

Diabetes

African Americans were disproportionately impacted by diabetes.

- African Americans were most likely to die of diabetes.
- People living in San Pablo, Pittsburg, Antioch and Richmond were more likely to die from diabetes compared to the county overall.
- Males were more likely to die from diabetes than females.

Deaths

Between 2005–2007, diabetes was the seventh leading cause of death in Contra Costa, accounting for 2.9% of all deaths in the county (see Leading Causes of Death section). On average, 197 Contra Costa residents died of diabetes each year. The age-adjusted death rate from diabetes was lower in Contra Costa (18.9 per 100,000) than California (23.4 per 100,000) and met the Healthy People 2010 objective (46 per 100,000).

In Contra Costa, the greatest number of diabetes deaths was among whites (350), followed by African Americans (97), Hispanics (77) and Asians/Pacific Islanders (64).

Even though diabetes killed a greater number of whites, African Americans had the highest diabetes death rate (46.5 per 100,000); higher than the rates for the county overall (18.9 per 100,000) and all other racial/ethnic groups listed.

Table 1 ■ Diabetes deaths by race/ethnicity

Contra Costa County, 2005–2007

	Deaths	Percent	Rate	
White	350	59.1%	16.0	The statistics presented include type 1 and 2 diabetes data. They do not include pregnancy-related diabetes data. The number of diabetes deaths from type 1 and 2 is likely underestimated. Only 10%–15% of decedents who had diabetes have it listed as the underlying cause of death. ¹
African American	97	16.4%	46.5*	
Hispanic	77	13.0%	24.2	
Asian	64	10.8%	20.0	
Total	592	100.0%	18.9	

These are age-adjusted rates per 100,000 residents

Total includes racial/ethnic groups not listed above.

* Significantly higher rate than the county overall.

In Contra Costa, slightly more males (304) died from diabetes than females (288). Males also had a higher diabetes death rate (22.9 per 100,000) than females (16.0 per 100,000).

Table 2 ■ Diabetes deaths by gender

Contra Costa County, 2005–2007

	Deaths	Percent	Rate
Males	304	51.4%	22.9*
Females	288	48.6%	16.0
Total	592	100.0%	18.9

These are age-adjusted rates per 100,000 residents.

* Significantly higher rate than county females overall.

The greatest number of diabetes deaths occurred among residents of Richmond (86), followed by Concord (78), Antioch (70) and Pittsburg (53).

Four cities had significantly higher diabetes death rates than the county overall (18.9 per 100,000): San Pablo (49.3 per 100,000), Pittsburg (37.0 per 100,000), Antioch (35.1 per 100,000) and Richmond (32.4 per 100,000). Only Walnut Creek had a significantly lower diabetes death rate (10.1 per 100,000) than the county overall.

Table 3 ■ Diabetes deaths by selected cities

Contra Costa County, 2005–2007

	Deaths	Percent	Rate
Richmond	86	14.5%	32.4*
Concord	78	13.2%	22.2
Antioch	70	11.8%	35.1*
Pittsburg	53	9.0%	37.0*
Walnut Creek	48	8.1%	10.1**
San Pablo	35	5.9%	49.3*
Martinez	27	4.6%	25.5
Pleasant Hill	24	4.1%	20.2
Brentwood	22	3.7%	22.0
El Cerrito	21	3.5%	16.5
Bay Point	14	2.4%	NA
Pinole	13	2.2%	NA
Hercules	9	1.5%	NA
Oakley	7	1.2%	NA
Contra Costa	592	100.0%	18.9

These are age-adjusted rates per 100,000 residents.

Contra Costa total includes cities not listed above.

* Significantly higher rate than the county overall.

** Significantly lower rate than the county overall.

Estimated Cases

Information about diabetes deaths indicates the ultimate toll this disease takes on people’s lives. But more people develop diabetes than die from it. To understand the full impact of diabetes on the community’s health it is also important to assess the diabetes burden on those living with the disease. In this section, diabetes prevalence is defined as the number of people who reported ever being diagnosed with diabetes. Since some people are never diagnosed, this data does not fully capture the total number of people living with the disease. However, it provides some idea of how common diabetes is in our community.

According to the 2007 California Health Interview Survey, approximately 51,000 adults 18 years and older in Contra Costa had ever been diagnosed with diabetes, resulting in a diabetes prevalence of 6.5%.



Editor’s note: Analyses of diabetes prevalence by gender, race/ethnicity and city was not possible for Contra Costa due to small sample size, but we can look to the greater Bay Area to learn more about how diabetes affects our community disproportionately.

In 2007, the diabetes prevalence among adults 18 years and older was similar for Contra Costa (6.5%), the greater Bay Area (6.8%) and California (7.8%).

Table 4 ■ Diabetes cases for adults 18 years and older by gender
2007

	Cases	Prevalence
California	2,099,000	7.8%
Greater Bay Area	367,000	6.8%
Contra Costa	51,000	6.5%

Estimates are not age-adjusted.

