like soda or fruit drinks. (Importance: 1.7, Ease: 2.4)

j. Teach and encourage children to eat appropriate portion sizes.
(Importance: 1.7, Ease: 3.0)

k. Breastfeed infants from birth to at least twelve months, introduce other foods at 6 months, and offer support to family members and friends who choose to breastfeed.
(Importance: 1.7, Ease: 3.5)

l. Consume three servings of low-fat or nonfat dairy products daily, including milk, yogurt, and cheese.
(Importance: 1.8, Ease: 2.6)

m. Avoid using food as a reward.
(Importance: 1.8, Ease: 3.0)

n. Parents should be knowledgeable about the types of foods offered at school and encourage improvements to the menu when necessary.
(Importance: 1.8, Ease: 2.8)

o. Parent should pack healthy lunches for their children, including fruits, vegetables, and low-fat dairy products.
(Importance: 1.8, Ease: 3.0)

p. Parents should encourage their children to avoid eating out of vending machines unless they are choosing healthy options.
(Importance: 1.8, Ease: 3.0)

q. Limit the frequency of eating fast food to no more than once per week.
(Importance: 2.0, Ease: 2.9)

r. Offer healthy food options and opportunities for physical activity at family gatherings.
(Importance: 2.0, Ease: 3.0)

s. Encourage healthy menu choices and portion control when dining away from home.
(Importance: 2.1, Ease: 2.9)

Strategy F2: Create a supportive home environment that encourages daily physical activity for all family members. (Importance: 1.3)

Action Items:

a. Give gifts that encourage physical activity such as hula-hoops, balls, bikes or physical activity video and computer games.
(Importance: 1.1, Ease: 1.2)

b. Limit the amount of time spent doing sedentary activities such as computer games, television, and video games.
(Importance: 1.3, Ease: 3.4)

c. Support and encourage children to participate in physical activities that interest them.
(Importance: 1.4, Ease: 2.4)

d. Be physically active with your child. Play games together, ride bikes, or take a walk.
(Importance: 1.4, Ease: 2.7)

e. Create or allow unlimited opportunities for children to play safely outside or inside.
(Importance: 1.6, Ease: 3.2)

f. Assign active chores to each family member, such as vacuuming, raking leaves, doing lawn work.
(Importance: 2.1, Ease: 2.0)

g. If able, always take the stairs rather than an elevator or escalator.
(Importance: 2.1, Ease: 2.4)

h. Plan active family-outings and vacations that incorporate hiking, swimming, skiing, walking, etc.
(Importance: 2.3, Ease: 2.5)

i. For short trips to the mailbox, corner store, or neighborhood parks, walk or bike rather than drive.
(Importance: 2.3, Ease: 2.9)

j. Use your lunch break as an opportunity for a brisk walk to re-energize for the second half of the workday.
(Importance: 2.4, Ease: 2.6)

k. Participate in community events that encourage physical activity as a family such as fun walks/runs.
(Importance: 2.5, Ease: 2.5)

l. Walk between shopping areas that are near one another rather than driving and parking numerous times.
(Importance: 2.6, Ease: 2.9)

m. Enroll your child in a physical activity class or team sport he or she enjoys, or an activity-based after school program.
(Importance: 2.6, Ease: 3.2)

n. Encourage your child to walk or ride their bike to school, and accompany them on their route.
(Importance: 2.6, Ease: 3.8)

Strategy F3: Be knowledgeable about healthy eating and physical activity recommendations for adults and children. (Importance: 1.5)

Action Items:

a. Talk with your family members about the benefits of eating healthfully and being physically active.
(Importance: 1.5, Ease: 1.8)

b. Seek out information about the benefits of obesity prevention, nutrition, and physical activity from a reliable source such as a health care provider, registered dietitian, or local health department.
(Importance: 1.6, Ease: 2.2)

c. Learn about the health benefits of breastfeeding a baby for at least one year and discuss it with pregnant family members and new moms.
(Importance: 1.8, Ease: 1.9)

d. Take advantage of free or low-cost community classes offered through hospitals or clinics, local health agencies, colleges or parks and recreation departments that teach about nutrition, physical activity and breastfeeding.
(Importance: 2.2, Ease: 2.4)

Strategy F4: Advocate for policies/guidelines that promote healthy lifestyle for your family. (Importance: 1.6)

Action Items:

a. Advocate for stricter physical education requirements and nutrition policies at schools and childcare facilities.
(Importance: 1.6, Ease: 3.8)

b. Write or call your state, local, and national elected officials to request policy changes that would encourage healthy eating and physical activity in your community.
(Importance: 1.8, Ease: 3.2)

c. If you are pregnant or intend to become so, seek hospitals that meet the requirements for a Baby Friendly Hospital, or ask your hospital to comply with these requirements.
(Importance: 2.1, Ease: 3.2)

d. Advocate for better parks and recreation facilities in your community.
(Importance: 2.1, Ease: 3.5)

e. Get involved in your child's future by participating in the School Health Advisory Council, Parent Teacher's Association, or Parent Teacher Organizations.
(Importance: 2.2, Ease: 3.4)

f. Advocate for the adoption of mother-friendly policies that support breastfeeding at your worksite.
(Importance: 2.2, Ease: 3.8)

g. Advocate for city and business policies that allow mothers to breastfeed in public places.
(Importance: 2.4, Ease: 3.9)

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Schools and Childcare Centers (SC)

Children spend a significant amount of time in childcare centers and schools. The information children receive in these settings helps shape their health behavior for the present and the future. Schools and childcare centers play a critical role in the development of all children and are an excellent place to influence children's health. Schools and childcare centers should provide environments that are conducive to children eating healthy and being physically active, and should engage parents and families in the process. Schools and childcare centers are worksites as well, and should offer an environment for employees that is conducive to healthy eating and physical activity.

Strategy SC1. All schools should comply with state and federal laws and policies for creating an environment that supports healthy lifestyles of students and their families. (Importance: 1.1)

Action Items:

a. Comply with Texas Department of Agriculture's school nutrition policies and encourage adopting policies that are stricter than the current policies. (Importance: 1.0, Ease: 2.5)

b. Adopt and implement a coordinated school health program that is approved by the Texas Education Agency. (Importance: 1.1, Ease: 3.0)

c. Designate a school health coordinator and maintain an active School Health Advisory Council (SHAC). (Importance: 1.7, Ease: 3.0)

d. Develop a school wellness policy as required by the Child Nutrition and WIC Reauthorization Act of 2005. (Importance: 1.8, Ease: 2.7)

e. Adopt nutrition and physical education/physical activity policies that are stricter than the minimum required by legislation or regulation where appropriate. (Importance: 1.9, Ease: 2.9)

Strategy SC2. Childcare centers should comply with existing state and federal laws and policies and consider adopting stricter policies for creating an environment that supports healthy lifestyles of children and their families. (Importance: 1.1)

Action Items:

a. Integrate age-appropriate nutrition and physical activity into the curriculum, including a component that will involve family members in healthy eating and safe physical activity.
(Importance: 1.6, Ease: 2.9)

b. Comply with licensing requirements related to nutrition and physical activity.
(Importance: 1.7, Ease: 2.6)

c. Adopt policies that are stricter than the minimum standards to create an environment that supports healthy eating and safe physical activity for children in childcare centers.
(Importance: 1.8, Ease: 2.9)

d. Assess the center's policies and environment and identify ways to improve nutrition and increase opportunities for physical activity.
(Importance: 1.8, Ease: 2.9)

Strategy SC3. Increase knowledge of children, parents, teachers, food service staff, coaches, nurses, administrators, and other school and childcare staff about the importance of healthy eating and safe physical activity. (Importance: 1.1)

Action Items:

a. Incorporate nutrition and physical activity topics across the curricula.
(Importance: 1.1, Ease: 2.8)

b. Provide age-appropriate and culturally sensitive instruction in health education that helps students develop the knowledge, attitudes, skills, and behaviors to adopt, maintain, and enjoy healthy eating habits and a physically active life.
(Importance: 1.3, Ease: 2.7)

c. Educate teachers, staff, and parents about the importance of physical activity and nutrition programs and policies in schools and childcare centers.
(Importance: 1.6, Ease: 2.2)

d. Conduct events involving parents and children that promote physical activity and healthy eating.
(Importance: 1.7, Ease: 2.7)

e. Educate parents, teachers, coaches, staff and other adults in the community about the importance they hold as role models for children.
(Importance: 1.8, Ease: 2.3)

f. Develop sensitivity of staff to the problems encountered by the overweight child.
(Importance: 1.8, Ease: 2.6)

g. Educate students, teachers, staff, and parents about the importance of body-size acceptance and the dangers of unhealthy weight control practices.
(Importance: 2.0, Ease: 2.5)

h. Establish peer leaders to model and encourage healthy eating and physical activity.
(Importance: 2.0, Ease: 2.7)

Strategy SC4: Advocate policies/guidelines that promote healthy lifestyle behaviors in school children.
(Importance: 1.2)

Action Items:

a. Advocate for enforcement of physical activity and nutrition policies.
(Importance: 1.0, Ease: 2.6)

b. Advocate for stricter physical education and nutrition policies.
(Importance: 1.1, Ease: 2.9)

c. Advocate for funding to continue the collection of School Physical Activity and Nutrition (SPAN) survey data.
(Importance: 1.6, Ease: 2.8)

d. Advocate for the development and implementation of classes that educate students on chronic disease prevention.
(Importance: 1.6, Ease: 3.1)

e. Advocate for increased funding to implement coordinated school health programs that are required by state law.
(Importance: 1.7, Ease: 3.1)

f. Advocate for policies that allow school facilities to remain open before and after the school day.
(Importance: 1.7, Ease: 3.5)

Strategy SC5: Create environments within and around schools and childcare centers that encourage healthy eating and physical activity.
(Importance: 1.2)

Action Items:

a. Provide more opportunities for students to eat fruits and vegetables at breakfast, lunch and throughout the school day.
(Importance: 1.2, Ease: 2.1)

b. Work with surrounding community to provide Safe Routes to School to promote walking and bicycling to school.
(Importance: 1.2, Ease: 2.7)

c. Develop trails and outdoor classrooms to encourage physical activity during the school day.
(Importance: 1.6, Ease: 3.2)

d. Provide an adequate amount of time for students to eat school meals, and schedule lunch periods at reasonable hours around midday.
(Importance: 1.7, Ease: 2.8)

e. Assess the school's health policies and programs in order to develop a plan for improvement, utilizing the School Health Index for K-12 schools and the Nutrition and Physical Activity Self-Assessment for Childcare Centers (NAPSACC).
(Importance: 1.7, Ease: 3.2)

f. Remodel/design cafeterias to be more inviting to students and reinforce healthy eating messages.
(Importance: 1.7, Ease: 3.6)

g. Create innovative gym/workout rooms/recreational facilities that are available to students during and after school.
(Importance: 2.2, Ease: 3.6)

Strategy SC6: Provide and promote physical activity opportunities that appeal to all students throughout the school day, before school, and after school. (Importance: 1.2)

Action Items:

a. Offer a variety of physical activities in order to attract all students, not just competitive athletes.
(Importance: 1.1, Ease: 2.7)

b. Work with local community and transportation officials to provide Safe Routes to School to allow safer walking and bicycling to and from school.
(Importance: 1.2, Ease: 2.7)

c. Partner with outside organizations, i.e., parks and recreation departments to provide a greater range of in-school and after-school opportunities for physical activity programs.
(Importance: 1.2, Ease: 3.4)

d. Childcare centers should provide a safe environment (indoor and outdoor) for infants, toddlers, and preschoolers that meet or exceeds recommended safety standards for performing large muscle activities.
(Importance: 1.4, Ease: 2.4)

e Childcare centers should be aware of the importance of physical activity and facilitate the development of children's movement skills.
(Importance: 1.4, Ease: 2.5)

f. Provide daily recess periods for elementary school students, featuring time for unstructured but supervised play.
(Importance: 1.5, Ease: 2.6)

g. Encourage the use of school facilities for physical activity offered by the school and/or community-based organizations outside of school hours.
(Importance: 1.8, Ease: 3.4)

h. Provide extracurricular physical activity programs, especially inclusive intramural programs and physical activity clubs.
(Importance: 2.1, Ease: 3)

Strategy SC7: Provide school and childcare center staff with strategies to promote healthy lifestyle behaviors.
(Importance: 1.3)

