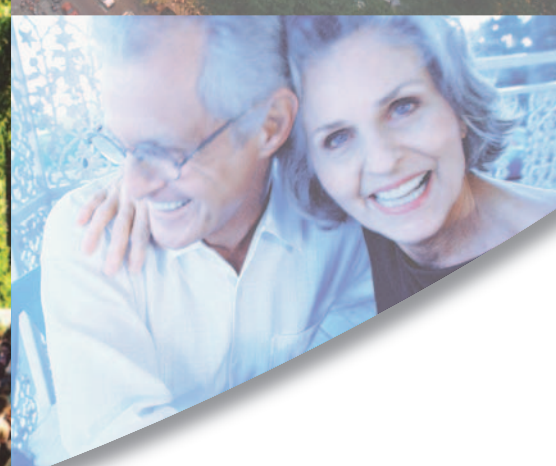


Section II: Connecticut Cancer Plan 2009 – 2013

B. The Continuum of Cancer Control

1. Prevention

The Power of Unity.



PREVENTION COMMITTEE

Patricia J Checko, Dr.PH, MPH Co-chair*
Elaine O'Keefe, MS Co-chair*
Bonnie Baldwin, BA
Polly Barey, RN, MSN*
Cathy Bartell
Annamarie Beaulieu MPH*
Ande Bloom MS, RD
Carol E. Bower*
Brenda Cartmel, PhD*
Charlie Chatterton, Ph.D
Stephanye R. Clarke
Kathy Cobb, MS, RD
Denis Coble, Ed.D.
Renee Coleman-Mitchell, MPH
Beth Comerford, MS
Robin Cox*

Deanna D'Amore, BA
Ellen Dorneles, PhD
Teresa Dotson, RD
Linda Drake, M.S.*
Bonnie Edmondson
Richard B. Everson MD, MPH
Roberta Friedman
Ingrid Gillespie*
Jennifer Granger, MPH
Anne Hulick, RN, MS, JD
Jennifer Ickovics, PhD
Jennifer Kertanis, MPH*
Margaret LaCroix
Connie Malave Branyan, MPH
Jerold R. Mande, Past Co-chair*
Katie Martin, PhD
Marlene McGann
Jean Mee, PhD
Carol Meredith*
Sharon Mierzwa, MPH, RD*
Tim Morse
Scott Newgass
Hilary Norcia, MPH
Ryan Obedzinski
Edith Pestano
William Quinn, MPH
Nancy Rodriguez
Alycia Santilli, MSW
Kathryn Shuttleworth
Kari Sullivan
Eric Triffin, BS, MPH*
Kathleen Turner
Sarah Uhl*
Barbara Walsh*
Jillian Wood
Susan Yurasevecz, MS
Kristen Zarfos, MD, FACS

Public Health Consultant/ MATCH Chair
Yale School of Public Health
American Cancer Society
Coalition for a Safe & Healthy CT
Oncology Network of Connecticut
CT Public Health Association
Eastern Highlands Health District
CT Department of Public Health
Yale University School of Medicine
Eastern Connecticut State University
Ledge Light Health District
KC & Friends
UConn-Storrs
CT Department of Public Health
Yale-Griffin Prevention Research Center
CT Department of Mental Health & Addiction
Services
CT Association of Directors of Health
Hartford Hospital
CT Dietetic Association
UConn Department of Nutritional Sciences
CT State Department of Education
UConn Health Center
Yale - Rudd Center
Lower Fairfield County Regional Action Council
Community Health Center Assn of CT
CT Nurses' Association
Community Alliance for Research & Engagement
CT Association of Directors of Health
American Lung Assn of New England
American Cancer Society
Yale Cancer Center
Ctr for Public Health & Health Policy
Meriden & Wallingford Substance Abuse Council
CT State Department of Education
DMHAS
CT Association of Directors of Health
UConn Health Center
CT State Department of Education
Central CT Health District
East of the River Action for Substance Abuse
CT Department of Environmental Protection
New Haven Health Department
UConn Department of Nutritional Sciences
Community Alliance for Research & Engagement
CT Dept of Public Health
CT State Department of Education
West Haven Health Department
American Cancer Society
Coalition for a Safe & Healthy Connecticut
CT Department of Public Health
American Academy of Pediatricians
CT Dept Public Health
ST Francis Hospital

* Actively involved in writing of prevention section of 2009-2013 Plan

1. PREVENTION

The Prevention Committee monitors critical areas of burden, high-risk populations, and existing gaps in programming. Acknowledging that there are ongoing challenges such as the funding and sustainability of smoking cessation efforts throughout the state, the Prevention Committee has considered new approaches to reaching its identified goal for the state.

