

2011

CHRONIC DISEASE IN NEBRASKA

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EXECUTIVE SUMMARY

Chronic diseases – such as heart disease, stroke, cancer, and diabetes – are among the most common, costly, and preventable of all health problems in the U.S. The purpose of this report is to highlight the burden of chronic disease, as well as the prevalence of associated risk and protective factors, in Nebraska.

Highlights of the report include:

- Fewer than 1 in 4 Nebraska adults consume more than 5 or more servings of fruits and vegetables per day.
- Nearly 1 in 3 Nebraska adults do not meet the recommended guidelines for physical activity.
- Nearly 2 in 3 Nebraska adults are overweight or obese.
- About 1 in 6 Nebraska adults currently smoke cigarettes.
- Over half of all adult cigarette smokers in Nebraska have stopped smoking for one or more days during the past year in an attempt to quit.
- Since the late 1990s, the percentage of Nebraska youth who smoke has been cut in half, falling to 18% in 2009.
- Tobacco-related illnesses account for over 2,200 deaths per year among Nebraska residents.
- About 1 in 4 Nebraska adults have been diagnosed with high blood pressure, and nearly 80% of those with high blood pressure take anti-hypertensive medication.
- Approximately 1 in 4 Nebraska adults have not had a blood cholesterol test within the past 5 years.
- Among Nebraska adults who have been tested for blood cholesterol, more than 1 in 3 have been diagnosed with high blood cholesterol.
- In 2009, acute myocardial infarctions accounted for almost 2,700 hospitalizations among Nebraska residents, while strokes accounted for another 3,400 hospitalizations.
- Approximately 1 in 4 Nebraska women age 40 and older have not had a mammogram within the past 2 years.
- Approximately 1 in 5 Nebraska women age 18 and older have not had a Pap test within the past 3 years.
- In 2009, over 60% of Nebraska adults age 50 and older had ever had a sigmoidoscopy or a colonoscopy; at the beginning of the decade (2001), this figure was under 40%.
- Breast cancer is the most frequently diagnosed malignancy among Nebraska women, while prostate cancer is the most frequently diagnosed among Nebraska men; lung and colorectal cancers are the #2 and #3 most common diagnoses for both men and women.
- Nearly 1 in 10 Nebraska adults has been diagnosed with diabetes.
- Among Nebraska adults, diabetes is about seven times more likely among those who are obese compared to those of normal weight.

INTRODUCTION

Chronic diseases – such as heart disease, stroke, cancer, and diabetes – are among the most common, costly, and preventable of all health problems in the U.S. The purpose of this report is to highlight the burden of chronic disease, as well as the prevalence of associated risk and protective factors, in Nebraska.

Data from a variety of sources are presented throughout this report, including the Nebraska Behavioral Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Survey (YRBS), the National Survey on Children’s Health (NSCH), Nebraska death certificates, Nebraska hospital discharge data, and the Nebraska Cancer Registry.

This report is a collaborative effort among programs within Nebraska Department of Health and Human Services Division of Public Health. These programs include the Cardiovascular Health, Comprehensive Cancer Control, Diabetes Prevention and Control, Tobacco Free Nebraska, and Nutrition and Activity for Health Programs within the Public Health Promotion Unit, and the Office of Community Health and Performance Management within the Community Health Planning and Protection Unit.

The above programs would like to acknowledge Ericka Welsh, PhD, Bryan Rettig, MS, David DeVries, MS, and Lazarous Mbulo, PhD, for their assistance with analyzing and interpreting data pertinent to this report.

STATE OF NEBRASKA – A DEMOGRAPHIC PROFILE



According to the US Census, the population of Nebraska included nearly 1.8 million people in 2009. Approximately 91% of Nebraskans are white, nearly 5% are black, and the remaining 4% are identified as American Indian/Alaskan Native, Asian, Native Hawaiian/Pacific Islander, or two or more races. Additionally, about 8% of Nebraska residents are also identified as Hispanic ethnicity. Nearly 53% of Nebraska's population resides in an urban metropolitan location, 21% resides in an

urban *non*-metropolitan location, and 26% resides in large and small rural settings.

In 2009, about 1 in 10 (9.9%) Nebraskans were below the poverty rate (source: US Census). During the same year, about 93% of Nebraska adults had at least a high school degree (source: NE BRFSS).

Of Nebraskans aged 18-64 years, 15.1% reported not currently having health care coverage in 2009. During the same year, about 87% of Nebraskans aged 18 years and older reported their health status as excellent, very good or good, while 13% reported their health status as fair or poor (source: NE BRFSS).

In 2008, 271,368 Nebraska residents were enrolled in Medicare. Slightly fewer, 261,001, were enrolled in Medicaid at some time during fiscal year 2007 (source: Center for Medicare and Medicaid Services).