In the greater Bay Area, more males (190,000) than females (177,000) were diagnosed with diabetes. The prevalence of diabetes between males (7.1%) and females (6.5%) however, was similar.

Table 5 ■ Diabetes cases for adults 18 years and older by gender
Greater Bay Area, 2007

	Cases	Prevalence
Males	190,000	7.1%
Females	177,000	6.5%
Total	367,000	6.8%

Estimates are not age-adjusted.

The greatest number of adult diabetes cases in the greater Bay Area was among whites (167,000), followed by Latinos (84,000), Asians/Pacific Islanders (80,000) and African Americans (30,000).

Table 6 ■ Diabetes cases for adults 18 years and older by race/ethnicity
Greater Bay Area, 2007

	Cases	Prevalence
White	167,000	6.1%
Latino	84,000	8.2%
Asian/Pacific Islander	80,000	6.8%
African American	30,000	8.8%
Total	367,000	6.8%

Estimates are not age-adjusted.

Total includes racial/ethnic groups not listed above.

Analysis of prevalence data at the California level revealed racial/ethnic disparities in diabetes prevalence. In 2007, American Indian/Alaska Native (14.2%) and African American adults 18 years and older (11.5%) had higher prevalence of diabetes than California adults overall (7.8%). The prevalence of diabetes among whites (6.7%) was lower than the state overall.

What is diabetes?

Diabetes is a chronic disease in which the body makes too little insulin or does not use it effectively. Insulin helps the body absorb excess blood glucose from the bloodstream. Blood glucose levels are normally kept within a normal range by insulin. People with diabetes have higher than normal blood glucose levels.² There are three types of diabetes: **Type 1 diabetes**, also known as insulin-dependent diabetes, is an autoimmune disease and most typically occurs in children and young adults. Type 1 diabetes accounts for 5% to 10% of all diagnosed cases of diabetes.² **Type 2 diabetes**, formerly known as “adult onset” diabetes, accounts for 90–95% of diabetes cases. Although it typically occurs after the age of 40, rates have been increasing among children and youths. Type 2 diabetes is linked to obesity and physical inactivity. **Gestational diabetes** is a type of diabetes that only pregnant females get. If not treated, it can cause problems for mothers and babies. Gestational diabetes develops in 2% to 14% of all pregnancies (depending on the race of the mother) but usually disappears when a pregnancy is over. About half of women with gestational diabetes will develop type 2 diabetes later.¹

Why is it important?

Diabetes is the seventh leading cause of death in Contra Costa overall and a top 10 cause of death for Asian/Pacific Islander, Hispanic, African American and white residents of the county. It was also the seventh leading cause of death in the United States in 2006, accounting for 72,507 deaths.²

More people live with diabetes than die from it. From 1980 through 2007, the number of U.S. adults 18–79 years with newly diagnosed diabetes almost tripled to more than 1.5 million in 2007. The number

of new cases of diabetes has increased sharply since the early 1990s.³ This is largely attributed to the rise in type 2 diabetes, which is being increasingly diagnosed at younger ages.⁴

Diabetes is a major cause of disability. People with diabetes are more likely to experience leg and foot amputations, heart disease and stroke.³ Diabetes is the leading cause of new cases of blindness in adults 20-74 years, and kidney failure.² Treating diabetes complications with medications, hospitalizations and dialysis is physically trying for patients and costly for society. Total health care and related costs for the treatment of diabetes are roughly \$174 billion annually.⁵

Who does it impact the most?

In Contra Costa, males are more likely to die from diabetes than females and African American residents have the highest diabetes death rate. Although no differences by race/ethnicity could be detected in local diabetes prevalence data, nationally African Americans, American Indians, Asian Americans, Pacific Islanders and people of Hispanic American/Latino heritage are at greater risk for being diagnosed with diabetes than whites.⁶

Other factors that put people at increased risk for developing type 2 diabetes include: being overweight or obese, which keeps the body from making and using insulin properly; family history of diabetes; prior history of gestational diabetes or birth of a child weighing more than nine pounds; high blood pressure; unhealthy cholesterol (i.e., low HDL or "good" cholesterol or high level of triglycerides); and physical inactivity (i.e., exercising fewer than three times a week).⁶

What can we do about it?

There is currently no cure for diabetes, but there are ways to prevent it from occurring.¹ The Diabetes Prevention Program research indicated that people can delay and possibly prevent diabetes by losing a small amount of weight (5 to 7 percent of total body weight) through 30 minutes of physical activity five days a week and healthier eating.⁶ Increased physical activity and healthier diets are more likely in communities where there are convenient, safe walking paths and accessible sources of fresh fruits and vegetables.⁷

Preventing and treating diabetes complications involves routine medical examinations, tests and medications. Blood sugar, blood pressure and kidney functions must be monitored as well as any existing sores or wounds. Access to quality preventive and outpatient medical care and education regarding medications, healthy eating and exercise are crucial. To help reduce health disparities and improve outcomes, efforts should be made to ensure that literacy and language are not barriers to receiving effective diabetes care.^{3,8}

Data Sources: Diabetes

TABLES

Tables 1-3: These tables include total deaths due to type 1 and type 2 diabetes and age-adjusted average annual death rates per 100,000 residents for 2005 through 2007. Mortality data from the California Department of Public Health Services (CDPH), <http://www.cdph.ca.gov/>, Center for Health Statistics' Death Statistical Master File, 2005-2007.