Goal: *Reduce cancer risk, incidence, and mortality through the development and adoption of policies and interventions that support healthy lifestyles and risk reduction practices among children and adults.*

According to the Institute of Medicine (IOM) report on cancer prevention, an estimated 100,000 of the 1,437,180 new cases of cancer and 60,000 of the 565,650 total deaths nationally could be prevented each year by 2015 if more Americans used the cancer prevention and early detection knowledge and recommendations currently available.¹ It is important to consider the effects of behavior on cancer incidence and prevention.

Tobacco use, poor nutrition, physical inactivity, and obesity are all linked with cancer. Effective behavioral interventions for these risk factors involve individual and family activities, engaging community organizations in behavior-changing initiatives, and systematic policy and societal changes that address factors which influence behavior such as self-efficacy, problem-solving skills, and social support.² These components are considered important regardless of the specific behavioral target. Clinical guidelines exist for smoking cessation, dietary compliance, increasing physical activity, and obesity reduction. There is also growing evidence that system-wide interventions are effective in addressing many of the social determinants of health.³ The Prevention Committee focused on the following risk factors that can be affected by behavioral interventions and population-based environmental and policy changes.

Why this goal is important...

Fifty to 75% of cancer cases in the United States are preventable.⁽¹⁾

1. Tobacco Use. Smoking accounts for at least 30% of all cancer deaths and 87% of lung cancer deaths. More than 5,400 Connecticut residents die each year from smoking related illnesses, about 2,000 of which are cancers.⁽²⁾

2. Nutrition, Physical Activity and Obesity. About one-third of cancer deaths are due to nutrition and physical activity factors, including excess weight. Higher consumption of fruits and vegetables and regular physical activity may lower risk of developing some cancers.

3. Environmental Cancer Risk. Exposure to ultraviolet radiation from the sun and artificial tanning devices is associated with an increase in melanoma and other skin cancers. Exposure to carcinogenic agents in workplace, community, and other settings is thought to cause about 6% of cancer deaths.

4. Excessive Alcohol Use. Excessive consumption of alcoholic drinks is associated with oral, laryngeal, pharyngeal, liver, and esophageal, cancers and possibly other cancers.

5. Unprotected Sex and Infectious Agents. Human papillomavirus (HPV), which is transmitted by sexual contact, is an established cause of cervical cancer in women. Up to 10% of cancers are associated with infectious diseases.⁽³⁾

(1) ACS Facts and Figures 2008

(2) Centers for Disease Control and Prevention. Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC): Adult SAMMEC and Maternal and Child Health SAMMEC software, 2002c. <http://www.dcd.gov/tobacco/sammeec>

(3) American Cancer Society. Cancer Facts & Figures 2008. Atlanta: American Cancer Society, 2008.

1. Tobacco Use

Tobacco use is the leading preventable cause of cancer in the United States and Connecticut (see Section II-A, *The Burden of Cancer in Connecticut*). The efficacy of evidence-based statewide tobacco control programs that are comprehensive, sustained, and accountable has been well documented.⁴ Reducing the use of tobacco can significantly reduce the burden of cancer. The Institute of Medicine (IOM) and the President's Cancer Panel recommended that each state should fund tobacco control activities at the level suggested by the Centers for Disease Control and Prevention (CDC).^{5,6} The 2007 CDC recommendation for Connecticut is an annual investment of \$43.9 million to implement known successful tobacco control strategies. The Committee's review also identified the existence of effective cessation treatments for tobacco users with severe mental illness and/or substance abuse disorders, one among many population groups experiencing significant tobacco-related disparities.⁷ The primary obstacle to implementing cessation services in Connecticut is their cost.

Proven strategies for comprehensive tobacco control programs include smoking bans, tobacco use prevention programs, high cigarette taxes, and smoking cessation programs. Connecticut's tobacco tax and smoking bans are among this nation's most effective and meet CDC guidelines, but Connecticut lacks the comprehensive tobacco cessation services, community efforts, and media campaigns that are known to dramatically reduce the prevalence of tobacco use. Legislation adopted in 2008 authorized the Tobacco and Health Trust Fund Board of Trustees to recommend spending \$6.8 million from the Trust Fund for tobacco control specific interventions. With this money and additional funds from the CDC, Connecticut will spend \$8.3 million in 2009.

The CDC's *Guide to Community Preventive Services (Community Guide)* identifies the following interventions for which the evidence is strongest for strategies to reduce and prevent tobacco use and exposure to environmental tobacco smoke:⁸

- Increasing the unit price of tobacco
- Smoking bans and restrictions
- Media education campaigns combined with other interventions
- Community mobilization when combined with additional interventions
- Comprehensive, multi-component cessation programs that include health care provider reminder systems, telephone support for clients, and reducing client out-of-pocket costs for effective cessation therapies.