According to Nebraska vital statistics, 16.6% of all deaths are among adults aged 45-64 years old. The average age at death for Nebraskans is 75.0 years.

RISK AND PROTECTIVE FACTORS RELATED TO CHRONIC DISEASE

Fruit and Vegetable Consumption

Compared to people who only eat small amounts of fruits and vegetables, those who eat more generous amounts tend to have reduced risk of chronic diseases, including cardiovascular disease, stroke, type 2 diabetes, and some types of cancer.

According to the 2005 Dietary Guidelines for Americans, women need at least 7-9 servings (3.5-4.5 cups) and men need at least 9-10 servings (4.5-5 cups) of fruits and vegetables per day.

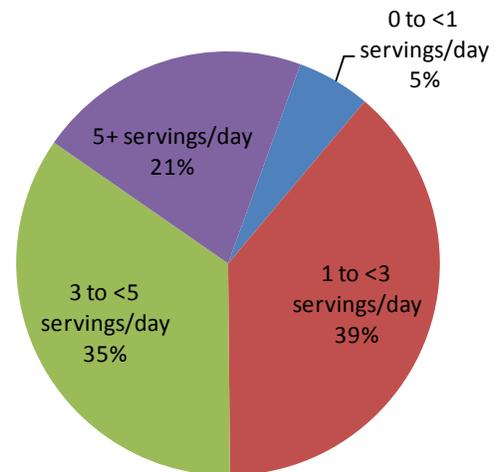


Despite these recommendations, fewer than 1 in 4 adults consume 5 or more servings of fruits and vegetables per day (Figure 1) and fewer than 1 in 10 adolescents consume both fruit ≥ 2 times/day and vegetables ≥ 3 times/day (source: NE YRBS 2009).

For more information on the Dietary Guidelines for Americans, visit www.health.gov/dietaryguidelines.

To learn more about improving healthy eating, visit www.dhhs.ne.gov/nafh.

Figure 1: Adults' consumption of fruits and vegetables by servings per day, Nebraska, 2009



Source: NE BRFSS 2009

Physical Activity

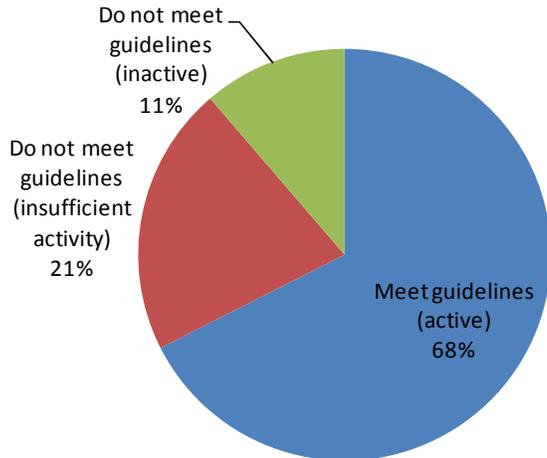
Regular physical activity can help to control body weight and reduce the risk of cardiovascular disease, type 2 diabetes, and some cancers. According to the 2008 Physical Activity Guidelines for Americans, adults ages 18-64 years should engage in muscle-strengthening activities on 2 or more days plus 150 minutes per week of moderate physical activity or 75 minutes per week of vigorous physical activity or an equivalent combination of moderate and vigorous physical activity.

Unfortunately, nearly 1 in 3 Nebraska adults do not meet the recommended guidelines for physical activity (Figure 2).

For more information on the 2008 Physical Activity Guidelines for Americans, visit www.health.gov/paguidelines.

To learn more about improving physical activity, visit www.dhhs.ne.gov/nafh.

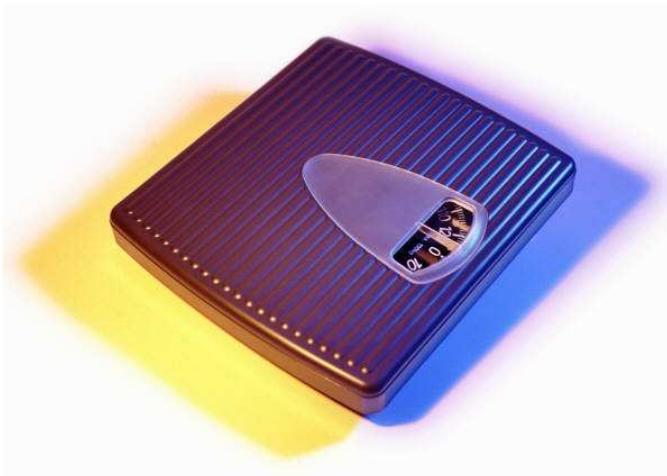
Figure 2: Adults meeting/not meeting 2008 Physical Activity Guidelines, Nebraska, 2009



