SUMMARY: In California, more than 13 million adults (46 percent of all adults in the state) are estimated to have prediabetes or undiagnosed diabetes. An additional 2.5 million adults have diagnosed diabetes. Altogether, 15.5 million adults (55 percent of all California adults) have prediabetes or diabetes. Although rates of prediabetes increase with age, rates are also high among young adults, with one-third of those ages 18-39 having prediabetes. In addition, rates of prediabetes are disproportionately high among young adults of color, with more than one-third of Latino, Pacific Islander, American Indian, African-American, and multiracial Californians ages 18-39 estimated to have prediabetes. Policy efforts should focus on reducing the burden of prediabetes and diabetes through support for prevention and treatment.

Diabetes, particularly type 2 diabetes, is a significant and growing health problem that affects both adults and children and can cause a number of serious complications, including blindness, kidney disease, cardiovascular disease, amputation, and premature death. Nationally, the prevalence of diabetes among adults has nearly tripled over the past 30 years. In 2014, 29.1 million people in the U.S., or 9.3 percent of the population, had diabetes (including 8.1 million with undiagnosed diabetes). In California, the prevalence of diabetes among adults increased by 35 percent between 2001 and 2012.

Prediabetes, also referred to as impaired glucose tolerance or impaired fasting glucose, is a condition in which blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. People with prediabetes have a much higher risk of developing type 2 diabetes, as well as an increased risk for cardiovascular disease. Results from the Diabetes Prevention Program (DPP) clinical trial indicated that among those with prediabetes, increased physical activity, improvements in diet, and weight loss can prevent or delay the onset of diabetes significantly more than placebo or medication. Results also indicated that medication, while effective, is not as effective as lifestyle changes.

Nationally, more than one in three adults is estimated to have prediabetes, and 90 percent of these individuals are not aware that they have the condition. Between 1999 and 2010, the prevalence of prediabetes among adults in the U.S. increased from 29 percent to 36 percent. Moreover, between 1999 and 2008, the prevalence of diabetes and prediabetes among adolescents in the U.S. rose dramatically, from 9 percent to 23 percent. Without intervention efforts, up to 30 percent of people with prediabetes will develop type 2 diabetes within five years, and up to 70 percent will develop diabetes within their lifetime. There are very effective interventions available, including lifestyle modification programs recognized by the CDC’s National Diabetes Prevention...
Program, that can prevent or delay the progression from prediabetes to diabetes.\textsuperscript{4} Not only does diabetes increase the risk of serious medical complications, but it is also extremely costly to families, businesses, health care plans, states, and the nation. Nationally, approximately 3.9 percent of adults have undiagnosed diabetes. Confidence intervals for estimates presented in this table are available here: http://healthpolicy.ucla.edu/publications/search/pages/detail.aspx?PubID=1472.

The current trends in diabetes and prediabetes are troubling because of the associated human and financial costs. Not only does diabetes increase the risk of serious medical complications, but it is also extremely costly to families, businesses, health care plans, states, and the nation. Nationally, diabetes was estimated to cost $245 billion in 2012, including $176 billion in direct medical costs and $69 billion in lost productivity.\textsuperscript{8} In California, the total cost of diabetes was estimated to be more than $27 billion, with $19 billion of that spent on direct medical care for diabetes and $8 billion on the indirect costs associated with the disease.\textsuperscript{8} In addition, undiagnosed diabetes is estimated to cost California $2.8 billion and prediabetes $5.3 billion in direct medical care.\textsuperscript{9}

This study used data from the 2013-14 California Health Interview Survey (CHIS) and the National Health and Nutrition Examination Survey (NHANES) to estimate the prevalence of prediabetes in California. NHANES 2009-2012 data were used to build and test a statistical model predicting prediabetes, defined by hemoglobin A1c and fasting plasma glucose (blood tests commonly used to diagnose diabetes and prediabetes). This predictive model was then applied to CHIS data to produce California-specific estimates of the prevalence of prediabetes and undiagnosed diabetes (herein referred to as prediabetes when reporting California estimates). The percentage of California adults with undiagnosed diabetes is expected to comprise a relatively small proportion of the prediabetes estimates presented. Nationally, less than 4 percent of adults have undiagnosed diabetes. This policy brief describes the estimated prevalence of prediabetes, including undiagnosed diabetes, statewide as well as by age, race and ethnicity, and county.