With its high cigarette tax and tough smoking ban, Connecticut has taken significant steps on the path to reducing tobacco-related cancers as well as other tobacco-related illnesses. Connecticut is one of eight states in the U.S. that does not provide Medicaid insurance coverage for smoking cessation.⁹ Although legislation was passed in 2002 to authorize funding for this purpose, no funding has been allocated. Smoking cessation and public prevention and education programs are crucial for achieving further significant reductions in tobacco use, preventing thousands of future tobacco-related deaths, and saving millions in health care dollars spent for treating tobacco-related diseases. Only through a sustained, coordinated, and strategic approach can this be achieved.

The Synar Amendment enacted by Congress in 1992 is aimed at decreasing access to tobacco products among individuals under the age of 18. This also requires states to enforce laws prohibiting sales to this population with a goal of reducing sales to minors to 20% or less. Since 1999 Connecticut's Targeted Reduction Schedule with Retailer Violation Rate has been less than 20% each year. In 2008 it was 13.7%. Connecticut's success in reducing underage youth access to tobacco was due to state tobacco law enforcement by the Department of Revenue Services (DRS) and the Department of Mental Health and Addiction Services (DMHAS); the enactment of legislation such as Connecticut General Statute Section 12-295a and 53-344 that provides meaningful, yet rational penalties for non-compliance; and the work of investigators and youth agents in the Tobacco Prevention and Enforcement Program (TPEP) who conduct inspections and merchant education along side local police and resident troopers.¹⁰

The Connecticut Tobacco Use Prevention and Control Plan, produced in 2002 by the Connecticut's Department of Public Health (DPH) and DMHAS with funding from the state legislature, is a plan that is comprehensive, sustainable, evidence based, and data-driven.¹¹ Its recommendations closely follow the CDC's *Best Practices for Comprehensive Tobacco Control Programs* which calls for comprehensive state and local action directed at social and environmental changes. *The Connecticut Tobacco Use Prevention and Control Plan* includes examples of effective programs, such as regional coalitions, and addresses population groups for whom smoking rates are the highest. The Connecticut Cancer Partnership supports the goals and objectives of this Plan and advocates for funding its implementation. The Prevention Committee and the DPH Tobacco Use Prevention and Control Program have established a joint Tobacco Workgroup to update the state tobacco control plan.

2. Nutrition, Physical Activity, and Obesity

Poor nutrition, inadequate physical activity, and obesity are interacting risk factors for several types of cancer. Indeed, obesity is the nation's fastest rising public health problem (see Section II-A, the Burden of Cancer in Connecticut). The tobacco control experience has demonstrated that policy and environmental change are essential components of a comprehensive approach to reduce health risk and change behavior. To stop the obesity epidemic, similar purposeful public policy and community-based interventions are needed to reinforce individual efforts to achieve and maintain a healthy body weight and adequate levels of physical activity throughout life.¹²

Connecticut residents do not consume recommended amounts of fruits and vegetables (Section IIA). Interventions that go beyond increasing individual awareness of the value of consuming fruits and vegetables and education programs regarding healthy eating are needed. Such interventions will require interpersonal, community-level, and environmental approaches. Successful, evidence-based interventions that increase access to fruits and vegetables are population and policy based. They include programs at day-care centers, schools, universities, and worksites; local farmers' markets; vouchers for seniors; and the Special Supplemental Nutrition Program for Women, Infants, and Children. Farm-to-school programs, school gardening projects, and other community initiatives may also offer opportunities for encouraging healthy eating behavior change. (See Burden section) The national *Fruits and Veggies – More Matters™* initiative is replacing the *5 A Day* approach for increasing public awareness about consuming these foods and builds upon the body of science that indicates that increased daily consumption of fruits and vegetables may help prevent many chronic diseases.¹³

Poor nutrition, physical inactivity, and obesity are risk factors that are associated not only with cancer but with multiple chronic diseases, including diabetes and heart disease. In addition to being multi-causal, this triad of risk factors is closely integrated and should be dealt with collectively rather than as stand alone, categorical issues. American Cancer Society (ACS) has developed nutrition and physical activity guidelines for cancer prevention that are updated every five years.¹⁴ In their common agenda white paper the American Cancer Society, American Diabetes Association, and American Heart Association note “The collaboration between ACS, ADA, and AHA offers several unique new opportunities to advance a collective cause for prevention and early detection of cancer, heart disease and diabetes. First and foremost, this collaboration holds the potential to achieve greater progress in health promotion and disease prevention.”¹⁵ Committee members agree that a comprehensive integrated approach to chronic disease prevention makes the most sense. This approach can reinforce community capacity and support infrastructure to reach high-risk population groups (low income, low literacy, isolated). It also maximizes the most effective use of limited resources. The Prevention Committee also endorses “*Healthy Eating and Active Living: Connecticut’s Plan for Health Promotion*”, released by the Department of Public Health in 2005, as a model for addressing nutrition, physical activity, and obesity challenges.¹⁶

3. Environmental Cancer Risk

a. Exposure to Carcinogens

Workplace exposures and pollutants account for more than 30,000 cancer deaths in the U.S. each year, and disproportionately affect low-income workers and communities.¹⁷ Preventive measures in these settings are largely based on identifying and then reducing exposures to the highest risk substances, and addressing the causes of disparities.