Source: NE BRFSS 2009

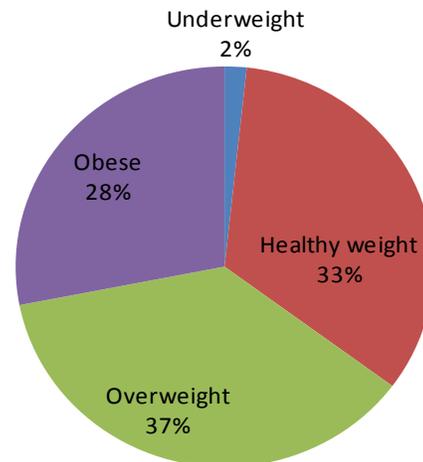
Overweight and obesity

Overweight and obesity are measured by an individual's body mass index (BMI) which is calculated as weight in kilograms \div (height in meters)². Overweight (BMI 25.0-29.9) and obese (BMI \geq 30) individuals are at increased risk for many health conditions, including hypertension, type 2 diabetes, coronary heart disease, stroke, and some cancers. Modest weight loss, such as 5-10% of total body weight, is likely to produce health benefits.



In Nebraska, nearly 2 in 3 adults are overweight or obese (Figure 3) while nearly 1 in 3 children aged 10-17 years is overweight or obese (source: NSCH 2007).

Figure 3: Adults' weight status, Nebraska, 2009



Source: NE BRFSS 2009

To learn more about preventing obesity, visit. www.dhhs.ne.gov/nafh.

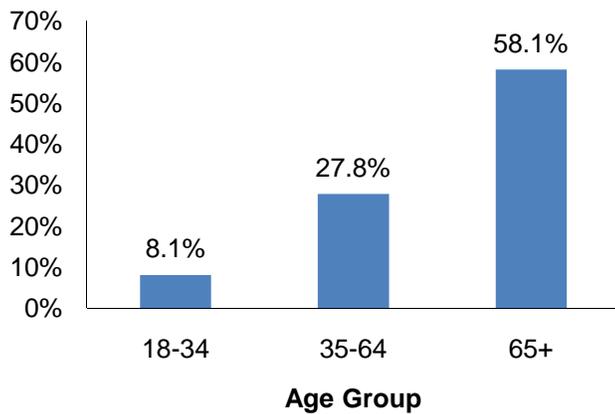
High Blood Pressure (Hypertension)

Blood pressure is the force of blood against the walls of the arteries, or in other words, the pumping action of the heart to sustain circulation. High blood pressure (also referred to as hypertension) occurs when an individual has a systolic blood pressure at or above 140 mg/dL or a diastolic blood pressure at or above 90 mg/dL. High blood pressure is a serious health concern that raises the risk for heart disease, stroke, and kidney failure. Unfortunately, high blood pressure often goes undetected or is not properly controlled. According to the American Heart Association (AHA), of those with high blood pressure, 30% do not even know they have it while an additional 25% are on medication but do not have their high blood pressure under control.

About 1 in 4 (27.1%) Nebraska adults have been diagnosed with high blood pressure.

In addition, as adults age they are more likely to have high blood pressure (Figure 4).

Figure 4: Percentage of Nebraska adults who reported ever being diagnosed with high blood pressure in 2009, by age group



Source: NE BRFSS 2009

To learn more about preventing and controlling high blood pressure, visit www.dhhs.ne.gov/cvh.

High Cholesterol

Cholesterol is a waxy, fat-like substance found in the walls of cells in all parts of the body. Excess cholesterol in the blood can become trapped in artery walls and form plaque, which can lead to atherosclerosis (or hardening of the arteries). Atherosclerosis, in turn, can result in poor blood circulation, which negatively affects all organs, including the heart.

High blood cholesterol is a major risk factor for heart disease, especially peripheral vascular disease and myocardial infarction, and should be kept below 200 mg/dL. Fortunately, healthy cholesterol levels can usually be maintained through regular physical activity, healthy eating, weight control, and a variety of lipid-lowering drugs. The National Institutes for Health (NIH) recommends that adults in America should have their cholesterol checked at least every five years.

Approximately 1 in 4 (26.1%) Nebraska adults have not had a blood cholesterol screening in the past five years. Of those that reported ever having a blood cholesterol screening, more than 1 in 3 (37.4%) reported being diagnosed with high blood cholesterol (source: NE BRFSS 2009).

To learn more about preventing and controlling high cholesterol, visit www.dhhs.ne.gov/cvh.