Action Items:

a. Provide training for staff on how to incorporate physical activity and healthy eating into traditional curriculum.
(Importance: 1.1, Ease: 2.6)

b. Educate school staff about preventing childhood overweight and the importance of promoting healthy eating and physical activity.
(Importance: 1.2, Ease: 2.5)

Strategy SC8: Provide all children, from pre-kindergarten through 12th grade, with quality daily physical education that helps develop the knowledge, attitudes, skills, behaviors, and confidence needed to be physically active for life.
(Importance: 1.3)

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Action Items:

a. Comply with the national standards for physical education developed by the National Association of Sport and Physical Education.
(Importance: 1.6, Ease: 2.7)

Strategy SC9. Encourage all staff to model healthy behaviors.
(Importance: 1.7, Ease: 3.6)

Action Items:

a. Provide a worksite wellness program for employees of schools and childcare centers.
(Importance: 1.4, Ease: 3.2)

b. Adopt mother-friendly worksite policies that support breastfeeding among staff members working in schools and childcare centers.
(Importance: 2.5, Ease: 3.2)

Strategy SC10. Schools and childcare centers should coordinate with outside partners, such as healthcare providers, parks and recreation departments, Texas Cooperative Extension, non-profits, professional associations, and others to provide consistent health messages and to identify additional resources for parents and children to help encourage health eating and safe physical activity. (Importance: 1.8, Ease: 3.3)

Action Items:

a. Collaborate with parks and recreation departments, faith-based organizations, and community-based organizations that provide physical activity programs for children after school and during summer and winter breaks.
(Importance: 1.7, Ease: 2.3)

b. Identify agencies that provide free or low-cost resources that target school-age children, parents, teachers, and other school and childcare staff.
(Importance: 1.8, Ease: 1.7)

c. Schools and childcare centers should work with health professionals on nutrition and physical activity programs to coordinate accurate messages around healthy eating and physical activity.
(Importance: 1.8, Ease: 2.1)

Strategy SC11: Encourage healthy eating at school- and PTA-sponsored events. (Importance: 2)

Action Items:

a. Offer healthy food and beverage choices at concession stands.
(Importance: 1.9, Ease: 3.3)

b. Conduct healthy fund-raisers with healthy food items or non-food items.
(Importance: 2.1, Ease: 2.7)

Strategy SC12: Promote breastfeeding acceptability among "school-age" children. (Importance: 2.9)

Action Items:

a. Educate children about the physiology of breastfeeding.
(Importance: 3.4, Ease: 3.2)

b. Educate children about physiology of breastfeeding from a health standpoint for both baby and mother.
(Importance: 2.6, Ease: 3.5)

c. Educate children about physiology of breastfeeding from a biological standpoint.
(Importance: 2.9, Ease: 3.5)

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Communities and Local Governments (CLG)

The community in which people live influences behaviors such as healthy eating and physical activity. A community includes many stakeholder groups (youth organizations, social and civic organizations, faith-based groups, child care centers, businesses, restaurants, grocery stores, recreation and fitness centers, public health agencies, city planners and private developers, safety organizations, and schools). Stakeholders in the community and the local government can act together to change the community environment and community policies that facilitate physical activity and healthy eating. This section contains recommendations for the prevention of obesity that are targeted at the community level of the Social-Ecological Model.

Strategy CLG1: Improve access to healthy foods and opportunities for physical activity among all community members, especially populations with health disparities. (Importance: 1.3)

Action Items:

a. Work with churches, food banks, community centers, and other organizations to provide nutrient dense foods and physical activity opportunities to home bound older adults and other underserved populations. (Importance: 1.8, Ease: 3.3)

b. Make produce available in convenience stores near worksites, recreational areas and mass transit locations such as airports and bus stations. (Importance: 2.1, Ease: 3.5)

c. Provide bus service to farmers markets and large grocery stores where fresh fruits and vegetables are readily available. (Importance: 2.8, Ease: 3.5)

Strategy CLG2: Establish a community-wide coalition to develop, implement, and evaluate a community action plan to promote healthy eating and safe physical activity for obesity prevention. (Importance: 1.3)

Action Item:

a. Engage stakeholders from all sectors of the community, representing all age and racial/ethnic groups, local organizations and businesses, and local government. (Importance: 1.4, Ease: 2.9)

b. Conduct a community assessment focusing on access to healthy foods, fruit and vegetable consumption, breastfeeding rates and acceptance, attitudes and behaviors toward physical activity, and the community environment and local policies that support healthy eating and safe physical activity. (Importance: 1.5, Ease: 2.9)

c. Assign responsibilities of action plan items to stakeholders involved in the coalition. (Importance: 1.8, Ease: 2.6)

d. Based on the community assessment, develop an action plan for obesity prevention in the community. (Importance: 1.8, Ease: 2.8)

e. Evaluate coalition work in order to demonstrate successes and learn from challenges encountered. (Importance: 1.9, Ease: 2.5)

Strategy CLG3: Educate community members about the importance of healthy eating and safe physical activity for obesity prevention. (Importance: 1.5)

Action Items:

a. Schools, health-care settings, and worksites should incorporate a focus on obesity prevention into their annual objectives, strategic plans, and/or mission statements (see previous sections and strategies for suggestions). (Importance: 1.4, Ease: 2.3)

b. Create community-wide media campaigns focused on healthy eating and safe physical activity that are consistent with other health messages in the community, culturally appropriate, and bilingual if needed using local media resources. (Importance: 1.4, Ease: 2.8)

c. Identify and promote organizations that are promoting healthy behaviors to targeted populations, especially those populations that are underserved. (Importance: 1.6, Ease: 2.9)

d. Partner with local experts to create messages based on the most recent scientific information. (Importance: 1.8, Ease: 2.1)

e. Implement behavior-change programs for healthy eating and physical activity that are adapted to individual needs or readiness to change, and include a mechanism for social support such as a support group or buddy system.
(Importance: 1.9, Ease: 3.5)

f. Engage local celebrities and sports teams in community-wide campaigns to promote accurate and consistent health messages.
(Importance: 2.7, Ease: 2.9)

Strategy CLG4: Community wellness efforts should include environmental and policy changes that make healthy foods and physical activity convenient for community members.
(Importance: 1.5)

Action Items:

a. Local governments and anyone involved in land development should ensure safe walking and biking routes between residential areas, worksites, shopping areas, schools, and entertainment venues.
(Importance: 1.5, Ease: 2.9)

b. Create and maintain parks, trails, sidewalks, and bike lanes within the existing community infrastructure.
(Importance: 1.6, Ease: 3.5)

c. Identify and promote under-utilized community resources that encourage healthy eating and physical activity.
(Importance: 1.6, Ease: 3.0)

d. Recognize and encourage businesses to establish mother-friendly worksite breastfeeding policies.
(Importance: 2.0, Ease: 2.8)

e. Recognize and/or provide incentives for local restaurants that identify healthy items on their menus and report nutrition facts of menu items.
(Importance: 2.0, Ease: 2.8)

f. Support and promote local farmers markets.
(Importance: 2.1, Ease: 2.0)

g. Recognize and/or provide incentives for local businesses to allow and accommodate for breastfeeding mothers.
(Importance: 2.4, Ease: 2.9)

h. Encourage farmers markets to comply with state legislation allowing taste testing and other health promotion activities.
(Importance: 2.6, Ease: 2.5)

i. Modify local land-use policies to provide incentives for the development of community gardens on public and private land.
(Importance: 2.6, Ease: 3.7)

Strategy CLG5: Faith-based organizations should educate members about the importance of healthy eating and safe physical activity and provide a supportive environment for members that desire to make healthy lifestyle choices. (Importance: 2.3)

Action Items:

a. Staff and clergy of faith-based organizations should serve as role models for eating healthy and being physically active.
(Importance: 1.4, Ease: 2.3)

b. Coordinate with non-profit agencies, local health agencies, other disease-specific organizations, and local health professionals within the community to bring consistent and accurate nutrition and physical activity messages to members.
(Importance: 1.6, Ease: 2.8)

c. Faith-based organizations should serve as a vehicle to disseminate information about nutrition, physical activity and breastfeeding to members and the surrounding community.
(Importance: 1.9, Ease: 3.3)

d. Provide fresh fruits and vegetables and healthy meal options to individuals and families that take advantage of charity services.
(Importance: 2.1, Ease: 2.7)

e. Plan fund-raisers and community service projects that encourage physical activity such as “clean-the-streets” programs.
(Importance: 2.2, Ease: 2.7)

f. Plan social events for members that include physical activity such as field games, team sports and group hikes.
(Importance: 2.2, Ease: 2.7)

g. Encourage members to be supportive of breastfeeding mothers, establish a breastfeeding room and provide a dedicated refrigerator to store breast milk.
(Importance: 2.3, Ease: 2.8)

h. Host a local farmers market in order to encourage members to consume more fresh fruits and vegetables.
(Importance: 2.6, Ease: 3)

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Worksites (W)

Working adults spend many hours per week on the job. Worksites are one of the best places to influence adult behaviors such as being physically active and eating healthy. Worksite wellness programs that can result in less absenteeism, lower turnover rates, higher productivity and higher morale, which can ultimately impact a worksite's financial standing. According to The Guide to Community Preventive Services, a review of seven scientific studies shows that worksite wellness programs that combine physical activity, nutrition, and behavioral interventions produced the best obesity prevention and reduction results.[88] This section describes strategies and action items that worksites can implement to help prevent obesity among their workers and their family members.

Strategy W1: Create a work environment that encourages healthy eating and safe physical activity. (Importance: 1.3)

Action Items:

a. Increase the number of fruits, vegetables and nutrient dense food items in cafeterias and vending machines. (Importance: 1.3, Ease: 1.8)

b. Provide clean, attractive, and safe stairwells at all worksites and encourage employees to use them. (Importance: 1.9, Ease: 2.3)

c. Display calorie and key nutrition information at point-of-purchase for foods served in cafeterias. (Importance: 2.0, Ease: 1.9)

d. Create indoor and/or outdoor walking trails/tracks and encourage employees to use them before work, during breaks and after work. (Importance: 2.0, Ease: 3.3)

e. Increase resources and space for innovative break time options that promote physical activity such as video and computer games that require players to be physically active or active games such as ping-pong. (Importance: 2.5, Ease: 3.5)

f. Provide point-of-decision prompts at elevators, stairwells, vending machines, cafeterias and break rooms (i.e. signage, flyers, taste-testing, or events) to encourage healthy eating and/or physical activity. (Importance: 2.2, Ease: 1.5)

g. Adopt mother-friendly worksite policies to encourage breastfeeding or pumping breast milk when at work.
(Importance: 2.3, Ease: 3.5)

h. Implement policies that require the provision of healthy food when food is made available at meetings, parties, and conferences, whether catered or provided by employees. For example, always make fruits and vegetables available, offer low-calorie beverages, monitor portion sizes made available, and offer foods that are prepared without excess fat, salt, and sugar. Meetings and conference should also provide frequent physical activity breaks.
(Importance: 2.4, Ease: 2.3)

i. Provide facilities such as showers, changing rooms, and bike racks that encourage walking and/or bicycling to work.
(Importance: 2.8, Ease: 3.8)

j. Consider hosting an on-site farmers market.
(Importance: 3.1, Ease: 3.5)

Strategy W2: Advocate for worksite policies/guidelines that support adoption and maintenance of healthy eating and physical activity behaviors. (Importance 1.4)

Action Item:

a. Advocate for vending machine and cafeteria policies/guidelines that promote healthy eating.
(Importance: 1.5, Ease: 2.0)

b. Advocate for the adoption of flex-time or other work schedule alternatives that will allow employees to incorporate physical activity breaks into their work day.
(Importance: 1.7, Ease: 3.1)

c. Advocate for incentives for companies that provide on-site wellness programs for employees.
(Importance: 1.9, Ease: 2.7)

d. Advocate for the adoption of mother-friendly breastfeeding policies at all worksites.
(Importance: 2.0, Ease: 2.5)

e. Advocate for the implementation of healthy food and beverage policies at work sponsored meetings, events, etc.
(Importance: 2.0, Ease: 2.5)

f. Advocate for employee benefits to include subsidies or pre-tax flex spending for specific wellness related activities.
(Importance: 2.1, Ease: 2.3)

g. Advocate for policies that ensure clean, attractive, safe stairwells at all worksites.
(Importance: 2.5, Ease: 3.2)