All occupational exposures to cancer causing agents can be prevented. Protection from carcinogenic substances in the workplace involves a combination of aggressive, scientifically-based regulations, worker education, and surveillance. The Environmental and Occupational Health Assessment program at DPH evaluates and quantifies health risks from exposures to environmental contaminants, and attempts to decrease these risks by working with the Connecticut Department of Environmental Protection (DEP) and informing the public and health care professionals about environmental hazards. DPH is developing a comprehensive system, the Environmental Public Health Tracking Program, for linking and reporting environmental, human exposure, and health effects data. The DPH Environmental Epidemiology group works to add questions about perception of environment-related risks to the BRFSS.

Global efforts to harmonize the classification and labeling of chemical substances the Global Health and Safety Initiative (GHS) provide a unique opportunity for occupational cancer prevention training. University of Connecticut Health Center staff has developed a risk assessment training program that builds on the GHS initiative. The training program uses “control banding”, a chemical risk management model to help employers and workers identify hazardous materials in their workplaces. The model is particularly attractive because it uses chemical classification systems like the GHS to help workplaces readily identify chemical carcinogens. Workplaces in Connecticut have used the model to identify carcinogens that should be replaced with safer substitutes.

b. Exposure to Ultraviolet Radiation

Skin cancer is the most common type of cancer in the United States, developing in approximately 1,000,000 Americans each year. Most of these are basal and squamous cell cancers that are highly curable if detected early. Melanoma is the most serious type of skin cancer. Melanoma is one of the few cancers for which the incidence rate is increasing, most strikingly in men, and one of the most preventable (see Section II-A). Exposure to ultraviolet (UV) rays (both A and B) appears to be the most important environmental risk factor for the development of skin cancer. An individual’s risk of skin cancer is related to the lifetime exposure to UV rays from the sun and artificial sources, such as tanning booths/beds and sunlamps. Although the risk for skin cancer is greatest for fair-skinned people, skin cancer can develop in anyone regardless of skin pigmentation.

Sun-protective behaviors can lead to substantial reductions in sun exposure, thereby reducing the risk of developing both melanoma and non-melanoma skin cancer. CDC recommendations to reduce exposure to sunlight include minimizing exposure to the sun during peak hours (10 am to 4 pm), wearing skin-protective clothing, applying broad spectrum sunscreen, and avoiding use of sunlamps or tanning beds.¹⁸ This is especially true for children, as childhood sunburns can increase the risk of skin cancer later in life.

Adults and adolescents do not regularly protect themselves from UV exposures when outside on sunny days. Overall, there has been rather limited progress in improving sun protection practices and reducing sunburns among U.S. youth despite widespread sun protection campaigns. CDC reported that sunburn prevalence among U.S. adults increased from 1999-2004. Men were more likely to have had sunburn than women (37% vs. 30%). Among the 33.7% of adults who reported sunburn in the preceding year, 20.7% reported four or more sunburns (all survey years combined). In Connecticut the prevalence of sunburn increased from 33.3% in 1999 to 43.1% in 2004 which was statistically significant.¹⁹

The percentage of high school students who wore sunscreen with an SPF of 15 or higher most of the time or always has actually decreased significantly from 13.3% in 1999 to 10.3% in 2007.²⁰ The use of indoor tanning lamps or booths is prevalent among young adults and women who perceive a tanned appearance as healthy and attractive. Twenty-nine states, including Connecticut, have passed legislation limiting a minor’s access to indoor tanning facilities.

4. Excessive Alcohol Use

Alcohol consumption directly and indirectly accounts for three to six percent of all cancer deaths.²¹ A causal association has been established between alcohol consumption and cancers of the oral cavity, pharynx, larynx, esophagus, liver, colon, rectum, and female breast, and an association is suspected for pancreatic and lung cancers.²² The combination of smoking and drinking alcohol multiplies the risk.²³

The American Cancer Society's recommendation (for those who drink) is to limit intake to two drinks per day for men and one per day for women. In 2007, 5.9% of Connecticut adults reported having greater than two drinks per day for males and one drink per day for females²⁴, and 26.2% high school students reported drinking five or more drinks on one occasion in 2007.²⁵ Sixty-three percent of 12th graders and 35% of 9th graders in Connecticut reported at least one drink of alcohol in the last 30 days. Binge drinking was reported by 42% of 12th graders and 13% of 9th graders.²⁶

There are twenty-eight Connecticut communities using evidence-based strategies to address underage drinking under the Center for Substance Abuse Prevention (CSAP) Strategic Prevention Framework (SPF) Grant Program administered by the Connecticut (DMHAS).²⁷ The SPF strategies implemented in Connecticut communities include:

- Communities Mobilizing for Change on Alcohol – a community-organizing program designed to reduce youth (13 to 20 years of age) access to alcohol by changing community policies and practices
- Strengthening Families Programs – a family skills training program designed to increase resilience and reduce risk factors for behavioral, emotional, academic, and social problems in children 3-16 years old
- Media campaigns focused on social access, family norms, peer norms, and brain development

- Increased law enforcement of underage drinking laws
- Merchant education
- Compliance checks

5. Unprotected Sex and Infectious Agents

Infectious agents are any organisms, such as viruses, parasites, or bacteria that are capable of invading body tissues, multiplying, and causing disease. Several infectious agents cause or are strongly linked to cancer, including human papilloma virus (cervical cancer), hepatitis B and C viruses (liver cancer), Epstein-Barr virus (Burkitt's lymphoma), human herpes viruses (Kaposi sarcoma), human T-lymphotropic virus (leukemia, lymphoma), and the bacterium *Helicobacter pylori* (gastric cancer). In the United States, United Kingdom, and other developed countries, about 10% of cancers are linked to infections, whereas in the developing world, 25% of cancers are infection-related.^{28, 29} Methods of transmission include: sexual intercourse, intravenous drug use, mother-to-fetus transmission, mother-to-child during breastfeeding, and transfusion of cellular blood products. Infectious agents and the cancers attributed to each worldwide are summarized in Table 1.

Vaccine development is the ultimate goal to prevent cancers related to these viruses, with the ideal vaccine conferring immunity by preventing infection from ever occurring. To date, no vaccine is available to prevent hepatitis C. However, an effective vaccine for hepatitis B has been available since 1982. The rate of new hepatitis B infections has declined by approximately 80% since 1991, when a national elimination strategy was implemented in the United States. The decline has been greatest among children born since 1991, when universal vaccination of infants was first recommended.

Table 1. Infectious Agents Cases Per Year Worldwide

Infection	Cancer	% Virus positive	No. of cases	Vaccine developed
HPVs	Cervical cancer	100%	490,000	✓
HBV	Liver cancer	50%	340,000	✓
HCV	Liver cancer	23%	195,000	✗
EBV	Burkitt lymphoma	>90%	113,000	✗
	Hodgkin's lymphoma	>50%		
	Post-transplant lymphoma	>80%		
	Nasopharyngeal carcinoma	100%		
KSHV	Kaposi sarcoma	100%	66,000	✗
	Primary effusion lymphoma	100%		
	Multicentric Castleman's	>50%		
HTLV-1	Adult T cell leukemia	100%	3,000	✗
H. pylori	Gastric carcinoma	30%	603,000	✗
	MALT lymphoma	100%		

Source: The global burden of infection-related cancer in 2002. Parkin DM. The global health burden of infection-associated cancers in the year 2002. *Intl J Cancer*, 2006: 847-853.

Since January 1994, Connecticut has required that all infants receive immunization against hepatitis B within the first six months of life. In August 2000, hepatitis B vaccination also became a requirement as a catch up intervention, for all students entering the seventh grade who were born before 1994. With this strategy, hepatitis B-associated cancer will become a rarity for our younger generations.

The human papilloma virus (HPV) group includes over 100 viruses, of which more than thirty types can be passed from one person to another through sexual contact.³⁰ Studies have shown that infection with certain types of HPV are a major cause of cervical cancer, may be a strong risk factor for oropharyngeal cancer, and may play a role in cancers of the anus, vulva, vagina, and penis. Sexual behaviors that increase the risk of sexually transmitted infections associate with cancer include sexual intercourse without the use of a condom and multiple sex partners. In many cases, risk for contracting HPV and other STDs can be reduced by decreasing potential exposure to the virus by limiting the number of lifetime sexual partners, avoiding partners who have had multiple sexual partners, and, in the case of cervical cancer, by women delaying their first sexual experience.³¹ The DPH makes this vaccine available at no cost, through the federally funded Vaccines for Children (VFC) Program, for VFC-eligible girls (~30% of 10-18 year olds).³² According to Lynn Sosa, M.D., Medical

Epidemiologist, at the Connecticut DPH, the physician surveys (pediatric, family practice, and obstetrics/gynecology) showed that the cost to stock the vaccine and inadequate reimbursement from insurance, including Medicaid for women age 19-26, are barriers to widespread use. There has been considerable discussion regarding whether or not this vaccine should be mandated for pre-teens. The state epidemiologist and the state Vaccine Advisory Committee have recommended against mandatory vaccination, but support voluntary vaccination as recommended by the national Advisory Committee on Immunization Practices (ACIP). (See Research in Section I-B).

Note to Reader: Measures, Targets, and Data sources may be found in the Appendix C. with a preface in the Implementation section: Tracking Plan Progress. All targets in the objectives are 2013 targets. Additional 2010 targets may be listed in the tracking document.