Tobacco Use

Tobacco use is the single most preventable cause of morbidity and death in Nebraska and the U.S. as a whole (Source: U.S. Department of Health and Human Services, National Institutes of Health, 2007). Each year, on average, approximately 2,200 Nebraskans die from tobacco-related diseases. Tobacco use causes a variety of health conditions, including cancers of the lung, kidney, pancreas, cervix, stomach, esophagus, and uterus; cardiovascular disease, including heart diseases, atherosclerosis, and aortic aneurysm; and respiratory diseases including bronchitis, emphysema, and chronic airway obstruction.



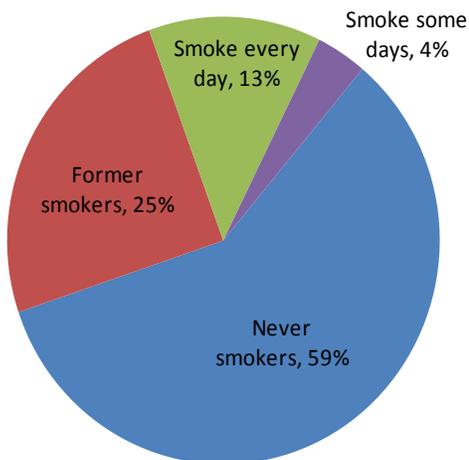
Tobacco-related diseases contribute significantly to high health care expenditures, lost productivity, and years of life lost. It is estimated that smoking-related medical costs in Nebraska total \$537 million annually, while smoking-attributable lost productivity costs are estimated at \$499 million annually (Source: Centers for Disease Control and Prevention, Smoking-Attributable Mortality,

Morbidity and Economic Costs.) In addition, the Campaign for Tobacco Free Kids projected that over 36,000 Nebraska youth under the age of 18 will ultimately die prematurely from smoking.

Despite the negative health consequences associated with smoking, about 1 in 6 Nebraska adults reported currently smoking cigarettes in 2009 (Figure 5).

Current smoking was reported in 2009 more by males, those with less than a high school education, and those with an income less than \$15,000/year.

Figure 5: Percentage of Nebraska adults who were current, former, or never smokers in 2009



Source: NE BRFSS 2009

Among Nebraska youth, the prevalence of current smoking has declined steadily from 39.2% in 1997 to 18.4% in 2009 (Source: NE YRBS). Additionally, in

2009 the reported current use of chewing tobacco or snuff/dip among high school students was 10.9%, with a higher prevalence reported among males (19.7%) than females (3.0%).

Cessation

Over half of current adult smokers (54.4%) stopped smoking for one or more days in the past year in an attempt to quit (Source: BRFSS 2009). The Nebraska Tobacco Quit-line is available to tobacco users who want to quit. According to Nebraska's Tobacco Quit-line vendor, the American Cancer Society, from June 2006 to December 2009, the 30-day sustained quit rate for those who completed telephone counseling was 36.6% at four months, 36.5% at seven months and 29.9% at 13 months.

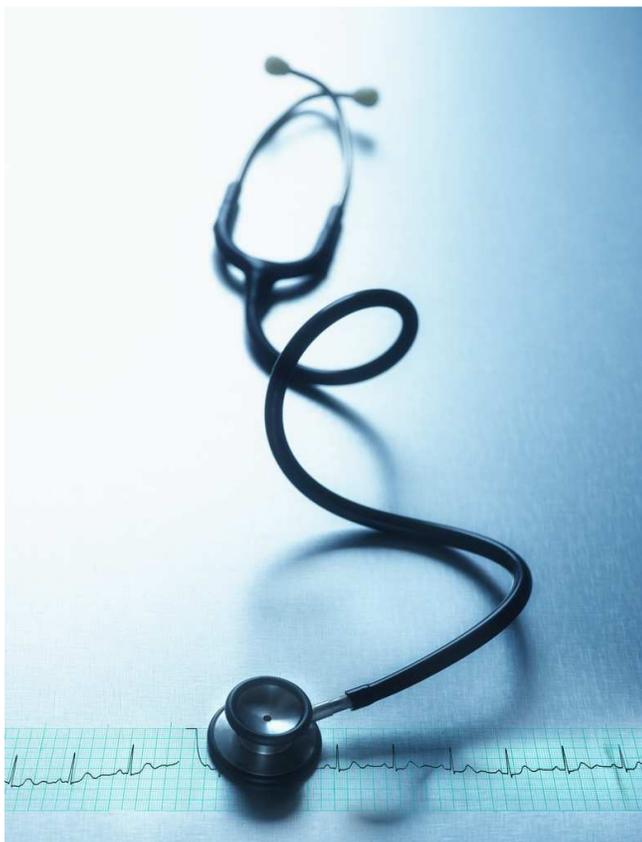
Secondhand Smoke Exposure

Increasingly, Nebraskans have adopted smoke-free policies in their homes and vehicles to prevent exposure to secondhand smoke. In 2009, 85% of Nebraskans had adopted smoke-free rules for their homes, while 80% had adopted smoke-free rules for their family vehicles (Source: 2009 Nebraska Adult Tobacco/Social Climate Survey).