\section*{Prediabetes in California}

\textbf{One-Third of Young Adults in California Have Prediabetes}

In California, more than half of adults (55 percent) have either prediabetes or diabetes. This includes 2.5 million adults, or 9 percent of the state’s adult population, who have diagnosed diabetes. In addition, nearly half of adults (46 percent) are estimated to have prediabetes. This represents more than 13 million California adults. Prediabetes prevalence increases with age, rising from 33 percent among adults ages 18-39 to 49 percent among those ages 40-59 (Exhibit 1). Prevalence then levels off at approximately 60 percent among adults 55 and older.
Prediabetes Higher Among Adults of Color

Prediabetes disproportionately affects certain racial and ethnic groups. In California, at least half of Pacific Islanders (55 percent), American Indians (51 percent), and African-Americans (50 percent) are estimated to have prediabetes (Exhibit 2). Among young adults, more than one-third of Latinos (36 percent), Pacific Islanders (43 percent), American Indians (38 percent), African-Americans (38 percent), and those of multiple races (37 percent) are estimated to have prediabetes.

Prediabetes Varies by County

The prevalence of prediabetes varies from county to county among California adults. Because age is a particularly strong risk factor for diabetes and prediabetes, Exhibit 3 displays estimates of county-level prediabetes prevalence broken out by age group. High rates among young adults are particularly concerning, because the risk of complications from diabetes increases significantly the longer one has the condition. Among adults ages 18-39, the prevalence of prediabetes ranged from 26 percent in Lake County to 40 percent in both Kings and Imperial counties (Exhibit 3). Among this younger age group, five counties had rates below 30 percent (Lake, San Benito, Butte, San Francisco, and San Luis Obispo), and five had rates over 37 percent (Tulare, Merced, San Joaquin, Kings, and Imperial). Among all adults, rates ranged from 43 percent in Sutter and Butte counties to 54 percent in Nevada County and the combined counties of Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, and Alpine. This regional variation is likely due to a number of factors, including differences in demographic, social, economic, and environmental characteristics.
### Exhibit 2

#### Percent of Adults Estimated to Have Prediabetes by County or County Group and Age, California, 2013-14

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<thead>
<tr>
<th>County or County Group</th>
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<td>18-39</td>
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**Source:** 2013-14 California Health Interview Survey

Conclusions and Recommendations

More than 13 million California adults—nearly half of the state’s adult population—are estimated to have prediabetes. This suggests that more effort is needed to address the prevention of diabetes and the detection of and intervention for prediabetes statewide. Health promotion and disease prevention efforts such as maintaining a healthy weight, consuming healthy foods and beverages, limiting intake of sugar and other simple carbohydrates, and being more physically active all reduce the risk of developing type 2 diabetes. To aid in the prevention of diabetes, particularly among those with prediabetes, policymakers should consider the following:

• **Support diabetes prevention efforts.** Most people with prediabetes do not know they have the condition. Providing coverage for and ensuring the regular medical practice of appropriate screening can identify people with prediabetes while it is still possible to prevent the onset of type 2 diabetes. In addition, insurance coverage for and referral to recognized diabetes prevention programs can remove critical barriers to education and care for people with prediabetes and can facilitate lifestyle changes that can prevent diabetes.

• **Promote community and workplace environments that support healthy eating.** Local and state policy initiatives can improve the food and beverage environment by increasing access to fruits and vegetables, decreasing marketing of unhealthy options, encouraging large institutions such as hospitals to follow healthy food procurement guidelines, developing educational strategies to assist consumers in making more informed food and beverage choices, and ensuring the availability of safe and low-cost drinking water.