Prevention Objectives

OBJECTIVE 1. Decrease tobacco use.

- Decrease tobacco use among adults (18 and over) from 15.4% to 12%.
- Decrease tobacco use among youth (grades 9-12) from 21.1% to 10%.
- Decrease tobacco use among of low socioeconomic status adult smokers by 25%.

Strategies:

1. Develop statewide smoking cessation programs that meet Public Health Service and National Action Plan guidelines, including counseling, pharmacotherapy, and a related counter marketing campaign. These interventions should be available at no charge for Medicaid and uninsured participants, and individuals with mental health issues.
2. Increase the state tobacco tax (including smokeless tobacco) and remove exemptions to Connecticut's smoking ban in public places.
3. Initiate a statewide tobacco education media campaign like those shown to be effective in New York City and states such as Florida, Maine, Massachusetts, and California.
4. Update and implement the *Connecticut Tobacco Use Prevention and Control Plan* through a combination of federal, state, and local funding at the levels recommended by CDC Guidelines.
5. Collaborate across agencies to institute a statewide Coordinated School Health approach within school districts.
6. Create and expand coordinated partnerships to carry out tobacco prevention and control strategies.
7. Create indicators to determine socio-economic status (SES) of BRFSS respondents in order to measure tobacco use prevalence among lower SES smokers. Extrapolate to Connecticut data if appropriate possible.

OBJECTIVE 2. Increase the percentage of people who consume at least five fruits and vegetables per day.

- Increase the percentage of adults who consume at least five fruits and vegetables per day from 28.5% to 75%.
- Increase the percentage of youth (high school and middle school) from 21.5% to 75% who consume at least five fruits and vegetables per day.

Strategies:

1. Adopt as the standard for state and local agencies, institutions, and communities, DPH's Healthy Eating and Active Living (HEAL) Plan to address nutrition, physical activity, and obesity.
2. Develop and implement policies for food, nutrition, and physical activity education and interventions, including:
 - menu and menu board nutrition labeling in chain restaurants
 - community-based intervention research
 - nutrition education curriculum to support healthier eating in schools and for at risk populations
 - tax breaks for physical activity projects such as building walking trails
 - environmental interventions to reduce barriers and provide safe, affordable and accessible opportunities for physical activity for adults and children in communities, schools and workplaces

3. Incorporate the physical activity, nutrition, and tobacco-use approach (PANT) in Coordinated School Health Programs and existing school district Wellness Programs.
4. Coordinate efforts to increase consumption of fruits and vegetables to meet current Dietary Guidelines for Americans.
5. Use existing, evidence-based models to promote healthy food choices at the community and individual levels.
6. Identify barriers and motivating factors for healthy nutrition for all age and ethnic groups, and implement interventions to address them.
7. Identify and implement proven community-based physical activity interventions to promote more active lifestyles among children and adults.
8. Develop new indicators that provide better measurement outcomes for nutrition, physical activity, obesity, and either add them to current BRFSS activities or conduct surveys to address them.

OBJECTIVE 3. Increase the percentage of people who engage in regular physical activity, (follow ACS activity guidelines), from 52.4% for adults and 45.1% of youth to 70%.

Strategies:

1. Adopt as the standard for state and local agencies, institutions, and communities, DPH's Healthy Eating and Active Living (HEAL) Plan to address physical activity.
2. Develop and implement policies for physical activity education interventions, including:
 - community-based intervention research
 - tax breaks for physical activity projects such as building walking trails
 - environmental interventions to reduce barriers and provide safe, affordable and accessible opportunities for physical activity for adults and children in communities, schools and workplaces
3. Incorporate the physical activity, nutrition, and tobacco-use approach (PANT) in Coordinated School Health Programs and existing school district Wellness Programs.
4. Identify and implement proven community-based physical activity interventions to promote more active lifestyles among children and adults.
5. Develop new indicators that provide better measurement outcomes for physical activity and obesity and either add them to current BRFSS activities or conduct surveys to address them.
6. Monitor trends over time for levels of overweight and obesity.

OBJECTIVE 4. Reduce cancer-related environmental exposures at home and in the workplace.

Strategies:

1. Partner with federal, state and local governments, businesses, organizations, and communities to identify environmental risk factors.
2. Develop variables to measure knowledge about environmental hazards, and use in pre/post tests and surveys, including population-based surveys such as the Connecticut Behavioral Risk Factor Survey.
3. Assess the use of hazardous substances in Connecticut's manufacturing sectors and make report findings broadly available.
4. Continue the Interstate Clearinghouse on Chemicals and the Coalition for Safe and Healthy Connecticut efforts to classify chemicals existing in workplaces and commercial goods by degree of hazard, and to manage available data on chemicals, including, but not limited to, information on uses, hazards and environmental concerns.
5. Establish links on the Connecticut Cancer Partnership web site to information resources on cancer-related environmental exposures, including the Interstate Clearinghouse on Chemicals.
6. Educate the public, employers, health professionals, and policy-makers about cancer-related environmental exposures, especially radon, pesticides, and home use products, including disparities in exposure risk for specific population groups.
7. Establish policies to reduce high priority chemical hazards in workplaces and to require protective measures for potential cancer-related environmental exposures.
8. Establish an Innovations Institute to serve as a resource for Connecticut business and industry about environmental exposures to carcinogens, the search for and transition to safer alternatives where feasible, and related education programs.
9. Implement primary preventive measures for reducing the usage of chemicals of high concern in Connecticut.