Nebraska's smoke-free air law, which protects Nebraskans from secondhand smoke in public places, went into effect in 2009.

To learn more about the health effects of tobacco use and how to quit, visit www.quitnow.ne.gov.

CARDIOVASCULAR DISEASE AND STROKE



Cardiovascular disease (CVD) includes all diseases of the heart and blood vessels, including coronary heart disease, stroke, congestive heart failure, hypertensive disease, and atherosclerosis. CVD is also commonly referred to as “diseases of the circulatory system.” Cardiovascular disease is a chronic disease, with an onset that often extends decades after exposure to one or more risk factors.

Coronary heart disease (or coronary artery disease) is a narrowing of the small blood vessels that supply blood and oxygen to the heart (coronary arteries). Coronary disease usually results from the build-up of fatty material and plaque (atherosclerosis). As the coronary arteries narrow, the flow of blood to the heart can slow or stop. The disease can cause chest pain (stable angina), shortness of breath, heart attack, or other symptoms.

Stroke is another type of cardiovascular disease. It affects the arteries leading to and within the brain. A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or bursts. When that happens, part of the brain cannot get the blood (and oxygen) it needs, so brain tissue starts to die.

The risk factors for CVD include high blood pressure, smoking, high blood cholesterol, physical inactivity, unhealthy eating, being overweight or obese, and having diabetes.

Prevalence

In 2009, there were 2,678 hospitalizations for acute myocardial infarction, for an age-adjusted rate of 13.5 hospitalizations per 10,000 Nebraskans (source: NE hospital discharge data).

During the same year, there were 3,418 hospitalizations for stroke, for an age-adjusted rate of 17.2 per 10,000 Nebraskans. Among Nebraska adults aged 65 years and older, there were 2,482 hospitalizations for stroke (103.1 per 10,000 people).

Mortality

From 2007 to 2009 there were 5,598 deaths from coronary heart disease, for an age-adjusted mortality rate of 88.6 deaths per 100,000 people (source: NE death certificates).

During this same time period, there were 2,602 deaths from stroke, for an age-adjusted mortality rate of 41.0 deaths per 100,000 people.

Prevention and Control

Approximately 1 in 4 (27.1%) Nebraska adults have ever been diagnosed with high blood pressure, and

3 in 4 (79.3%) Nebraskans with high blood pressure are taking medication for their blood pressure (source: NE BRFSS 2009).

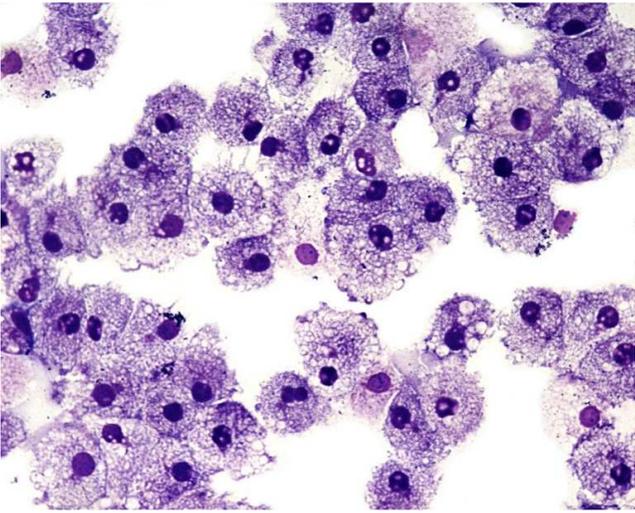
Despite the benefits of cholesterol screening, about 1 in 4 (26.1%) Nebraska adults has not had a blood cholesterol screening in the past five years,

Costs

In 2009, hospitalizations involving coronary heart disease totaled nearly \$329.5 million, with an average charge per hospitalization of \$50,500. Hospitalizations involving stroke added up to \$100.3 million, with an average hospitalization charge of \$29,400 (source: NE hospital discharge data).

To learn more about preventing cardiovascular disease and stroke, visit www.dhhs.ne.gov/cvh.