• **Promote built environments that encourage regular physical activity.** Lack of physical activity is a significant risk factor for diabetes, and further policies should be developed to facilitate active living—for example, creating safe environments for walking and biking, providing access to safe parks and other places for recreation and physical activity, and offering worksite programs to facilitate regular physical activity for adults of all ages.

• **Support adequate access to quality primary and specialty care.** At-risk individuals need to have adequate and sufficient access to quality health care services. Lack of continuous health insurance coverage and insufficient benefits packages create significant financial barriers to accessing primary and specialty care services. In addition, increased access to recognized diabetes-prevention lifestyle modification programs has been shown to be particularly beneficial for adults with prediabetes.
Data Sources and Methods
The findings in this brief are based on data from the 2013-14 California Health Interview Survey (CHIS). CHIS 2013-14 completed interviews with more than 40,000 households that included 40,240 adults, drawn from every county in the state. Interviews were conducted in English, Spanish, Chinese (both Mandarin and Cantonese), Korean, Vietnamese, and Tagalog. California estimates of diabetes prevalence are based on self-report. Adults were asked whether they had ever been diagnosed with diabetes by a doctor. Those who responded “yes” were classified as having diabetes.

Estimates of prediabetes are statistically modeled. Data from the 2009-2012 National Health and Nutrition Examination Survey (NHANES) were used to build and test predictive models of blood glucose levels above cutoffs associated with prediabetes. NHANES is a cross-sectional survey that provides a nationally representative sample of the noninstitutionalized population. NHANES participants completed a household interview as well as a physical examination that included a blood sample. Predictive models were developed for the adult population (18 and older) using data from the NHANES fasting subsample. Cutoffs associated with prediabetes were applied to hemoglobin A1c (HbA1c) and fasting plasma glucose (FPG) values in NHANES. HbA1c of 5.7 percent or above, or FPG of 100 or above. People who reported having been diagnosed with diabetes were classified as having diabetes.

The predictive model was developed using Generalized Boosted Regression Models (GBM) implemented in R. This iterative, machine-learning algorithm increases in complexity until it minimizes out of training-sample predictive error, which was assessed using tenfold cross-validation. The NHANES predictive model displayed good predictive ability: Pseudo R-squared = 0.304 and Coefficient of Discrimination = 0.301. These metrics are taken from the cross-validation and represent the prediction for cases not used in the training. Models predicted blood glucose levels above prediabetes cutoffs. As a result, estimates of prediabetes include adults with undiagnosed diabetes. However, those with undiagnosed diabetes are expected to represent a relatively small proportion of the prediabetes estimates presented here. Variance was estimated using multiple imputation. Confidence intervals for estimates presented in this publication are available here: http://healthpolicy.ucla.edu/publications/search/pages/detail.aspx?PubID=1472.

For consistency with earlier estimates, the National Center for Health Statistics applies regression equations to fasting glucose values collected after 2005. The current analysis does not involve comparison with earlier estimates. Therefore, fasting glucose values are based on the current laboratory measurement methods and have not been adjusted to be comparable to values collected in previous NHANES cycles. Based on our analysis of 2009-2012 NHANES data using HbA1c and FPG values not adjusted for comparability with earlier NHANES cycles, approximately 42 percent of U.S. adults 18 and over have prediabetes, and an additional 3.9 percent have undiagnosed diabetes. The predictive model developed in NHANES was applied to CHIS 2013-14 data to produce California-specific estimates of the prevalence of prediabetes (which include undiagnosed diabetes). Although the California prediabetes estimates include undiagnosed diabetes, the proportion with undiagnosed diabetes is expected to be relatively small, given that nationally less than 4 percent of adults have undiagnosed diabetes.