Strategy W3: Use incentives and group challenges to encourage healthy eating and physical activity behaviors among employees. (Importance: 1.6)

Action Items:

a. Provide incentive-based physical activity and nutrition programs for employees. (Importance: 1.6, Ease: 3.2)

b. Include subsidies or pre-tax flex spending for wellness related activities as an employee benefit. (Importance: 1.7, Ease: 2.7)

c. Provide flex-time or other work-schedule options to allow employees to incorporate physical activity breaks into their work day. (Importance: 1.8, Ease: 3.3)

Strategy W4: Educate employees about the importance of incorporating healthy eating and physical activity into everyday life. (Importance: 1.8)

Action Items:

a. Use creative outlets to disseminate information to employees such as an intranet, electronic newsletter, paycheck insert, and point-of-decision prompts. (Importance: 1.7, Ease: 2.3)

b. Provide wellness classes on-site to educate employees about the importance of lifestyle behaviors in the prevention of chronic disease. (Importance: 1.8, Ease: 2.3)

c. Coordinate with outside partners, such as healthcare providers, parks and recreation departments, non-profits, etc., to ensure consistent health messages are used. (Importance: 1.8, Ease: 2.6)

d. Provide physical activity, nutrition, weight management, smoking cessation, and healthy behavior management classes for employees. (Importance: 1.8, Ease: 2.7)

e. Use culturally appropriate materials to educate all employees and their families about incorporating healthy lifestyle behaviors into everyday life. (Importance: 1.8, Ease: 3.0)

f. Develop worksite events for employees and families that promote healthy lifestyle activities. (Importance: 2.1, Ease: 2.5)

g. Educate employees about the importance of breastfeeding to increase peer support for women who return to work and choose to continue breastfeeding. (Importance: 2.3, Ease: 2.4)

Strategy W5: Collaborate with state agencies, non-profits, parks and recreation departments, and health care providers that offer employee wellness related resources and activities.
(Importance: 2.3)

Action Items:

a. Participate in existing statewide initiatives to promote worksite wellness.
(Importance: 2.2, Ease: 2.9)

b. Participate in local and statewide worksite wellness networks to share information with other employers on activities and services that can be implemented at the worksite.
(Importance: 2.3, Ease: 2.9)

c. Develop a network for smaller employers to partner with each other in order to combine their resources to provide employee wellness programs.
(Importance: 2.3, Ease: 3.4)

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Business and Industry (BI)

The food, beverage, restaurant, leisure, entertainment, fitness and recreation industries play a role in the prevention of obesity in Texas. These venues touch millions of people daily through direct services and advertising/marketing. This section contains strategies and action items that detail how business and industry can positively impact the health behaviors of Texans.

Strategy BI1: Make obesity prevention a priority. (Importance: 1.3)

Action Items:

a. Develop and promote products and information that will encourage healthy eating and regular physical activity. (Importance: 1.3, Ease: 2.9)

b. Fund obesity prevention initiatives in communities. (Importance: 1.8, Ease: 3.2)

c. Coordinate healthy eating and physical activity messages with local, state, and national messages. (Importance: 1.8, Ease: 2.6)

d. Incorporate obesity prevention in employee worksite wellness programs and in company health insurance policies. (Importance: 1.9, Ease: 2.8)

e. Professional and collegiate athletic programs and venues should participate in community, state, and national obesity prevention efforts by providing funding or incentive items, acting as role models for healthy behaviors, and ensuring that healthy food options are offered at events. (Importance: 2.5, Ease: 3.4)

Strategy BI2: Increase policies/guidelines and provide a work environment that supports healthy eating and physical activity behaviors in employees and customers. (Importance: 1.6)

Action Items:

a. Ensure clean, attractive, safe stairwells and sidewalks in and around all facilities. (Importance: 1.7, Ease: 1.9)

b. Adopt a healthy meeting policy for business meetings and events. (Importance: 1.8, Ease: 1.9)

c. Adopt a healthy vending machine policy.
(Importance: 1.8, Ease: 2.2)

d. Adopt and enforce mother-friendly worksite policies to accommodate breastfeeding mothers who return to work and wish to continue to breastfeed.
(Importance: 2.0, Ease: 2.5)

e. Offer breastfeeding facilities separate from restrooms for customers and employees wishing to breastfeed.
(Importance: 2.2, Ease: 2.6)

Strategy BI3: Fruit and vegetable growers, processors, and shippers should work to increase demand for fruits and vegetables by focusing on increasing product appeal and packaging products so that consumers can use them easily and cost-efficiently.
(Importance: 1.7)

Action Items:

a. Make fruits and vegetables more convenient and portable, to easily fit into consumers' busy lives (i.e. single- or smaller-portion packaging).
(Importance: 1.8, Ease: 3.2)

b. Innovate in products, packaging and preparation to make fruits and vegetables main dishes rather than side dishes.
(Importance: 2.2, Ease: 3.6)

c. Assure consistently excellent taste profile before selling products to customers.
(Importance: 2.3, Ease: 3.2)

d. Develop and use packaging features to extend shelf life, improve marketability of products, and make it easier for consumers to purchase and use products successfully.
(Importance: 2.3, Ease: 3.3)

e. Develop affordable, effective technologies for selling pre-cut, conveniently packaged fruits and vegetables at venues such as convenience stores, food kiosks in transportation centers and sports venues.
(Importance: 2.3, Ease: 3.7)

f. Use packaging or stickers to provide consumers with simple recipes and serving suggestions, appropriate health messages, or product handling and storage information.
(Importance: 2.9, Ease: 2.5)

Strategy BI4: Cafeterias, restaurants, and other food establishments can help customers eat healthy away from home. (Importance: 1.7)

Action Items:

a. Include more fruits and vegetables (non-fried) and other nutrient-dense foods as part of children's menu/offerings and meals.
(Importance: 1.4, Ease: 2.6)

b. Attractively merchandise and aggressively market fresh fruits and vegetables in season.
(Importance: 1.9, Ease: 2.3)

c. Provide calorie and other key nutrition information for all menu items in a form that is easily available to consumers.
(Importance: 1.9, Ease: 2.3)

d. Increase the number of fruit and vegetable menu items and fruit and vegetable-rich entrees in restaurants and through vending machines.
(Importance: 1.9, Ease: 2.9)

e. Include fruits and vegetables and other nutrient dense foods as part of "value meals" in place of food items that are not nutrient-dense.
(Importance: 2.3, Ease: 2.7)

f. Conduct cafeteria-based fruit and vegetable promotions.
(Importance: 2.4, Ease: 2.3)

g. To ensure customer acceptance, test new fruit and vegetable recipes through taste tests, discount coupons and direct mail for fruit and vegetable-rich and other healthy menu items.
(Importance: 2.6, Ease: 2.7)

h. Work with chefs to identify key culinary techniques, flavor approaches, and menu strategies to put more fruits and vegetables in front of customers and prepare all foods in a healthy manner.
(Importance: 2.8, Ease: 2.8)

i. Train chefs in restaurants, hotels and central kitchens on how to create exciting and tasty fruit and vegetable appetizers, entrees and desserts.
(Importance: 3.0, Ease: 2.7)

Strategy BI5: Supermarkets and retailers (grocery stores, super centers, and convenience stores) should work to increase the public's access to fruits and vegetables (fresh, canned, frozen, dried, and 100% juice) and knowledge of the benefits of consuming healthy foods and being physically active. (Importance: 1.8)

Action Items:

a. Tie physical activity into all health-related messages.
(Importance: 1.6, Ease: 2.3)

b. Assure that fruit and vegetable products offered are high quality.
(Importance: 1.8, Ease: 2.5)

c. Share best practices within the industry on effective fruit and vegetable marketing activities.
(Importance: 2.1, Ease: 2.5)

d. Offer and promote convenient, ready-made meals or meal solutions for shoppers that include an abundance of fruits and vegetables.
(Importance: 2.1, Ease: 2.5)

e. Enhance and expand the use of industry media, marketing, and promotional strategies such as coupons, cross product marketing, loyalty marketing, sales events, billboards and radio to promote increased consumption of fruits and vegetables, other healthy foods, and being physically active.
(Importance: 2.2, Ease: 3.1)

f. Develop training and educational programs for retail associates to deliver fruit and vegetable messages; training components could include retail quality and freshness, handling, storage, health benefits and consumer education.
(Importance: 2.3, Ease: 2.3)

g. Use integrated produce department promotions such as point-of-sale materials, periodic samplings, and recipe demonstrations, give-aways, discounting, supporting collateral signage and recipe cards, implemented over a reasonably long period of time (e.g. three months or more).
(Importance: 2.3, Ease: 2.4)

h. Expand the fruit and vegetable message beyond traditional grocery retail venues—such as into convenience stores and dollar stores; as well as into other retail departments within supermarkets—such as promoting fruits and vegetables in the canned and frozen areas, and 100% juice in the beverage section.
(Importance: 2.4, Ease: 3.1)

i. Make available and market pre-cut fruits and vegetables.
(Importance: 2.6, Ease: 2.6)

Strategy BI6: Fitness and recreation industry should develop products and opportunities that promote regular physical activity, reduced sedentary behaviors, and healthy eating. (Importance: 1.8)

Action items:

a. Offer childcare facilities onsite to patrons.
(Importance: 1.2, Ease: 3.5)

b. Feature people of all sizes, demographics, and fitness levels in media campaigns to encourage body acceptance and increase efficacy to be physically active.
(Importance: 1.5, Ease: 2.3)

c. Offer fitness classes and recreation opportunities that are beginner friendly or accommodating to larger individuals, that are appropriate for a variety of age groups, and that are taught by certified fitness instructors who specialize in beginner or high-risk groups.
(Importance: 1.7, Ease: 1.9)

d. Offer a variety of nutrient-dense foods such as fruits and vegetables, whole grains and healthy beverage options for participants and members.
(Importance: 1.8, Ease: 1.9)

e. Increase resources and space for innovative entertainment options that promote physical activity such as video and computer games or television programming that incorporate physical activity.
(Importance: 1.8, Ease: 1.9)

f. Employ fitness instructors and trainers with appropriate qualifications and credentials such as American College of Sports Medicine (ACSM), American Council on Exercise (ACE), Aerobics and Fitness Association of America (AFAA), and/or 4-year degree in Kinesiology or Exercise Physiology.
(Importance: 2.1, Ease: 2.4)

g. Employ registered dietitians to provide onsite nutrition counseling services and classes.
(Importance: 2.3, Ease: 2.3)

h. Offer waivers on initiation fees and training sessions to people who have a written doctors prescription for an exercise program.
(Importance: 2.6, Ease: 2.7)

Healthcare Industry (HC)

Healthcare providers, healthcare settings, and health insurance companies should be involved in promoting healthy eating and physical activity behaviors that prevent obesity. Patients look to healthcare providers for guidance on all aspects of their health. Healthcare settings employ large numbers of workers that could benefit from worksite wellness programs. Health insurance companies can modify policies and procedures to increase the types of preventive care offered to their customers. This section contains strategies targeted at the healthcare industry.

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

Strategy HC1: Educate healthcare providers (physicians, nurses, family practitioners, and other allied health professionals) about strategies to prevent obesity across the life span.
(Importance: 1.2)

Action Items:

a. Integrate basic nutrition and physical activity counseling for behavior change into the healthcare provider's academic curriculum.
(Importance: 1.2, Ease: 3.4)

b. Provide continuing education classes on nutrition, breastfeeding and physical activity.
(Importance: 1.3, Ease: 2.8)

c. Educate physicians on appropriate referrals for patients who need counseling or services to improve their nutrition and physical activity behaviors.
(Importance: 1.8, Ease: 3.3)

d. Educate physicians and allied health professionals on nutrition and physical activity guidelines (U.S. Dietary Guidelines and CDC/ACSM Guidelines for Physical Activity, see Chapter 7: National Recommendations) and on best practices in sustaining weight loss, promoting nutrition and physical activity, and managing chronic diseases related to excess weight, poor diet, and inadequate physical activity.