CANCER



Description

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer is caused by both external factors (e.g. tobacco, infectious organisms, chemicals, and radiation) and internal factors (e.g. inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate or promote carcinogenesis. Ten or more years often pass between exposure to external factors and detectable cancer. Cancer is treated with surgery, radiation, chemotherapy, hormone therapy, biological therapy, and targeted therapy.¹

Incidence

In 2007, the most commonly diagnosed cancers (except cancers of the skin) among Nebraskans included cancer of the prostate (males only), lung and bronchus, female breast, and colon and rectum (*Table 1*). Among men, there were approximately 162 new cases of prostate cancer per 100,000 males. Among women, there were

about 116 new cases of breast cancer per 100,000 females.

Table 1: Cancer incidence and mortality, Nebraska, 2007/2009

Site	Incidence* (2007)		Mortality (2009)	
	# Diagnoses	Incidence Rate**	# Deaths	Mortality Rate**
Lung & bronchus	1238	65.0	888	45.2
Colon & rectum	1050	54.6	333	16.7
Female breast	1159	116.4	215	19.6
Prostate	1400	162.1	193	23.9
Uterine cervix	68	8.1	12	1.3

*Incidence data include malignant cases only.

**Incidence and mortality rates are age-adjusted to the 2000 US standard population. Rates for cancers of the lung and bronchus and colon and rectum are expressed per 100,000 total population; rates for breast and cervical cancer are expressed per 100,000 female population; rates for prostate cancer are expressed per 100,000 male population.

Source: NE Cancer Registry, 2007; NE death certificates, 2009

Mortality

In 2009, there were 3,336 cancer deaths in Nebraska, which was just under one-fourth (22.5%) of all deaths that occurred among Nebraska residents that year. Cancer of the lung was the year's leading cause of cancer deaths among Nebraska men and women, accounting for 888 deaths, or 45 deaths per 100,000 persons (*Table 1*).

Cancer Screening

Regular screening examinations by a health care professional can result in the detection and

¹ American Cancer Society, Cancer Facts and Figures, 2010

removal of precancerous growths, as well as the diagnosis of cancers, at an early stage when they are most treatable. Cancers that can be prevented by removal of precancerous tissue include cancers of the cervix, colon, and rectum. Cancers that can be diagnosed early through screening include cancers of the breast, colon, rectum, cervix, prostate, oral cavity, and skin.²

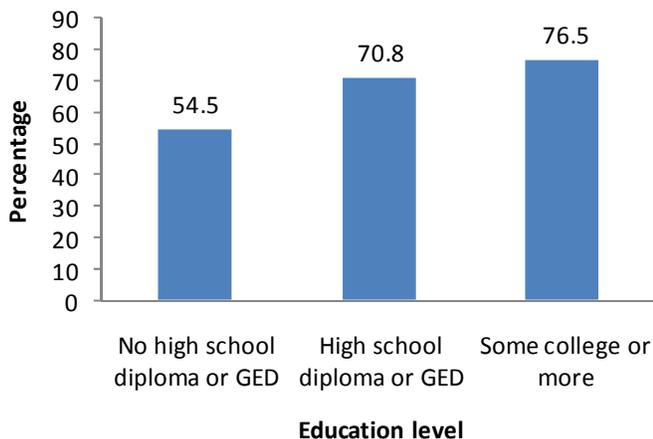
Breast Cancer

There are three main tests used to screen women’s breasts for cancer: mammogram, clinical breast exam, and the breast self-exam. Mammograms (x-ray of the breast) are the best method to detect breast cancer early when it is easier to treat and before it is big enough to feel or cause symptoms. Women ages 40 years or older should have a screening mammogram every one to two years.

Approximately 1 in 4 Nebraska women ages 40+ years reported not having a mammogram in the past 2 years.

Women ages 40-49 years and those who had no high school diploma or GED education were less likely to report having a mammogram in the past 2 years compared to older women and women with a higher education level, respectively (Figure 6).

Figure 6: Percentage of Nebraska women ages 40+ years who reported having a mammogram in the past 2 years, by education level, 2008



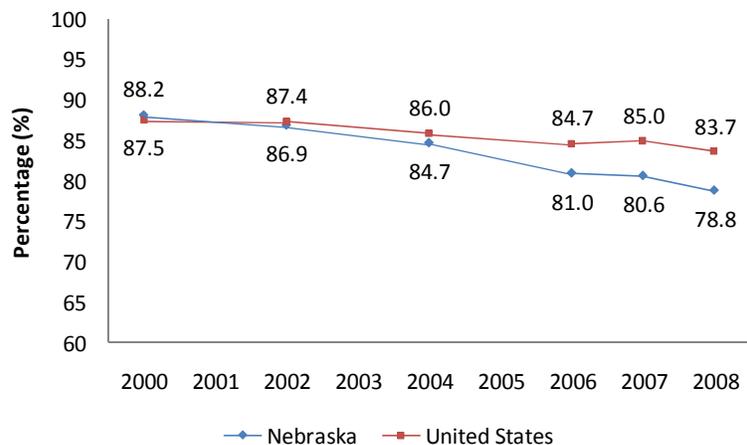
Source: NE BRFSS 2008

Cervical Cancer

The Pap test (or Pap smear) looks for pre-cancers, or cell changes, on the cervix that might become cervical cancer if they are not treated appropriately. Women should start getting regular Pap tests at age 21, or within three years of first having sex. Women ages 30 years or older whose Pap tests are normal have a very low chance of getting cervical cancer in the next few years. For that reason, such women may not need another screening test for up to three years. However, it is important to visit a doctor regularly for a checkup that may include a pelvic exam.