The California Health Interview Survey is a collaboration of the UCLA Center for Health Policy Research, the California Department of Public Health, the California Department of Health Care Services, and the Public Health Institute. For funders and other information on CHIS, visit www.chis.ucla.edu.
Author Information

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Acknowledgments

The authors wish to thank Hongjian Yu, PhD; Pan Wang, PhD; Akbar Esfahani, MIS; Carl Ganz; Terry Schell, PhD; Gwen Driscoll; Venetia Lai; and Celeste Maglan Peralta for their assistance. The authors would also like to thank the following individuals for their helpful comments: Xiao Chen, PhD, associate director of the Health Economics and Evaluation Program, UCLA Center for Health Policy Research; Francine R. Kaufman, MD, Distinguished Professor Emerita of Pediatrics at USC, the Center for Endocrinology, Diabetes and Metabolism, Children’s Hospital Los Angeles; Paul Simon, MD, MPH, director of the Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health.

Suggested Citation


Endnotes


Nearly half of California adults – including one out of every three young adults – have prediabetes, a precursor to life-threatening type 2 diabetes, or undiagnosed diabetes, according to a UCLA study released today. The research provides the first analysis and breakdown of California prediabetes rates by county, age and ethnicity, and offers alarming insights into the future of the nation’s diabetes epidemic.

Conducted by the UCLA Center for Health Policy Research and commissioned by the California Center for Public Health Advocacy (CCPHA), the landmark study analyzed hemoglobin A1c and fasting plasma glucose findings from the National Health and Nutrition Examination Survey together with California Health Interview Survey data from over 40,000 respondents.

The study found that 13 million adults in California (46 percent) are estimated to have prediabetes or undiagnosed diabetes, while another 2.5 million adults (9 percent) have already been diagnosed with diabetes. Combined, the two groups represent a majority of the state’s adult population, 15.5 million (55 percent). Since diabetes is more commonly seen among older adults, the study’s finding that 33 percent of young adults (18 to 39 years old) have prediabetes is of particular concern.

“This is the clearest indication to date that the diabetes epidemic is out of control and getting worse,” says CCPHA’s Executive Director Dr. Harold Goldstein. “With limited availability of healthy food in low income communities, a preponderance of soda and junk food marketing, and urban neighborhoods lacking safe places to play, we have created a world where diabetes is the natural consequence. If there is any hope to keep health insurance costs from skyrocketing, health care providers from being overwhelmed and millions of Californians from suffering needlessly from amputations, blindness and kidney failure, the state of California must launch a major campaign to turn around the epidemic of type 2 diabetes.”

County-by-County Crisis

The study estimates prediabetes rates by county, finding major disparities across the state, particularly among the 18-39 year-old population. For those young adults, prediabetes rates ranged from lows of 26 percent in Lake County and 28 percent in San Francisco County, to a high of 40 percent in rural Kings and Imperial counties.

Racial and ethnic disparities are extremely pronounced. There are statistically higher prediabetes rates among young adult Pacific Islanders (43 percent), African-Americans (38 percent), American Indians (38 percent), multi-racial Californians (37 percent), Latinos (36 percent) and Asian Americans (31 percent) than Whites (29 percent), pointing to the need to focus additional prevention efforts in those communities. Altogether, no demographic or region appeared to be free of the diabetes and prediabetes epidemics.
Complicating matters is the fact that many people do not get tested for prediabetes because the test often is not covered by insurance, particularly for those under the age of 45. And although there are effective interventions to control weight and adopt a healthier lifestyle, these programs are often not be covered by insurers.

“There are significant barriers not only to people knowing their status, but getting effective help,” said Dr. Susan Babey, lead author of the study and co-director of the UCLA Center for Health Policy Research’s Chronic Disease Program. “A simple blood test for diabetes should be covered by all insurers, as should the resources and programs that can make a real difference in stopping the progression of this terrible disease.”

Prevention is Possible

Prediabetes is a condition in which blood glucose levels are higher than normal but not high enough for a diabetes diagnosis. Up to 30 percent of those identified with prediabetes will develop type 2 diabetes within five years, and as much as 70 percent will develop the disease in their lifetime. Diabetes is associated with dramatically increased risk of amputation, nerve damage, blindness, kidney disease, heart disease, hospitalization and premature death.