(Importance: 1.9, Ease: 3.4)

Strategy HC2: Create or strengthen healthcare policies/guidelines that promote healthy lifestyles and the prevention of chronic diseases. (Importance: 1.3)

Action Items:

a. Advocate for managed-care organizations to reimburse for nutrition and physical activity assessment and counseling.
(Importance: 1.1, Ease: 3.2)

b. Increase advocacy skills of healthcare providers to bring about environmental change and policies that promote greater access to fruits and vegetables, nutrient dense foods, physical activity opportunities, and environments that are accepting and inviting to breastfeeding mothers.
(Importance: 1.2, Ease: 4.1)

c. Advocate for increased funding to implement hospital-sponsored community health programs focused on nutrition, physical activity and prevention of obesity and related chronic diseases.
(Importance: 1.2, Ease: 4.1)

d. Advocate for the adoption of mother-friendly worksite/Baby-Friendly Hospital breastfeeding policies in all healthcare settings.
(Importance: 1.4, Ease: 2.4)

e. Develop and implement a policy requiring a registered dietitian and exercise physiologist or physical therapist as part of the healthcare team when treating patients for chronic disease and weight management when feasible.
(Importance: 1.8, Ease: 3.3)

f. Work with insurance regulators and insurance companies to enhance advocacy for initiatives and policies that support healthy eating habits and physical activity.
(Importance: 1.8, Ease: 3.6)

g. Advocate for policies that allow/mandate the use of some hospital areas/facility space to provide educational seminars to the community.
(Importance: 2.0, Ease: 3.0)

h. Advocate for increased insurance coverage for registered dietitians to provide nutrition counseling and medical nutrition therapy and for certified fitness trainers to provide personal or group fitness training.
(Importance: 2.0, Ease: 3.3)

i. Advocate for increased insurance coverage for trained lactation counselors and breastfeeding support for all postpartum women.
(Importance: 2.3, Ease: 3.4)

Strategy HC3: Health insurance companies should adopt policies that promote wellness among policyholders. (Importance: 1.4)

Action Items:

a. Provide health insurance discounts or other incentives for employers to provide fitness/wellness opportunities for employees.
(Importance: 1.4, Ease: 3.3)

b. Provide reimbursement for individual policyholders that engage in prevention-type activities such as nutrition counseling, fitness classes, and behavior change therapy.
(Importance: 1.8, Ease: 3.4)

Strategy HC4: Create hospital environments that support healthy eating and physical activity behaviors for patients and staff. (Importance: 1.5)

Action items:

a. Increase the number of fruits and vegetables and nutrient-dense foods in hospital cafeterias and vending machines.
(Importance: 1.4, Ease 2.2)

b. Provide a comprehensive worksite wellness program for staff.
(Importance: 1.6, Ease: 2.7)

c. Display calorie and key nutrition information at point of purchase for foods served.
(Importance: 1.8, Ease: 1.9)

d. Provide point-of-decision prompts at elevators, stairwells, vending machines, cafeterias and break rooms (i.e. signage, flyers, taste-testing, or events) to encourage choosing healthy behaviors.
(Importance: 2.2, Ease: 1.5)

e. Enforce the International Code of Marketing for breast milk substitutes.
(Importance: 2.2, Ease: 3.8)

f. Provide physical activity opportunities for patients and visitors such as an outdoor walking path.
(Importance: 2.3, Ease: 2.9)

g. Adopt and enforce mother-friendly worksite policies to promote breastfeeding among employees and achieve the Baby-Friendly Hospital designation.
(Importance: 2.3, Ease: 3.4)

Strategy HC5: Identify overweight, obese, and at-risk patients and provide them with information, guidance and support to adopt healthy behaviors in order to halt weight gain or safely reduce weight.
(Importance: 1.6)

Action items:

a. Counsel patients about weight status and related health risks.
(Importance: 1.2, Ease: 2.3)

b. Counsel parents and other family members on their responsibility to choose healthy foods, eat meals as a family, and to be physically active together.
(Importance: 1.3, Ease: 2.3)

c. Monitor BMI as a vital sign and record in patient's medical record.
(Importance: 1.6, Ease: 1.8)

d. Identify existing tools to assess and treat overweight and obese patients.
(Importance: 1.6, Ease: 2.3)

e. Provide patients with written prescriptions for healthy eating and physical activity behaviors and an age-appropriate schedule for preventive care appointments
(Importance: 1.8, Ease: 2.6)

f. Provide guidance, information, and written referrals to community based health programs and facilities for nutrition and physical activity.
(Importance: 1.9, Ease: 2.0)

g. Create a local referral system to registered dietitians, fitness trainers, parks and recreation facilities, and community activity centers.
(Importance: 2.2, Ease: 2.5)

Strategy HC6: Hospitals, physicians and other healthcare providers should educate all patients about the importance of incorporating healthy eating and physical activity into everyday life.
(Importance: 1.6)

Action Item:

a. Integrate basic nutrition and physical activity messages into appropriate office visits.
(Importance: 1.3, Ease: 2.5)

b. Distribute culturally appropriate materials to educate all patients about incorporating healthy eating and physical activity into everyday life.
(Importance: 1.6, Ease: 2.6)

c. Assess and counsel patients on physical activity, fruit and vegetable consumption, and other aspects of dietary intake (fat, cholesterol, excess calories) when appropriate.
(Importance: 1.7, Ease: 2.8)

d. Coordinate with outside partners, such as parks and recreation departments and non-profits, to provide additional resources and referrals for patients to develop healthy eating and physical activity behaviors.
(Importance: 1.7, Ease: 3.0)

e. Develop and implement classes that educate patients about chronic disease prevention.
(Importance 1.8, Ease 3.8)

f. Identify existing or develop new toolkits and other resources for physicians and other allied health professionals to use when working with adults and children on healthy weight, healthy eating, and physical activity.
(Importance: 2.0, Ease: 1.5)

Strategy HC7: Healthcare providers should promote and provide information about breastfeeding to all pregnant, postpartum and childbearing age women. (Importance: 1.7)

Action items:

a. Distribute breastfeeding information to women of childbearing age and their families.
(Importance: 1.3, Ease: 1.9)

b. Provide breastfeeding mothers with access to lactation management support provided by trained physicians, nurses, lactation specialists, peer counselors, and other trained healthcare providers, especially during the first days and weeks postpartum.
(Importance: 1.4, Ease: 3.3)

c. Encourage women to breastfeed exclusively for six months, introducing other foods after the six-month period while continuing to breastfeed the entire first year of their infant's life or longer.
(Importance: 1.6, Ease: 2.6)

d. Develop hospital policies regarding formula distribution that promote and support breastfeeding mothers and only makes infant formula an option if the mother cannot successfully breastfeed.
(Importance: 2.4, Ease: 3.3)

Ratings:
Level of Importance:
1 = most important
5 = least important
Ease of implementation:
1 = easy
5 = difficult

State Government and Statewide Organizations (S)

State government (including state agencies and legislative bodies) and statewide organizations (associations, Texas chapters of national association, state-level professional organizations, state-level non-profits, etc.) play a lead role in the prevention of obesity in Texas. State government can influence and make policy and environmental changes that impact the entire population and improve healthy eating and physical activity behaviors. Statewide organizations can dedicate expertise, resources, and local networks to accomplish many obesity prevention goals. Both should work with partners in obesity prevention efforts.

Strategy S1: Collaborate with multiple state agencies and other state-level partners to create or support statewide networks to promote chronic disease prevention activities.
(Importance: 1.2)

Action Item:

a. Establish and support a state School Health Advisory Council to support and promote development of local School Health Advisory Councils.
(Importance: 1.2, Ease: 2.7)

b. Establish and support a statewide physical activity network to promote Active Community Environments and best practices in physical activity.
(Importance: 1.5, Ease: 3.2)

c. Establish and support a state-wide fruit and vegetable network to promote increased fruit and vegetable consumption.
(Importance: 1.5, Ease: 3.0)

d. Establish and support a state-wide breastfeeding network to promote breastfeeding.
(Importance: 2.1, Ease: 3.6)

e. Establish and support a statewide network focused on nutrition and physical activity policy change and development.
(Importance: 2.1, Ease: 2.7)

Strategy S2: Create a state-wide media campaign focused on increasing awareness and educating Texans about the importance of adopting healthy lifestyle behaviors, i.e. increased physical activity, eating more fruits and vegetables, and breastfeeding.
(Importance: 1.4)

Action Items:

a. Provide regional trainings to train community organizers on strategies to promote healthy lifestyle behaviors and create healthy community environments.
(Importance: 1.2, Ease: 3.6)

b. Promote consistent messages across the state.
(Importance: 1.4, Ease: 3.2)

Strategy S3. Identify evidence-based and effective programs and interventions that impact obesity prevention for individuals and communities.
(Importance: 1.6)

Action Items:

a. Establish criteria for defining programs and interventions as best practices.
(Importance: 1.7, Ease: 2.5)

b. Communicate best practices to key target audiences (academicians, local public health workers, community coalitions).
(Importance: 1.8, Ease: 2.1)

c. Create and maintain a web site to serve as a clearinghouse for best practices for promoting nutrition and physical activity for obesity prevention.
(Importance: 1.9, Ease: 2.1)

Strategy S4: Establish and maintain a data collection system for tracking fruit and vegetable consumption, breastfeeding rates and attitudes, changes in the built environment, and physical activity attitudes and behaviors.
(Importance: 1.7)

Action Items:

a. Collect data for the evaluation of the *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* and for monitoring the effectiveness of all interventions at a state and community level.
(Importance: 1.8, Ease: 2.4)

b. Provide ongoing funding for current surveillance systems that monitor the prevalence of overweight and at-risk-for overweight in school-age children.
(Importance: 1.9, Ease: 3.1)

c. Develop training sessions for data collection that are adaptable for all public health regions.
(Importance: 2.2, Ease: 2.4)

d. Create models and trainings for reporting aggregate data to target audiences.
(Importance: 2.2, Ease: 2.5)

Strategy S5: Support collaboration between the public health, parks and recreation and city/regional planning professionals to leverage knowledge and resources in assuring that Texas communities develop strong green space preservation policies.
(Importance: 1.7)

Action Items:

a. Educate local government leaders about the importance of green space preservation policies and their impact on public health, public safety, and traffic abatement.
(Importance: 1.2; Ease; 1.8)

b. Provide adequate funding to local parks and recreation and planning departments to assist in green space development and management.
(Importance: 1.2; Ease: 3.4)

c. Offer continuing education opportunities to city/regional planning professionals on the importance of green space preservation to public health, public safety, and traffic abatement.
(Importance: 1.6; Ease: 2.7)

Strategy S6: Strengthen legislation for funding of transportation projects that include infrastructure development to support pedestrian transportation, such as walking and bicycling.
(Importance: 1.8)

Action Items:

a. Feature successful pedestrian infrastructure projects throughout the state in public health, transportation, and urban planning forums such as publications, professional conferences, and Web sites.
(Importance: 1.5; Ease: 2.2)

b. Educate policy makers about the benefits of offering pedestrian transportation options, such as improving the public's health, improving public safety, and easing traffic congestion.
(Importance: 1.9; Ease: 2.5)

c. Evaluate and report on successes associated with Safe Routes to School project funding.
(Importance: 2.0; Ease: 2.9)

Strategy S7: Identify communities that are coordinating efforts for the promotion of nutrition and physical activity for obesity prevention.
(Importance: 1.9)

Action Items:

a. Provide technical assistance and resources to communities that are interested in coordinating efforts to prevent obesity.
(Importance: 1.8, Ease: 1.9)

b. Communicate and share lessons learned and innovative ideas from communities that are focusing on obesity prevention.
(Importance: 2.0, Ease: 2.5)

c. Establish criteria for identifying communities that are focusing on obesity prevention.
(Importance: 2.1, Ease: 2.3)

d. Maintain a list of communities that are focusing on obesity prevention and catalog their activities.
(Importance: 2.1, Ease: 2.4)

Strategy S8: The state legislature and state agencies should increase the number of and enforcement of policies that promote healthy eating and physical activity behaviors. (Importance: 2.1, Ease: 3.6)

Action Item:

a. Assure that all state agencies include nutrition messages and food procurement practices consistent with the 2005 Dietary Guidelines for Americans.
(Importance: 1.6, Ease: 2.2)

b. Require state and local government employers to adopt mother-friendly worksite policies and offer comprehensive worksite wellness programs to all employees.
(Importance: 1.7, Ease: 3.4)

c. Provide incentives for private businesses to offer comprehensive worksite wellness programs to all employees and adopt mother-friendly Worksite policies.
(Importance: 1.7, Ease: 3.4)

d. Policymakers should legislate for adequate funding from state and federal funds for obesity prevention activities.
(Importance: 1.9, Ease: 3.6)

e. Assure the enforcement of current policies and laws related to school health.
(Importance: 2.1, Ease: 3.6)

f. Fund the implementation and evaluation of programs that promote healthy eating and physical activity behaviors.
(Importance: 2.1, Ease: 3.6)

g. Create policies that encourage the use of public facilities, including schools, after hours by members of the community.
(Importance: 2.1, Ease: 3.6)

h. Provide funding to develop, implement and evaluate programs that are culturally sensitive and inclusive which promote healthy eating and physical activity.
(Importance: 2.1, Ease: 3.6)

i. Require state and county hospitals to achieve the Baby-Friendly Hospital designation.
(Importance: 2.3, Ease: 3.3)