Approximately 1 in 5 Nebraska women ages 18+ years reported not having a Pap test in the past 3 years (Figure 7).

Figure 7: Percentage of Nebraska women ages 18+ years who reported having a Pap test in the past 3 years, 2000-2008



Source: NE BRFSS 2000-2008

Women who had no high school diploma or GED education or earned less than \$15,000/year were less likely to report having a Pap test in the past 3 years compared to women with a higher education level and higher income level, respectively.

Furthermore, the prevalence of Nebraska women ages 18+ years reporting a Pap test in the past 3 years has decreased over the past several years.

Colorectal Cancer

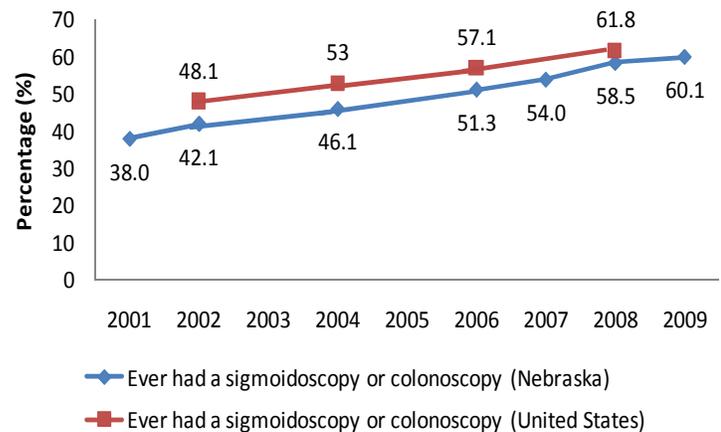
The U.S. Preventive Services Task Force (USPSTF) recommends screening for colorectal cancer using high-sensitivity fecal occult blood testing, sigmoidoscopy, or colonoscopy beginning at age 50 years and continuing until age 75 years.

Recommended colorectal cancer screening tests and intervals are as follows:

- High-sensitivity fecal occult blood test (FOBT), which checks for hidden blood in three consecutive stool samples, should be administered every year.
- Flexible sigmoidoscopy, where physicians use a flexible, lighted tube (sigmoidoscope) to inspect visually the interior walls of the rectum and part of the colon, should be administered every five years.
- Colonoscopy, where physicians use a flexible, lighted tube (colonoscope) to inspect visually the interior walls of the rectum and the entire colon, should be administered every 10 years.

Only 3 in 5 Nebraska adults age 50+ years reported ever having a sigmoidoscopy or colonoscopy (Figure 8). Furthermore, only half of Nebraska adults age 50+ reported having a sigmoidoscopy or colonoscopy in accordance with recommended guidelines.

Figure 8: Percentage of Nebraska adults age 50+ years who reported ever having a sigmoidoscopy or colonoscopy, by year, 2001-2009



Source: NE BRFSS 2001-2009

Costs

According to the National Institutes of Health (NIH), the total cost of cancer for the entire US in 2010 was \$263.8 billion. This figure breaks down into \$102.8 billion for direct medical costs and \$161 billion for indirect costs. Indirect costs further breaks down into \$20.9 for indirect morbidity costs and \$140.1 billion for indirect mortality costs.

If we apply these calculations to Nebraska data, we estimate a total cost of cancer equal to \$1.53 billion per year, or about \$595 million for direct costs and \$932 million for indirect costs (with the indirect figure divided into \$121 million for indirect morbidity costs and \$811 million for indirect mortality costs).

To learn more about preventing and screening for cancer, visit www.dhhs.ne.gov/NebraskaCARES.