Any analyses or interpretations of the data were reached by the Community Health Assessment, Planning and Evaluation (CHAPE) Unit of Contra Costa Health Services and not the CDPH. Data presented for Hispanics include Hispanic residents of any race. Data presented for whites, Asians/Pacific Islanders and African Americans include non-Hispanic residents. Not all race/ethnicities are shown but all are included in totals for the county and for each gender and city. Counts fewer than five are not shown in order to protect anonymity. Rates were not calculated for any group with fewer than 20 cases due to unstable estimates.

ICD10 coding for diabetes mellitus (ICDE10-E14) from the Centers for Disease Control and Prevention National Center for Health Statistics, available online at: http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_16.pdf

Population estimates for Contra Costa and its subpopulations (by age, gender, race/ethnicity, city/census place) for 2005-2007 were provided by the Urban Strategies Council, Oakland, CA. January, 2010. Data sources used to create these estimates included: U.S. Census 2000, Neilsen Claritas 2009, Association of Bay Area Governments (ABAG) 2009 Projections, and California Department of Finance Population Estimates for Cities, Counties and the State 2001-2009, with 2000 Benchmark.

California population estimate for state level rate from the State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark. Sacramento, California, May 2009.

Healthy People 2010 objectives from the U.S. Department of Health and Human Services' Office of Disease Prevention and Health Promotion, available online at: <http://www.healthypeople.gov/>

Tables 4-6: These tables include total estimated cases of diabetes among adults 18 years and older and crude prevalence percentages for 2007. Local data about asthma from the California Health Interview Survey's AskCHIS data query system, copyright© 2007 the Regents of the University of California, all rights reserved, available online at: <http://www.chis.ucla.edu/>. Data analysis performed March 17, 2010. Any analyses or interpretations of the data were reached by the Community Health Assessment, Planning and Evaluation (CHAPE) unit of Contra Costa Health Services. Data presented for Latinos include Latinos residents of any race. Data presented for whites, Asians/Pacific Islanders and African Americans include non-Latino residents. Not all race/ethnicities are shown but all are included in totals for the county, region, state and region by gender and by race/ethnicity. Greater Bay Area data includes the following counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma. Ask CHIS data are generated from a telephone survey that asks questions to a randomly selected group of residents in Contra Costa and other counties in California. Responses are then weighted to represent the county, region, and state as whole. The question used for this data was "{Other than during pregnancy, has/Has} a doctor ever told you that you have diabetes or sugar diabetes?" This question was only asked of adults 18 years or older.

TEXT

1. CDC, National Center for Chronic Disease Prevention and Health Promotion. (n.d.) National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.
2. CDC, National Center for Chronic Disease Prevention and Health Promotion Diabetes. (n.d.) Diabetes Public Health Resource: Basics About Diabetes. Retrieved May 16, 2010 from the CDC website:<http://www.cdc.gov/diabetes/consumer/learn.htm>
3. CDC, National Center for Chronic Disease Prevention and Health Promotion. (n.d.). Diabetes Data & Trends. Retrieved May 16, 2010 from the CDC website: <http://www.cdc.gov/diabetes/statistics/incidence/fig1.htm>
4. Gerberding J., CDC. (2005). Diabetes: Disabling, Deadly and On the Rise, 2005. At a Glance Report, May 2005. Retrieved May 31, 2006 at the CDC website: www.cdc.gov/nccdphp/publications/aag/pdf/aag_ddt2005.pdf;
5. CDC, The Diabetic Epidemic among Older Adults. Adapted from the National Institute of Diabetes and Digestive and Kidney Diseases. National Diabetes Statistics, 2007. Bethesda, MD: U.S. Department of Health and Human

- Services, National Institutes of Health, 2008. Updated December 2009. Retrieved August 29, 2010 at http://ndep.nih.gov/media/FS_OlderAdult.pdf
6. CDC, National Center for Chronic Disease Prevention and Health Promotion Diabetes. (n.d.) Diabetes Public Health Resource: Prevention. Retrieved May 16, 2010 from the CDC website: <http://www.cdc.gov/diabetes/consumer/prevent.htm#4>
 7. Aboelata MJ, Mikkelsen L, Cohen L, (2004) The Built Environment and Health: 11 Profiles of Neighborhood Transformation. Prevention Institute, Oakland CA.
 8. U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality. (2001) Diabetes Disparities Among Racial and Ethnic Minorities. AHRQ Publication No. 02-P007. Retrieved May 16, 2010 from the AHRQ website: <http://www.ahrq.gov/research/diabdsp.htm>