OBJECTIVE 5. Increase the percentage of persons who use sunscreen and practice sun/ultraviolet protection behaviors.

- Increase the percentage among adults of sunscreen use from 50.4% to 75%.
- Increase the percentage among youth of sunscreen use from 10.3% to 75%.

Strategies:

1. Establish a population-based surveillance system to monitor trends in sun-safety knowledge, attitudes, and behaviors among youth and adults within the state.
2. Implement and evaluate education programs for elementary school children and their parents to teach them about the harms from UV exposure, especially to children, and what they can do to reduce lifetime risk of skin cancer.
3. Develop, implement, and evaluate a sun-safety media education campaign targeting young adults.
4. Implement sun-protection policies such as shade/trees in schoolyards and the wearing of protective clothing and wraparound sunglasses with UV absorption factor.
5. Develop, implement, and evaluate a campaign for pediatricians to inform parents about caring for the skin of babies and young children.
6. Increase awareness of the dangers of artificial sun tanning.
7. Add sun protection questions to CT BRFSS and YRBS.

OBJECTIVE 6. Decrease the percentage of adults and youth consuming alcohol and increase the practice of safe sexual behaviors.

- Decrease from 5.9% to 4% the percentage of adults who exceed the ACS recommendations for drinks per day.
- Decrease from 46% to 40% the percentage of high school students who consume alcohol. Reduce to 20% the percentage of high school students who report binge drinking.

Strategies:

1. Add questions to BRFSS and YRBS or conduct surveys to monitor trends in knowledge, attitudes, and behavior trends related to high cancer-risk alcohol and sexual behaviors among adults in Connecticut.
2. Use existing or establish new communications forums/networks (i.e. Connecticut Clearinghouse) to share evidence-based programs and patient education/behavioral approaches to reduce cancer-related high risk alcohol and sexual behaviors. Groups to include in such forums/networks might include community-based clinics, Regional Action Councils, MAAD, and public/mental health programs.
3. Continue existing efforts, including DPH programs, to promote voluntary use of HPV vaccine for eligible girls.
4. Continue provider education about DPH EIP passive and active surveillance programs related to HPV and cervical cancer.
5. Establish statewide network of local partnerships, such as Coordinated School Health Councils and teen programs, to promote safe sex practices, alcohol-free activities, and associated environmental and policy changes, with joint participation and support from DPH and SDE.