DIABETES



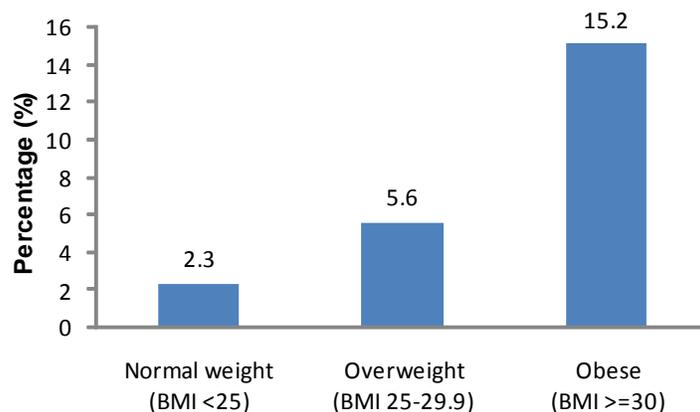
Diabetes is a chronic disease marked by elevated blood sugar levels caused by the body not producing or properly using insulin. Insulin helps glucose (sugar) to leave the blood and enter the body's cells. Type 1 diabetes occurs when the body does not produce insulin and is unable to provide the cells with the glucose they need to generate energy. *About 5-10% of people with diabetes have type 1 diabetes.* Type 2 diabetes develops when the body either does not make enough insulin or does not efficiently use the insulin. *About 90-95% of people with diabetes have type 2 diabetes.*

Risk factors for diabetes include family history of diabetes; history of gestational diabetes or giving birth to at least one baby weighing 9 lbs or more; African American, Hispanic/Latino, American Indian, Native Hawaiian, or Pacific Islander heritage; physical inactivity; high blood pressure; being overweight or obese; being age 45 years or older; impaired glucose tolerance (IGT) and/or impaired fasting glucose (IFG); and low HDL cholesterol or high triglycerides.

Prevalence

In 2009, nearly 1 in 10 Nebraska adults reported ever being diagnosed with diabetes (source: NE BRFSS 2009). Adults who are obese were more likely to report ever being diagnosed with diabetes than adults who are normal weight or overweight (Figure 9).

Figure 9: Percentage of Nebraska adults who have ever been diagnosed with diabetes, by weight status, 2009



Source: NE BRFSS 2009

Complications

Health complications of diabetes include eye problems, nerve damage, foot problems, dental problems, kidney disease, and cardiovascular disease. Symptoms of diabetes include frequent urination, excessive thirst, unexplained weight loss, extreme hunger, extreme tiredness, and irritability. Often, people with type 2 diabetes have no symptoms.

In 2009, there were 33,910 hospitalizations among Nebraska residents at Nebraska hospitals for which either the primary diagnoses or one of the secondary diagnoses was diabetes. This number translates into a discharge rate of 1794.4 per

100,000 persons. Also in 2009, 410 non-traumatic amputations were performed at Nebraska hospitals among Nebraska residents who have diabetes. This number translates into a rate of 21.6 per 100,000 persons.

Mortality

In 2009, there were a total of 444 deaths in Nebraska, or 22 deaths per 100,000 persons, attributed to diabetes (source: NE death certificates).

In this same year, there were 14 deaths among Nebraska residents for which diabetic ketoacidosis was the underlying cause, which translates into a mortality rate of 0.8 deaths per 100,000 persons. When considering diabetic ketoacidosis as either the underlying or a contributing cause, the number of deaths increases to 20 and the rate to 1.1 deaths per 100,000 persons.

In 2009, there were 32 deaths among Nebraska residents for which diabetic end-stage renal disease (ESRD) was the underlying cause, which translates into a mortality rate of 1.6 deaths per 100,000 persons. When considering deaths where diabetic ESRD was either the underlying or a contributing cause, the number of deaths increases to 85 and the rate to 4.2 deaths per 100,000 persons.

Management of Diabetes

The American Diabetes Association recommends that persons with diabetes undergo several examinations by health professionals to prevent complications associated with their condition. Unfortunately, not all persons with diabetes are following the recommended management practices.

For example, in Nebraska:

- 69.4% of adults with diabetes reported having their feet examined for sores and irritations at least once by a health professional during the past year.
- 64.4% of adults with diabetes reported that they checked their blood glucose at least once per day.
- 69.0% of adults with diabetes reported having a dilated eye exam within the past year.
- 63.4% of adults with diabetes reported ever having a pneumonia vaccination.
- 68.3% of adults with diabetes reported having an influenza vaccination within the past year.

Source: NE BRFSS 2009

Costs

According to the Centers for Disease Control and Prevention (CDC), the total estimated cost of diabetes for the entire US in 2007 was \$171 billion (\$116 billion for direct medical costs and \$58 billion for indirect costs, i.e., the cost of lost productivity due to illness, disability, and premature mortality). After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were 2.3 times higher than what expenditures would be in the absence of diabetes.

If we apply these calculations to Nebraska data, we estimate a total cost of diabetes equal to \$1.08 billion per year (\$672 million for direct costs and \$336 million for indirect costs).

To learn more about preventing and managing diabetes, visit www.dhhs.ne.gov/diabetes.