Strategy S9: Support worksite wellness initiatives in all Texas businesses. (Importance: 2.3, Ease: 2.8)

Action Items:

a. Provide funding opportunities, best-practice models, technical assistance, and educational materials to encourage implementation of worksite wellness programs. (Importance: 1.7, Ease: 2.4)

b. Develop a statewide campaign that promotes worksite wellness and demonstrates how health promotion activities positively impact the worksite. (Importance: 2.2, Ease: 2.9)

c. Provide incentives to companies and government agencies that offer worksite wellness programs. (Importance: 2.3, Ease: 2.8)

d. Develop a statewide worksite wellness network to provide employers with information on activities and services that can be implemented at worksites. (Importance: 2.3, Ease: 2.9)

Appendices

Appendix A - My Pyramid - Food Guidance System

Appendix B - Dietarty Approaches to Stop Hypertension (DASH) Diet

Appendix C - HP2010 Objectives, U.S. Baselines, and U.S. Targets

Appendix D - Potential Partners

Appendix E - Programs and Resources

Appendix F - Glossary

MyPyramid - Food Guidance System

Food Intake Patterns

The suggested amounts of food to consume from the basic food groups, subgroups, and oils to meet recommended nutrient intakes at 12 different calorie levels. Nutrient and energy contributions from each group are calculated according to the nutrient-dense forms of foods in each group (e.g., lean meats and fat-free milk). The table also shows the discretionary calorie allowance that can be accommodated within each calorie level, in addition to the suggested amounts of nutrient-dense forms of foods in each group.

Daily Amounts of Food From Each Group											
Calorie Level[1]	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
Fruits[2]	1 cup	1 cup	1.5 cups	1.5 cups	1.5 cups	2 cups	2 cups	2 cups	2 cups	2.5 cups	2.5 cups
Vegetables[3]	1 cup	1.5 cups	1.5 cups	2 cups	2.5 cups	2.5 cups	3 cups	3 cups	3.5 cups	3.5 cups	4 cups
Grains[4]	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	6 oz-eq	6 oz-eq	7 oz-eq	8 oz-eq	9 oz-eq	10 oz-eq	10 oz-eq
Meat & Beans[5]	2 oz-eq	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	5.5 oz-eq	6 oz-eq	6.5 oz-eq	7 oz-eq	7 oz-eq	7 oz-eq
Milk[6]	2 cups	2 cups	2 cups	3 cups	3 cups	3 cups	3 cups	3 cups	3 cups	3 cups	3 cups
Oils[7]	3 tsp	4 tsp	4 tsp	5 tsp	5 tsp	6 tsp	6 tsp	7 tsp	8 tsp	8 tsp	10 tsp
Discretionary caloric allowance[8]	165	171	171	132	195	267	290	362	410	428	512

1 Calorie Levels are set across a wide range to accommodate the needs of different individuals. The attached table “Estimated Daily Calorie Needs” can be used to help assign individuals to the food intake pattern at a particular calorie level.

2 Fruit Group includes all fresh, frozen, canned, and dried fruits and fruit juices. In general, 1 cup of fruit or 100% fruit juice, or 1/2 cup of dried fruit can be considered as 1 cup from the fruit group.

3 Vegetable Group includes all fresh, frozen, canned, and dried vegetables and vegetable juices. In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group.

Vegetable Subgroup Amounts are Per Week							
Calorie Level1	1000	1200 or 1400	1600	1800 or 2000	2200 or 2400	2600 or 2800	3000 or 3200
Dark green Veg.	1 c/wk	1.5 c/wk	2 c/wk	2 c/wk	3 c/wk	3 c/wk	3 c/wk
Orange Veg.	.5 c/wk	1 c/wk	1.5 c/wk	2 c/wk	2 c/wk	2.5 c/wk	2.5 c/wk
Legumens	.5 c/wk	1 c/wk	2.5 c/wk	3 c/wk	3 c/wk	3.5 c/wk	3.5 c/wk
Starchy veg.	1.5 c/wk	2.5 c/wk	2.5 c/wk	3 c/wk	6 c/wk	7 c/wk	9 c/wk
Other veg.	3.5 c/wk	4.5 c/wk	5.5 c/wk	6.5 c/wk	7 c/wk	8.5 c/wk	10 c/wk

4 Grains Group includes all foods made from wheat, rice, oats, cornmeal, barley, such as bread, pasta, oatmeal, breakfast cereals, tortillas, and grits. In general, 1 slice of bread, 1 cup of ready-to-eat cereal, or 1/2 cup of cooked rice, pasta, or cooked cereal can be considered as 1 ounce equivalent from the grains group. At least half of all grains consumed should be whole grains.

5 Meat & Beans Group in general, 1 ounce of lean meat, poultry, or fish, 1 egg, 1 Tbsp. peanut butter, 1/4 cup cooked dry beans, or 1/2 ounce of nuts or seeds can be considered as 1 ounce equivalent from the meat and beans group.

6 Milk Group includes all fluid milk products and foods made from milk that retain their calcium content, such as yogurt and cheese. Foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not part of the group. Most milk group choices should be fat-free or low-fat. In general, 1 cup of milk or yogurt, 1 1/2 ounces of natural cheese, or 2 ounces of processed cheese can be considered as 1 cup from the milk group.

7 Oils include fats from many different plants and from fish that are liquid at room temperature, such as canola, corn, olive, soybean, and sunflower oil. Some foods are naturally high in oils, like nuts, olives, some fish, and avocados. Foods that are mainly oil include mayonnaise, certain salad dressings, and soft margarine.

8 Discretionary Calorie Allowance is the remaining amount of calories in a food intake pattern after accounting for the calories needed for all food groups—using forms of foods that are fat-free or low-fat and with no added sugars.

Estimated Daily Calorie Needs

To determine which food intake pattern to use for an individual, the following chart gives an estimate of individual calorie needs. The calorie range for each age/sex group is based on physical activity level, from sedentary to active.

Sedentary means a lifestyle that includes only the light physical activity associated with typical day-to-day life.

Active means a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

	Calorie Range		
Children	Sedentary	--->	Active
2-3 years	1,000	--->	1,400
Females			
4-8 years	1,200	--->	1,800
9-13	1,600	--->	2,200
14-18	1,800	--->	2,400
19-30	2,000	--->	2,400
31-50	1,800	--->	2,200
51+	1,600	--->	2,200
Males			
4-8 years	1,400	--->	2,000
9-13	1,800	--->	2,600
14-18	2,200	--->	3,200
19-30	2,400	--->	3,000
31-50	2,200	--->	3,000
51+	2,00	--->	2,800

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Appendix B - Dietary Approaches to Stop Hypertension Diet (DASH Diet)

DASH EATING PLAN

The DASH eating plan shown below is based on 2.000 calories a day. The number of daily servings in a food group may vary from those listed, depending on your caloric needs. Use this chart ot help you plan your menus or take it with you when you go to the store.

Food	Daily Servings (Except as noted)	Serving Sizes	Examples	Significance of Each Food Group to the DASH Eating Plan
Grains and grain products	7–8	1 slice bread 1 oz dry cereal* 1/2 cup cooked rice	Whole wheat bread, English muffin, pita bread, bagel, cereals, grits, oatmeal, crackers, pasta, or cereal unsalted pretzels and popcorn	Major sources of energy and fiber
Vegetables	4–5	1 cup raw leafy vegetable 1/2 cup cooked vegetable 6 oz vegetable juice	Tomatoes, potatoes, carrots, green peas, squash, broccoli, turnip greens, collards, kale, spinach, artichokes, green beans, lima beans, sweet potatoes	Rich sources of potassium, magnesium, and fiber
Fruits	4–5	6 oz fruit juice 1 medium fruit 1/4 cup dried fruit 1/2 cup fresh, frozen, or canned fruit	Apricots, bananas, dates, grapes, oranges, orange juice, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, prunes, raisins, strawberries, tangerines	Important sources of potassium, magnesium, and fiber
Lowfat or fat free dairy foods	2–3	8 oz milk 1 cup yogurt 11/2 oz cheese	Fat free (skim) or lowfat (1%) milk, fat free or lowfat buttermilk, fat free or lowfat regular or frozen yogurt, lowfat and fat free cheese	Major sources of calcium and protein
Meats, poultry, Fish	2 or less	3 oz cooked meats, poultry, or fish	Select only lean; trim away visible fats; broil, roast, or boil, instead of frying; remove skin from poultry	Rich sources of protein and magnesium
Nuts, seeds, and dry beans	4–5 per week	1/3 cup or 11/2 oz nuts 2 Tbsp or 1/2 oz seeds 1/2 cup cooked dry beans	Almonds, filberts, mixed nuts, peanuts, walnuts, sunflower seeds, kidney beans, lentils, peas	Rich sources of energy, magnesium, potassium, protein, and fiber peas

* Equals 1/2 – 1 1/4 cups, depending on cereal type. Check the product's Nutrition Facts Label.
† Fat content changes serving counts for fats and oils: For example, 1 Tbsp of regular salad dressing equals 1 serving; 1 Tbsp of a lowfat dressing equals 1/2 serving; 1 Tbsp of a fat free dressing equals 0 servings.

DASH EATING PLAN				
Food	Daily Servings (Except as noted)	Serving Sizes	Examples	Significance of Each Food Group to the DASH Eating Plan
Fats and oils	2–3	1 tsp soft margarine 1 Tbsp low fat mayonnaise 2 Tbsp light salad dressing 1 tsp vegetable oil	Soft margarine, low fat light salad dressing, vegetable oil including fat in or (such as olive, corn, canola, added to foods or safflower)	DASH has 27 percent of calories as fat, including fat in or added to foods
Sweets	5 per week	1 Tbsp sugar 1 Tbsp jelly or jam 1/2 oz jelly beans 8 oz lemonade	Maple syrup, sugar, jelly, jam, fruit-flavored gelatin, jelly beans, hard candy, fruit punch, sorbet, ices	Sweets should be low in fat

Appendix C - HP2010 Objectives, U.S. Baselines, and U.S. Targets

The Proposed Texas Targets in *Chapter 6: Texas Goals and Proposed Texas Targets* are based on Healthy People 2010 (HP2010) objectives. HP2010, which set nationwide health goals and objectives in order to promote and maintain the health of all Americans, is based on strong scientific evidence and serves as a basis from which state and community plans should be developed.[82] It has two main goals: to increase quality and years of healthy life and to decrease health disparities.[82] Each goal is achieved by meeting several measurable objectives. HP2010 has 467 objectives in 28 areas of focus. The following is a list of the HP2010 objectives used to develop the Proposed Texas Targets in Chapter 6.:

HP2010 – 7-2 Increase the proportion of middle, junior high, and senior high schools that provide school health education to prevent health problems in the following areas: … unhealthy dietary patterns; inadequate physical activity.

U.S. Target and baseline:

Objective	Schools Providing School Health Education to prevent health problems in the following priority areas	1994 Baseline	2010 Target
7-2h.	Unhealthy dietary patterns	84 %	95 %
7-2i.	Inadequate physical activity	78 %	90 %

HP2010 – 7-3 Increase the proportion of college and university students who receive information from their institution on each of the six priority health-risk behavior areas…two of which are inadequate physical activity and dietary patterns that cause disease.

U.S. Target: 25%

U.S. Baseline: 6% of undergraduate students received information from their college or university on all six topics in 1995: injuries (intentional and unintentional), tobacco use, alcohol and illicit drug use, sexual behaviors that cause unintended pregnancies and sexually transmitted diseases, dietary patterns that cause disease, and inadequate physical activity.

HP2010 – 7-5 Increase the proportion of worksites that offer a comprehensive employee health promotion program to their employees.