- 1 American Cancer Society Press Release: American Cancer Society and Institute of Medicine: 60,000 Cancer Deaths and 100,000 New Cases Avoidable Annually. June 30, 2003. http://www.cancer.org/docroot/MED/content/MED_2_1x_American_Cancer_Society_and_Institute_of_Medicine_60000_Cancer_Deaths_and_100000_New_Cases_Avoidable_Annually.asp. Morantz C, Torrey B. Clinical Briefs. *American Family Physician*. February 15, 2004; 997. <http://www.aafp.org/afp/20040215/clinical.html>.
- 2 Gotay CC. Behavior and Cancer Prevention. *J Clin Oncol*. 2005 Jan; 10;23(2):301-10
- 3 Williams DR, Costa MV, Odunlami AO, Mohammed SA. Moving Upstream: How Interventions that Address the Social Determinants of Health can Improve Health and Reduce Disparities, *Journal of Public Health Management & Practice* 2008 (Suppl): S8-S17.
- 4 Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs – 2007*. Atlanta: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. October 2007.
- 5 Institute of Medicine. *Ending the tobacco problem: A blueprint for the nation*. Washington, DC: The National Academies Press. 2007.
- 6 Reuben SH. *Promoting Healthy Lifestyles: Policy, Program, and Personal Recommendations for Reducing Cancer Risk*. President's Cancer Panel 2006-2007 Annual Report. USDHHS:NIH.NIH.NCI. August 2007.
- 7 Lasser K, Boyd JW, Woolhandler S, Himmelstein DU, McCormick D, Bor DH. Smoking and mental illness: A population-based prevalence study. *JAMA*. 2000 Nov 22-29;284(20):2606-10.
- 8 Tobacco Use Prevention and Control. Guide to Community Preventive Services. www.thecommunityguide.org/tobacco/.
- 9 Centers for Disease Control and Prevention. State Medicaid Coverage for Tobacco-Dependence Treatments - United States, 2006. *Morbidity and Mortality Weekly Report*. 2008 Feb 8; 57(5):117-122. www.cdc.gov/mmwr/preview/mmwrhtml/mm5705a2.htm.
- 10 Connecticut Department of Mental Health and Addiction Services, *Summary of Results On the Reduction of Underage Sale of Tobacco*. October 1, 2007 to September 30, 2008. <http://prevention.samhsa.gov/tobacco/default.aspx>
- 11 Connecticut Department of Public Health. *Connecticut Tobacco Use Prevention and Control Plan, 2002*. Hartford, CT: Connecticut Department of Public Health. 2002.
- 12 Roux L, Pratt M, Tengs TO, et al. Cost Effectiveness of Community-Based Physical Activity Intervention. *Am J Preventive Medicine*. 2008; 35(6):578-588.
- 13 Centers for Disease Control and Prevention. Fruits and Veggies More Matters. <http://www.fruitsandveggiesmatter.gov/>
- 14 American Cancer Society, American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention: Reducing the Risk of Cancer With Healthy Food Choices and Physical Activity *CA Cancer J Clin* 2006 56: 254-281 <http://caonline.amcancersoc.org/content/vol56/issue5/>
- 15 Eyre H, Kahn R, Robertson RM. ACS/ADA/AHA Collaborative Writing Committee. Preventing cancer, cardiovascular disease, and diabetes: a common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *CA Cancer J Clin*. 2004; 54:190-207. <http://caonline.amcancersoc.org/cgi/content/full/54/4/190>.
- 16 Connecticut Department of Public Health. *Healthy Eating and Active Living: Connecticut's Plan for Health Promotion*. Hartford, CT: Connecticut Department of Public Health. 2005.
- 17 American Cancer Society. *Cancer Facts & Figures 2006*. Atlanta. American Cancer Society 2006
- 18 Centers for Disease Control and Prevention. Preventing Skin Cancer by Reducing Exposure to Ultraviolet Radiation. Guide to Community Preventive Services. www.thecommunityguide.org/cancer/skin.
- 19 Centers for Disease Control and Prevention. Sunburn Prevalence Among Adults – United States, 1999, 2003, and 2004. *Morbidity and Mortality Weekly Report*. 2007 June 1; 56 (21):524-528.
- 20 Centers for Disease Control and Prevention. Youth Risk Behaviors Surveillance System (YRBSS) www.cdc.gov/yrbss and Center for Disease Control and Prevention. Youth Risk Behavior Surveillance – United States, 2007. *Surveillance Summaries. Morbidity and Mortality Weekly Report*. 2008 June 6; 57(SS-4).
- 21 Brownson RC, Reif JS, Alavanja MCR, and Bal DG. In: Brownson RC, Remington PL, Davis JR, eds. *Chronic Disease Epidemiology and Control*. 2nd ed. Washington, DC: American Public Health Association. 1998: 335-73.
- 22 Boffetta P, Hashibe M. Alcohol and Cancer. *Lancet Oncology*. 2006; 7:149-156.
- 23 Pelucchi C, Gallus S, Garavello W, Bosetti C, La Vecchia C. Alcohol and tobacco use, and cancer risk for upper aerodigestive tract and liver. *Eur. J. Cancer Prev*. 2008; 17:340-4.
- 24 Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2007. www.cdc.gov/brfss.
- 25 Centers for Disease Control and Prevention. Youth Risk Behaviors Surveillance System (YRBSS) www.cdc.gov/yrbss.
- 26 Ibid
- 27 Center for Substance Abuse Prevention Guidance Document for the Strategic Prevention Framework State Incentive Grant Program – 2007 http://download.ncadi.samhsa.gov/csap/spfsig/Final_SPFGuidance_Jan04_2007.pdf
- 28 American Cancer Society. *Cancer Facts & Figures 2008*. Atlanta: American Cancer Society, 2008.
- 29 Cancer Research UK. *CancerStats: Infectious Agents and Cancer*. March 2006: 1-8. http://publications.cancerresearchuk.org/WebRoot/crukstoredb/CRUK_PDFs/CSINF06.pdf.
- 30 National Cancer Institute Fact Sheet 3.20, *Human Papillomaviruses and Cancer: Questions and Answers*. <http://www.cancer.gov/cancertopics/factsheet/Risk/HPV>.
- 31 National Cancer Institute Fact Sheet 4.21, *Human Papillomavirus (HPV) Vaccines: Questions and Answers*. <http://www.cancer.gov/cancertopics/factsheet/Prevention/HPV-vaccine>.
- 32 Cartter,ML. HPV Vaccine Target Groups and Benefits: Cervical Cancer Epidemiology in Connecticut, 1994–2003. *Connecticut Epidemiologist*. 2007 Feb: 27(2).