U.S. Target and baseline:

Objective	Increase in Worksites Offering a Comprehensive Employer-Sponsored Health Promotion Program	1999 Baseline Percent	2010 Target
7-5a.	Worksites with fewer than 50 employees	Developmental	
7-5b.	Worksites with 50 or more employees	34 %	75 %
7-5c.	Worksites with 50 to 99 employees	33 %	75 %
7-5d.	Worksites with 100 to 249 employees	33 %	75 %
7-5e.	Worksites with 250 to 749 employees	38 %	75 %
7-5f.	Worksites with 750 or more employees	50 %	75 %

HP2010 – 7-6 Increase the proportion of employees who participate in employer-sponsored health promotion activities.

U.S. Target: 75%

U.S. Baseline: 61% of employees aged 18 years and older participated in employer-sponsored health promotion activities in 1994.

HP2010 – 7-7. (Developmental) Increase the proportion of healthcare organizations that provide patient and family education.

HP2010 – 7-8. (Developmental) Increase the proportion of patients who report that they are satisfied with the patient education they receive from their health care organization.

HP2010 – 7-9. (Developmental) Increase the proportion of hospitals and managed care organizations that provide community disease prevention and health promotion activities that address the prior health needs identified by the community.

HP2010 – 7-10. (Developmental) Increase the proportion of Tribal and local health service areas or jurisdictions that have established a community health promotion program that addresses multiple Healthy People 2010 focus areas.

HP2010 – 7-11. Increase the proportion of local health departments that have established culturally appropriate and linguistically competent community health promotion and disease prevention programs…that focus on nutrition and overweight and physical activity and fitness.

U.S. Target and baseline:

Objective	Increase in Local Health Department Community Health Promotion and Disease Prevention Programs That Are Culturally Appropriate and Linguistically Competent	1996–97 Baseline	2010 Target
7-11g.	Educational and community-based programs	33 %	50 %
7-11s	Nutrition and overweight	44 %	50 %
7-11v.	Physical activity and fitness	21 %	50 %

HP2010 – 7-12 Increase the proportion of older adults who have participated during the preceding year in at least one organized health promotion activity.

U.S. Target: 90%

U.S. Baseline: 12% of adults aged 65 years and older participated during the preceding year in at least one organized health promotion activity in 1998 (age adjusted to the year 2000 standard population).

HP2010 – 16-19 Increase the proportion of mothers who breastfeed their babies.

U.S. Target and baseline:

Objective	Increase in Mothers Who Breastfeed	1998 Baseline	2010 Target
16-19a.	In early postpartum period	64 %	75 %
16-19b.	At 6 months	29 %	50 %
16-19c.	At 1 year	16 %	25 %

HP2010 – 19-1 Increase the proportion of adults who are at a healthy weight.

U.S. Target: 60%

U.S. Baseline: 42% of adults aged 20 years and older were at a healthy weight (defined as a body mass index [BMI] equal to or greater than 18.5 and less than 25) in 1988–94 (age adjusted to the year 2000 standard population).

HP2010 – 19-2 Reduce the proportion of adults who are obese.

U.S. Target: 15%

U.S. Baseline: 23% of adults aged 20 years and older were identified as obese (defined as a BMI of 30 or more) in 1988–94 (age adjusted to the year 2000 standard population).

HP2010 – 19-3 Reduce the proportion of children and adolescents who are overweight or obese.

U.S.Target and national baseline:

Objective	Reduction in Overweight or Obese Children and Adolescents*	1988–94 Baseline	2010 Target
19-3a.	Children aged 6 to 11 years	11 %	5 %
19-3b.	Adolescents aged 12 to 19 years	11 %	5 %
19-3c.	Children and adolescents aged 6 to 19 years	11 %	5 %

* Overweight in children is defined as at or above the gender- and age-specific 95th percentile of BMI based on the revised CDC Growth Charts for the United States. Children between the 85th and 95th percentile for BMI for age are considered at risk for overweight.

HP2010 – 19-5 Increase the proportion of persons aged two years and older who consume at least two daily servings of fruit.

U.S. Target: 75%

U.S. Baseline: 28% of persons aged 2 years and older consumed at least two daily servings of fruit in 1994–96 (age adjusted to the year 2000 standard population).

HP2010 – 19-6 Increase the proportion of persons aged two years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or orange vegetables.

U.S. Target: 50%

U.S. Baseline: 3% of persons aged 2 years and older consumed at least three daily servings of vegetables, with at least one-third of these servings being dark green or orange vegetables in 1994–96 (age adjusted to the year 2000 standard population).

HP2010 – 19-15 Increase the proportion of children and adolescents aged six to 19 years whose intake of meals and snacks at school contributes to good overall dietary quality.

HP2010 – 19-16 Increase the proportion of worksites that offer nutrition or weight management classes or counseling.

U.S. Target: 85%

U.S. Baseline: 55% of worksites with 50 or more employees offered nutrition or weight management classes or counseling at the worksite or through their health plans in 1998–99.

HP2010 – 19-17 Increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that includes counseling or education related to diet and nutrition.

U.S. Target: 75%

U.S. Baseline: 42% of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia included ordering or providing counseling or education on diet and nutrition in 1997 (age adjusted to the year 2000 standard population).

HP2010 – 22-1 Reduce the proportion of adults who engage in no leisure time physical activity.

U.S. Target: 20%

U.S. Baseline: 40% of adults aged 18 years and older engaged in no leisure-time physical activity in 1997 (age adjusted to the year 2000 standard population).

HP2010 – 22-2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

U.S. Target: 30% (based on the 1997 NHIS results, adjusted to 2000 population levels. The BRFSS did not add a similar question until 2003).

U.S. Baseline: 47% of adults aged 18 years and older engage in moderate-vigorous physical activity for at least 30 minutes 5 or more days per week (2003 BRFSS)

HP2010 – 22-3 Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardio-respiratory fitness three or more days per week for 20 or more minutes per occasion.

U.S. Target: 30%

U.S. Baseline: 23% of adults aged 18 years and older engaged in vigorous physical activity 3 or more days per week for 20 or more minutes per occasion in 1997 (age adjusted to the year 2000 standard population).

HP2010 – 22-6 Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on five or more of the previous seven days.

U.S. Target: 35%

U.S. Baseline: 27% of students in grades 9 through 12 engaged in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days in 1999.

HP2010 – 22-7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardio-respiratory fitness three or more days per week for 20 or more minutes per occasion.

U.S. Target: 85%

U.S. Baseline: 65% of students in grades 9 through 12 engaged in vigorous physical activity 3 or more days per week for 20 or more minutes per occasion in 1999.

HP2010 – 22-8 Increase the proportion of the nation's public and private schools that require daily physical education for all students.

U.S. Target and baseline:

Objective	Increase in Schools Requiring Daily Physical Activity for All Students	1994 Baseline	2010 Target
22-8a.	Middle and junior high schools	17 %	25 %
22-8b.	Senior high schools	2 %	5 %

HP2010 – 22-9 Increase the proportion of adolescents who participate in daily school physical education.

U.S. Target: 50%

U.S. Baseline: 29% of students in grades 9 through 12 participated in daily school physical education in 1999.

HP2010 – 22-10 Increase the proportion of adolescents who spend at least 50% of school physical education class time being physically active.

U.S. Target: 50%

U.S. Baseline: 38% of students in grades 9 through 12 were physically active in physical education class more than 20 minutes 3 to 5 days per week in 1999.

HP2010 – 22-11 Increase the proportion of adolescents who view television two or fewer hours on a school day.

U.S. Target: 75%

U.S. Baseline: 57% of students in grades 9 through 12 viewed television 2 or fewer hours per school day in 1999.

HP2010 – 22-12 Increase the proportion of the nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours.

HP2010 – 22-13 Increase the proportion of worksites offering employer-sponsored physical activity and fitness programs.

U.S. Target: 75%

U.S. Baseline: 46% of worksites with 50 or more employees offered physical activity and/or fitness programs at the worksite or through their health plans in 1998–1999.

HP2010 – 22-14a Increase the number of trips made by adults age 18 and older of one mile or less made by walking.

U.S. Target: 25% of all trips made by adults of one mile or less made by walking

U.S. Baseline: 17% of all trips made by adults of one mile or less made by walking

HP2010 – 22-14b Increase the number of trips to school of one mile or less by children and adolescents age 5-15 made by walking.

U.S. Target: 50% of all trips to school of one mile or less by walking

U.S. Baseline: 31% of all trips to school of one mile or less are made by walking

HP2010 – 22-15a Increase the number of trips made by adults age 18 or older of five miles or less made by bicycling.

U.S. Target: 2% of all trips made by adults of five miles or less made by bicycling.

U.S. Baseline: <1% of all trips made by adults of five miles or less made by bicycling

HP2010 – 22-15b Increase the number of trips to school of 2 miles or less made by children age 5-15 made by bicycling.

U.S. Target: 5% of all trips to school of 2 miles or less made by bicycling

U.S. Baseline: 2.4% of all trips made to school of 2 miles or less made by bicycling

Appendix D
Potential Partners for Obesity Prevention

Working with partners and capitalizing on their areas of expertise increases the likelihood that Texans will become aware of the obesity challenge and adopt healthy behaviors. Obesity prevention in Texas cannot be achieved without the partnership and collaboration of many individuals, groups, and organizations at the state and local level. There are many organizations, groups and individuals who want to help prevent obesity in Texas and many that have yet to realize their role in obesity prevention efforts. Below are some general descriptions of partners that can be found in most Texas communities. Some of these are obvious partners, but others are not ones you would typically think about yet each is equally capable of contributing to the effort.

Potential Partners

Sector	Examples
Organizations/Clubs	Senior centers Community service organizations Student organizations Professional organizations Health and fitness clubs Philanthropic organizations Local chapters of state and national organizations
Businesses	Chamber of Commerce Major employers Businesses Grocers Trade groups Restaurants
Financial Institutions	Banks Savings and Loans Credit Unions
Education	Public and private schools Home schooling parents group Childcare centers/Headstart Colleges and Universities GED Programs Parent Teacher Associations School Health Advisory Council Education Service Centers
Faith-Based Organizations	Churches Tabernacles Synagogues Emergency Food Pantry Soup Kitchen Ministerial

Potential Partners

Sector	Examples
Law Enforcement	Police Department Sheriff's Department Fire Department Ambulance Service
Government	City Council County Commissioner's Court Texas Cooperative Extension Agent Parks and Recreation Department Department of Transportation Public Works Department Local Health Department
Media	Television Radio Newspaper Community Magazines
Neighborhood & Housing Leadership	Neighborhood Crime Watch Zoning commission Home owners associations
Health Care	Senior Center Programs Long Term Care Facilities Doctor's Offices Hospitals Rehabilitation services WIC
Youth Organizations	YMCA YWCA Boys and Girls Club Boy Scouts Girl Scouts Camp Fire Brownies Intramural sports teams

Appendix E: Programs and Resources

One of the purposes of the *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* is to offer partners a useful tool to prevent obesity. As such, a list of programs and resources was compiled and included in the *Strategic Plan*. We hope that you find this information useful.

The resources contained in this section consist of a combination of nationwide programs, Texas programs, evidence-based programs and general information sources. These resources are available freely via the Internet. This list is by no means all-inclusive but is a good place to start when looking for nutrition, physical activity, and obesity prevention resources.

Nutrition and Nutrition Environments

Organization and Website	Key Resources
American Community Gardening Association www.communitygardens.org	• Starting a community garden • What is good community gardening? • Tips for urban gardening
American Diabetes Association www.diabetes.org	• Nutrition information for individuals with diabetes
American Dietetic Association www.eatright.org	• Nutrition Information & Position Statements • Professional information • Find a dietitian search engine
American Public Health Association, Food and Nutrition Section www.aphafoodandnutrition.org	• Nutrition policy statements and resolutions
Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity www.cdc.gov/nccdphp/dnpa/index.htm	• State and national data on overweight and obesity, nutrition, and physical activity • Current physical activity recommendations for school age children and adults • 5 to 9 A Day for Better Health • VERB Youth Media Campaign • Active Community Environments • Kids Walk-to-School • Growing Stronger: Strength Training for Older Adults
Community Food Security Coalition Farm to School Program www.foodsecurity.org/farm_to_school.html	• Farm to School & Farm to College • Farm to Cafeteria • The Community Food Security Coalition
Junior Master Gardener http://jmgkids.us	• School or community group registration • Teacher/Leader training
National Cancer Institute's 5 to 9 A Day for Better Health Program www.5aday.gov	• Body and Soul – Faith-based promotion • African American Health • Fruit & Vegetable promotion for men • Fruit & Vegetable promotion for women
National Council on Folic Acid www.folicacidinfo.org/index.php	• Folic Acid resources

Nutrition and Nutrition Environments

Organization and Website	Key Resources
National Council on Folic Acid www.folicacidinfo.org/index.php	• Folic Acid resources
National Dairy Council www.nationaldairycouncil.org	• Nutrition & product information • Tools for schools • Tools for healthcare professionals • Healthy weight information
National Heart Lung and Blood Institute – Dietary Approach to Stop Hypertension www.nhlbi.nih.gov/health/public/heart/hbp/dash	• DASH Eating Plan research and description • Download DASH eating plan
Produce for Better Health Foundation www.5aday.com	• 5 A Day the Color Way • Tools for grocery stores and retail • Fruit & Vegetable policy and program information • Brochures, posters, and materials for purchase
Sustainable Food Center www.sustainablefoodcenter.org	• The Happy Kitchen/La Cocina Alegre • Community gardens • Austin Farmers' Market
United Fresh Fruit and Vegetable Association www.uffva.org	• The Fruit and Vegetable Snack Program Resource Center • Food safety and security • Produce information
USDA Center for Nutrition Policy and Promotion www.usda.gov/cnpp/dietary_guidelines.html	• Dietary Guidelines for Americans • MyPyramid and MyPyramid Tracker • Putting guidelines into practice
USDA Food and Nutrition Information Center www.nal.usda.gov/fnic/	• Food Stamp Nutrition Education • Healthy School Meals resources • WIC Works resources • Food Safety • Child Care Nutrition Resources
USDA Food and Nutrition Service www.fns.usda.gov/fns/default.htm	• Eat Smart, Play Hard • MyPyramid for Kids • Changing the Scene Toolkit • Team Nutrition • Fruits & Vegetables Galore • Senior Farmer's Market Nutrition Program
USDA Food Guide Pyramid www.mypyramid.gov	• My Pyramid Plan • My Pyramid for Kids • USDA's Food Guidance System
United States Food and Drug Administration www.fda.gov	• Nutrition Label information • Nutrition Supplement information • Nutrition and Healthy Weight information

Physical Activity

Organization and Website	Key Resources
Active for Life www.activeforlife.info/default.aspx	• Resources for promoting physical activity to adults age 50 and older
American Alliance for Health, Physical Education, Recreation and Dance www.aahperd.org	Links to Partner Organizations: • American Association for Active Lifestyles & Fitness • American Association for Health Education • American Association for Leisure & Recreation • National Association for Girls & Women in Sport • National Association of Sport and Physical Education • National Dance Association
American College of Sports Medicine www.acsm.org	• Fitness professional certification and credentialing • Physical activity and health information • Continuing professional education
The Cooper Institute www.cooperinst.org	• Training and continuing education workshops • FitnessGram and ActivityGram Assessments for children and youth • Physical fitness standards for law enforcement
The Guide to Community Preventive Services www.thecommunityguide.org/pa	• Recommendations on evidence-based physical activity interventions for implementation in schools, communities, and worksites.
International Council on Active Aging www.icaa.cc	• Physical activity and disease prevention programs and recommendations for older adults • Guidelines for fitness professionals and facilities that serve older adults.
National Association for Sport and Physical Education www.aahperd.org/naspe	• Active Start: A Statement of Physical Activity Guidelines for Children Birth to Five Years • Local School Wellness policies • National PE Standards and Activity Guidelines • Position papers on sport and physical education
National Center for Physical Activity and Disability www.ncpad.org	• Health promotion, nutrition, and physical activity resources for people with disabilities • Trends in promoting physical activity to the disabled population • Professional resources
National Coalition for Promoting Physical Activity www.ncppa.org	• Tools and resources to promote physical activity • E-Newsletters with news, program, and funding announcements • Legislation and Policy updates that impact physical activity
National Coalition for Promoting Physical Activity www.ncppa.org	• Tools and resources to promote physical activity • E-Newsletters with news, program, and funding announcements • Legislation and Policy updates that impact physical activity
National Recreation and Park Association (NRPA) www.nrpa.org	• Step Up to Health: It Starts in Parks

Physical Activity

Organization and Website	Key Resources
President's Council on Physical Fitness and Sports www.fitness.gov	• Publications of the President's Council on Physical Fitness and Sports • President's Challenge on-line for kids, teens, adults, and seniors
Shape Up America! www.shapeup.org	• Overweight and obesity prevention resources for health care providers and the general public
Texas Association of Health, Physical Education, Recreation, and Dance www.tahperd.org	• Professional resources for health, physical education, and recreation instructors
Texas Bicycle Coalition www.biketexas.org	• Safe Routes to School • Texas SuperCyclist and SuperCollege programs • Bicycle education and advocacy
Texas on the Move www.americaonthemove.org/affiliates.asp?affiliateid=10	• Resources for parents, children, educators, and worksites • On-line physical activity tracking for individuals
Texas Parks and Wildlife www.tpwd.state.tx.us	• Bike Texas • Hike Texas • Splash Texas • Saddle Up Texas • State Parks and Destinations
Texas Recreation and Park Society www.traps.org	• Regional listing of local parks and recreation departments • Parks and recreation vendor list • Resources for professional parks and recreation staff • Legislative updates related to parks and recreation
Walk Across Texas http://walkacrosstexas.tamu.edu/index.htm	• Eight week walking program for individuals and groups
Walk Texas! www.dshs.state.tx.us/diabetes/walktx.shtm	• Community-based walking program and resources

Active Community Environments

Organization and Website	Key Resources
Active Living Network www.activeliving.org	• Clearinghouse of tools and resources for promoting active living and healthy communities
America Bikes www.americabikes.org	• Benefits of bicycling • News updates on bicycling trends and policy • Advocacy tools and resources
America Walks www.americawalks.org	• Resources for creating walkable communities • Advocacy tools to promote walking
American Planning Association www.planning.org	• Physically Active Community Project • Planning and Designing the Physically Active Community resource list • Neighborhood Collaborative Planning • City Parks Forum
Association of Pedestrian and Bicycle Professionals www.apbp.org	• Americans with Disabilities Act training course • Bicycle parking guidelines • AASHTO Guide for the Development of Bicycle Facilities • Bicycle Friendly Communities workshop pilot program
Bikes Belong Coalition www.bikesbelong.org	• Guide to bicycle advocacy • Bikes Belong grants program • Bikes Belong Strategic Plan
Complete the Streets www.completethestreets.org	• Model language to use for advocacy • Thunderhead Alliance Complete Streets Report • Complete The Streets powerpoint presentation
Congress for the New Urbanism www.cnu.org	• Resources related to smart growth and urban planning to create liveable communities
International City/County Management Association http://icma.org/main/sc.asp	• Active Living • Parks and Recreation • Smart Growth • Transportation
League of American Bicyclists www.bikeleague.org	• Bicycle Friendly Communities program • Bicycle Safety Education • National, state, and local bike advocacy • National Bike Month
Local Government Commission www.lgc.org	• Focus on Livable Communities Fact Sheets • Street Design Guidelines for Healthy Neighborhoods • Streets and Sidewalks, People and Cars: A Citizen's Guide to Traffic Calming • Ahwahnee Principles for livable, sustainable communities
Local Government Commission www.lgc.org	• Focus on Livable Communities fact sheets • Street design guidelines for healthy neighborhoods • Streets and Sidewalks, People and Cars: A Citizen's Guide to Traffic Calming • Ahwahnee Principles for livable, sustainable communities

Active Community Environments

Organization and Website	Key Resources
National Center for Bicycling & Walking www.bikewalk.org	• Walkability and Bikeability checklists • Tools and resources for improving community environments • Advocacy resources and legislative updates
Partnership for a Walkable America www.walkableamerica.org	• International Walk to School Day • Walkability Checklist • Institute of Transportation Engineers Pedestrian Project Awards
Pedestrian and Bicycling Information Center www.pedbikeinfo.org	• TrailLink on-line trail finder • Multi-modal trail development and enhancement
Pedestrians Educating Drivers on Safety, Inc www.peds.org	• An innovative local Pedestrian advocacy group from Atlanta, Georgia
Texas Bicycle Coalition www.biketexas.org	• Safe Routes to School • Texas SuperCyclist and SuperCollege programs • Bicycle education and advocacy
Trans Texas Alliance www.transtexas.org	• Train the Trainer Pedestrian Safety Workshop • Walkability Audits • Livable Community Awards
Walk and Bike to School www.walktoschool-usa.org	• Health benefits of walking and biking to school • Safe Routes to School program and SR2S National Course • International Walk to School Day

Health Affiliates

Organization and Website	Key Resources
American Association for Retired Persons www.aarp.org/health	• Numerous physical activity resources and programs for individuals over 65
American Arthritis Association www.arthritis.org	• Nutrition and physical activity resources for those with arthritis • Listing of local arthritis affiliates
American Cancer Society www.cancer.org	• Meeting Well
American Heart Association www.americanheart.org	• Just Move • Healthy Lifestyle Tools and Resources
American Obesity Association www.obesity.org	• Community Programs • Creating a Healthy Environment • Advocacy updates

Health Advocacy

Organization and Website	Key Resources
Center for Science in the Public Interest www.cspinet.org	• Nutrition Action Newsletter • Nutrition policy updates and reports
TV Turnoff Network www.tvturnoff.org	• Lists of screen-free activities • Resources for controlling or limiting TV in home, schools, and communities

Professional and Member Organizations

Organization and Website	Key Resources
American Academy of Pediatrics www.aap.org	• Resources for parents and medical professionals on obesity, nutrition, and physical activity
American Council For Fitness & Nutrition www.acfn.org	• Partnership initiative with the American Dietetic Association on high-risk populations • Fun, Food, and Fitness Community Action Kit for African Americans • Salud Festival Community Action Kit for Hispanics
American Public Health Association www.apha.org	• Toolkit for Intervention of Overweight Children and Adolescents • Issue Brief: The Obesity Epidemic in U.S. Minority Communities • Community Solutions to Health Disparities Database
National Recreation and Park Association (NRPA) www.nrpa.org	• Step Up to Health: It Starts in Parks
Physical Activity Collaborative www.pacollaborative.org	• Resources and web forums for physical activity and public health professionals
Society for Public Health Education www.sophe.org	• Resources and continuing education for public health professionals
Texas Association of Health, Physical Education, Recreation, and Dance www.tahperd.org	• Professional resources for health, physical education, and recreation instructors
Texas Dietetic Association www.nutrition4texas.org	• Speakers Bureau
Texas Medical Association www.texmed.org	• Professional resources and news for health care professionals
Texas Pediatric Society www.txpeds.org	• Professional resources and news for health care professionals working with children
Texas Public Health Association www.charityadvantage.com/texaspha/Home.asp	• Professional resources and news for public health practitioners in Texas
Texas Society for Public Health Education www.tsophe.org	• Professional resources and news for public health practitioners in Texas
Texas Recreation and Park Society www.traps.org	• Regional listing of local parks and recreation departments • Parks and recreation vendor list • Resources for professional parks and recreation staff • Legislative updates related to parks and recreation
Wellness Councils of America www.welcoa.org	• Online director of wellness providers for the workplace • Well Workplace and Well Cities awards program • Consulting and training for worksite wellness

Schools

Organization and Website	Key Resources
Action for Healthy Kids www.actionforhealthykids.org	• Resources to improve school nutrition and physical activity environments • Profile of Texas Team and Actions
American School Health Association www.ashaweb.org	• Professional resources and news for school health educators
Bienestar www.sahrc.org/products.html	• Texas Education Agency-approved Coordinated School Health Program
CATCH www.sph.uth.tmc.edu/chppr/catch/index.htm	• Texas Education Agency-approved Coordinated School Health Program
The Great Body Shop www.greatbodyshop.com	• Texas Education Agency-approved Coordinated School Health Program
Healthy and Wise www.caprockpress.com	• Texas Education Agency-approved Coordinated School Health Program
National Association of State Boards of Education, Safe and Healthy Schools Project www.nasbe.org/healthyschools	• Fit, Healthy, and Ready to Learn • Online database of state school health policies • How Schools Work and How to Work with Schools: A Primer for Education Professionals
National School Boards Association www.nsba.org	• School Health Program
School Nutrition Association www.asfsa.org	• Online continuing education for school nutrition professionals • Local school wellness policy resources
Texas Association for School Nutrition www.tasn.net	• Fact Sheet on School Health Advisory Councils • Texas School Breakfast Week • Advocacy tips for school nutrition • Legislative updates • School District Directory
Texas Education Agency www.tea.state.tx.us	• School Curriculum • Coordinated school health • Texas public school data

Breastfeeding

Organization and Website	Key Resources
Breastfeeding Training for Health Care Providers www.dshs.state.tx.us/wichd/lactate/courses.shtm	• Offered by the Department of State Health Services and Texas Association of Local WIC Departments
Centers for Disease Control and Prevention, Breastfeeding Information www.cdc.gov/breastfeeding/index.htm	• HHS Blueprint for Action on Breastfeeding • The CDC Guide to Breastfeeding Interventions • Current recommendations • Promotion and support programs
Department of State Health Services WIC Nutrition Program www.dshs.state.tx.us/wichd/nut/nut1.shtm	• Nutritional assessments and education • Breastfeeding help and information • WIC approved food and formula packages
La Leche League International www.lalecheleague.org	• Breastfeeding information and FAQ's • Resources for healthcare providers and advocates
Texas Mother-Friendly Worksite Program www.dshs.state.tx.us/wichd/lactate/mother.shtm	• Texas law applicable to breastfeeding • Mother-Friendly Worksite Application • Listing of Texas Mother-Friendly businesses • Benefits of becoming Mother-Friendly business
Texas Ten Step Hospital Program www.dshs.state.tx.us/wichd/lactate/TXfact.shtm	• How to become a Texas Ten Step designated facility • How to use the Texas Ten Step facility designation • Current facilities designated as a Texas Ten Step facility
The World Health Organization - Infant and Young Child Feeding Practices www.who.int/nut/#inf	• Infant and Young Feeding Practices • Recommendations for breastfeeding duration • Publications
United States Breastfeeding Coalition www.usbreastfeeding.org	• Issue papers and position statements related to breastfeeding

State and Federal Government

Organization and Website	Key Resources
Centers for Disease Control and Prevention, Division of Adolescent and School Health www.cdc.gov/HealthyYouth/index.htm	• Coordinated School Health • School Health Index • Key strategies to prevent obesity • Local Wellness Policy development tools • Youth Risk Behavior Surveillance System • School Health Policies and Programs study
Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity www.cdc.gov/nccdphp/dnpa/index.htm	• State and national data on overweight and obesity, nutrition, and physical activity • Current physical activity recommendations for school age children and adults • 5 to 9 A Day for Better Health • VERB Youth Media Campaign • Active Community Environments • Kids Walk-to-School • Growing Stronger: Strength Training for Older Adults
Healthier US Initiative www.healthierus.gov	• Steps to a Healthier U.S. initiative • Tips and resources for nutrition and physical activity
Healthy People 2010 www.healthypeople.gov	• Publications and progress reports related to Healthy People 2010
National Heart, Lung and Blood Institute www.nhlbi.nih.gov	• Clinical Guidelines on Overweight and Obesity • Aim for a Healthy Weight Toolkit • We Can! (Ways to Enhance Children's Activity & Nutrition) • BMI Calculator • Hearts 'n Parks Community Mobilization guide • JumpSTART for Teachers • Portion Distortion Quiz
National Institute of Diabetes and Digestive Kidney Diseases (NIDDK) Weight Information Network http://win.niddk.nih.gov	• Publications on nutrition, physical activity, and weight control • Sisters Together: Move More, Eat Better program for African American women
National Institutes of Health www.nih.gov	• Health Information A-Z • Grants and funding opportunities
The National Women's Health Information Center www.4woman.gov	• Health topics, resources, and funding opportunities specifically related to Women's Health
President's Council on Physical Fitness and Sports www.fitness.gov	• Publications of the President's Council on Physical Fitness and Sports • President's Challenge on-line for kids, teens, adults, and seniors
The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, 2001 www.surgeongeneral.gov/topics/obesity	• HTML and PDF versions of the 2001 Call to Action • Fact Sheets related to the Call to Action
Texas Department of Aging and Disability Services www.dads.state.tx.us	• Aging Texas Well • Texercise
Texas Department of Agriculture www.agr.state.tx.us	• Square Meals • Pick Texas

State and Federal Government

Organization and Website	Key Resources
Texas Department of State Health Services www.dshs.state.tx.us/phn/phn.shtm	• Nutrition, Physical Activity, and Obesity Prevention Program www.dshs.state.tx.us/phn/phn.shtm • Cardiovascular Health and Wellness Program www.dshs.state.tx.us/wellness/default.shtm • Texas Diabetes Council www.dshs.state.tx.us/diabetes/default.shtm • School Health Program www.dshs.state.tx.us/schoolhealth/default.shtm • WIC www.dshs.state.tx.us/wichd/default.shtm
Texas Department of State Health Services Regional Offices www.dshs.state.tx.us/regions/default.shtm	• Contact information and Health Service Region map
Texas Department of Transportation www.dot.state.tx.us	• Safe Routes to School
Texas Education Agency www.tea.state.tx.us	• Listing of approved coordinated school health programs for Texas • Texas Essential Knowledge and Skills for Health and Physical Education
Texas Local Health Departments www.dshs.state.tx.us/regions/lhds.shtm www.dshs.state.tx.us/regions/nonlhd.shtm	• Listing of both full service and non-participating local health departments by city and county
USDA Center for Nutrition Policy and Promotion www.usda.gov/cnpp/dietary_guidelines.html	• Dietary Guidelines for Americans • MyPyramid and MyPyramid Tracker • Putting Guidelines into Practice
USDA Food and Nutrition Information Center www.nal.usda.gov/fnic	• Food Stamp Nutrition Education • Healthy School Meals Resources • WIC Works Resources • Food Safety • Child Care Nutrition Resources
USDA Food and Nutrition Service www.fns.usda.gov/fns/default.htm	• Eat Smart, Play Hard • MyPyramid for Kids • Changing the Scene Toolkit • Team Nutrition • Fruits & Vegetables Galore • Senior Farmer's Market Nutrition Program
United States Department of Health and Human Services www.hhs.gov	• Resources available by topic • Faith-based and community initiative grants
United States Food and Drug Administration www.fda.gov	• Nutrition label information • Nutrition Supplement information • Nutrition and Healthy Weight information
World Health Organization (WHO) www.who.int/topics/obesity/en	• Activities, news, and reports related to WHO partners working on obesity prevention.

Research anc Community Outreach	
Organization and Website	Key Resources
Moving to the Future www.movingtothefuture.org	• Tools for developing community nutrition services
Prevention Institute www.preventioninstitute.org	• Eat Better, Move More Strategic Alliance • Physical activity promotion • The Built Environment and Health: 11 Profiles of Neighborhood Transformation
RE-AIM www.re-aim.org	• A community planning framework including the elements of Reach, Efficacy/Effectiveness, Adoption, Implementation, and Maintenance
Robert Wood Johnson Foundation www.rwjf.org	• Active Living By Design • National Blueprint: Increasing Physical Activity Among Adults Age 50 and Older • A Nation at Risk: Obesity in the United States • Active Living Diversity Project • Healthy Community Design: Success Stories from State and Local Leaders • Healthy Places, Healthy People: Promoting Public Health & Physical Activity Through Community Design • Healthy Schools for Healthy Kids • Lessons Learned: Promoting Physical Activity at the Community Level • Making Places for Healthy Kids • State Actions to Promote Nutrition, Increased Physical Activity, and Prevent Obesity: A Legislative Overview
Texas Cooperative Extension http://texasextension.tamu.edu/	• Division of Family and Consumer Sciences offers Food, Nutrition, and Health Education for Texas families
University of California at Berkeley, Center for Weight and Health www.cnr.berkeley.edu/cwh/index.html	• Programs, materials, and educational tools related to nutrition, physical activity, and healthy weight • List of funding resources
University of Kansas Community Tool Box http://ctb.ku.edu	• A step-by-step online manual of how to assess community needs, develop an intervention, implement it, and evaluate it

Appendix F

Glossary

Term	Definition
Aerobic exercise	Exercise in which there is a continuous and sufficient supply and demand of oxygen. Examples would include walking, jogging, biking, swimming, and aerobic dancing.
Behavior Risk Factor Surveillance System (BRFSS)	A population-based surveillance system to assess health behavioral risk factors of American adults (age 18+) that provides randomized national and state data on obesity trends, physical activity and fruit and vegetable consumption.
BMI	Body Mass Index or BMI is a tool for indicating weight status and risk for chronic disease in adults. It is a measure of weight for height.
Calorie balance	Calorie balance is achieved when caloric expenditures are balanced with caloric intake.
Childhood Overweight	Describes the condition of children (ages 2-18) with a gender and age specific BMI value > 95th percentile.
Chronic Disease	Refers to an illness that is long term and rarely ever is cured completely.
Coalition	An organization formed by a group of people or groups of people who are working together on a shared mission in order to achieve common goals.
Community	A body of individuals with common interests.
Comorbidity	The simultaneous occurrence of two diseases or disorders in a given population.
Dietary fiber	Nonstarch polysaccharides and lignin that are not digested by enzymes in the small intestine. Dietary fiber typically refers to non-digestable carbohydrates from plant foods.
Exercise	Physical activity that is planned or structured. It involves repetitive bodily movement done to improve or maintain one or more of the components of physical fitness—cardiorespiratory endurance (aerobic fitness), muscular strength, muscular endurance, flexibility, and body composition.
Family	A group of people within a common household.

Glossary

Term	Definition
Health	Condition of physical, mental, and emotional well-being, free from disease and pain.
Hypercholesterolemia	An excess of cholesterol in the blood.
Hyperlipidemia	Generic term for an excess of one or more lipids (fatty substances) in the blood.
Hypertension	Also know as High blood pressure (HBP) is defined as: systolic pressure of 140 mm Hg or higher, or diastolic pressure of 90 mm Hg or higher, taking antihypertensive medicine, or being told at least twice by a physician or other health professional that you have high blood pressure.
Inactive	Is to not engage in any regular pattern of physical activity beyond daily functioning.
Moderate-intensity physical activity	Refers to a level of activity that is easily maintained in which a person would experience a slight increase in breathing or heart rate. A person should still be able to talk and hold a conversation at this level of activity.
Nutrient density	Nutrient dense foods are those that provide substantial amounts of vitamins and minerals and relatively fewer calories.
Overweight	An adult who has a BMI between 25 and 29.9 is considered overweight.
Obesity	An adult who has a BMI of 30 or higher is considered obese.
Physical activity	Any bodily movement produced by skeletal muscles that results in energy expenditure and therefore may include both occupational and leisure physical activity. Strength training is working skeletal muscles against resistance.
Physical education	Is taught through a well-defined curriculum by highly qualified physical education teachers and offers the best opportunity to provide physical activity to all children and to teach them the skills and knowledge needed to establish and sustain an active lifestyle.
Portion size	The amount of food consumed in one eating occasion.
Public health	An effort organized by society to protect, promote, and restore the people's health through the application of science, practical skills, and collective actions.

Glossary

APPENDIX F

Term	Definition
Quality of life	In relation to health, quality of life is the gap between our expectations of health and our experience of it.
Sedentary	Refers to a condition of physical inactivity.
Social marketing	The application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence voluntary behavior of target audiences in order to improve their personal welfare and that of their society.
Social-ecological model	The “Socioecological Model” to explain this complex relationship between the individual and environment.
Stakeholders	People and organizations who have a vested interest in identifying and addressing a problem.
Steatohepatitis	A liver inflammation found in alcoholics; also a similar condition (nonalcoholic steatohepatitis) of uncertain origin.
Strength training	Working skeletal muscles against resistance.
Structured physical activity	planned and directed by the parent, caregiver, or teacher and is designed to accommodate the child’s developmental level.
Unstructured physical activity	Child-initiated physical activity that occurs as the child explores his or her environment or as play.
Vigorous physical activity	Can produce fatigue in a short period of time and is performed at an intensity in which heart rate and breathing are elevated to the point where conversation is difficult or “broken”.
Whole grains	Foods made from the entire grain seed, usually called the kernel, which consists of the bran, germ, and endosperm. If the kernel has been cracked, crushed, or flaked, it must retain nearly the same relative proportions of bran, germ, and endosperm as the original grain in order to be called whole grain.

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