Diabetes is one of America’s fastest growing diseases and one of the most costly. Nationally, diabetes rates have tripled over the past thirty years. In California, the rate has increased by 35 percent since 2001. Nationally, annual medical spending for people with diabetes is almost twice that for people without diabetes. Someone diagnosed with diabetes by age 40 will have lifetime medical spending that is $124,600 more than someone that age who does not have diabetes.

Three-quarters of that care is paid through Medicare and Medi-Cal, including $254 million in annual hospital costs that are paid by Medi-Cal alone.

To avoid the progression from prediabetes to diabetes, the study’s authors recommend greater participation in the National Diabetes Prevention Program, as well as policy and environmental changes to increase screening, prevention and healthy lifestyle supports.

“For most people, type 2 diabetes is entirely preventable,” said Dr. Goldstein. “If Medi-Cal covered diabetes prevention programs and every health provider screened for prediabetes, we could prevent a large proportion of cases. In exchange for a proactive investment today, we can save billions of dollars in health care costs over the next five years and beyond, and save thousands of lives.”

Funded by the California Health Care Foundation and The California Endowment, the study and accompanying recommendations and materials are available at www.caprediabetes.org.

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The California Center for Public Health Advocacy (CCPHA) is an independent, nonpartisan, nonprofit organization at the forefront of solving the obesity and diabetes epidemics by advocating for groundbreaking policies that build a healthier California.

The UCLA Center for Health Policy Research is one of the nation’s leading health policy research centers and the premier source of health policy information for California. The Center improves the public’s health through high-quality, objective, and evidence-based research and data that informs effective policymaking. The Center is the home of the California Health Interview Survey (CHIS) and is part of the UCLA Fielding School of Public Health. For more information, visit www.healthpolicy.ucla.edu.

WHAT
A new study estimates that 46 percent of California adults — including one out of every three young adults — have prediabetes or undiagnosed diabetes, precursors for life-threatening type 2 diabetes. The study provides the first analysis and breakdown of prediabetes rates by county, age and ethnicity, and provides the best indication to date that diabetes rates will continue to climb dramatically.

WHY
These high rates of prediabetes are an alarming indication of the health crisis coming down the road. Understanding the prevalence of prediabetes and undiagnosed diabetes on a county-by-county basis offers health care professionals and decision makers a vital tool to aid their efforts to curb this disease and its related costs, and underscores the importance of acting now to prevent prediabetes from developing into diabetes. If action isn’t taken, California can expect a worsening diabetes crisis that will overwhelm health care providers, dramatically increase health care costs and leave millions of Californians suffering needlessly.

HOW
Researchers analyzed hemoglobin A1c (HbA1c) and fasting plasma glucose (FPG) test records from the National Health and Nutrition Examination Survey (NHANES) in conjunction with 2013-14 California Health Interview Survey (CHIS) data from 40,000 respondents to estimate the prevalence of prediabetes in California.

WHO
The study was conducted by the UCLA Center for Health Policy Research and commissioned by the California Center for Public Health Advocacy, with funding from the California Health Care Foundation and The California Endowment.
# Prediabetes Rates by County

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<td>18-39</td>
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<td><strong>Northern and Sierra Counties</strong></td>
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**Greater Bay Area**

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<tr>
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</table>

Note: Estimates of prediabetes are based on predictive models developed using 2009-2012 NHANES data and applied to CHIS 2013-14 data. Prediabetes estimates include adults with undiagnosed diabetes (approximately 3.9% of adults nationally).
## Prediabetes and Diabetes by County

<table>
<thead>
<tr>
<th>COUNTY</th>
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<th>Diabetes</th>
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Note: Small counties pooled by region - see policy brief. Estimates of prediabetes are based on predictive models developed using 2009-2012 NHANES data and applied to CHIS 2013-14 data. Prediabetes estimates include adults with undiagnosed diabetes (approximately 3.9% of adults nationally).
## Prediabetes and Diabetes by County

<table>
<thead>
<tr>
<th>County</th>
<th>Prediabetes</th>
<th>Diabetes</th>
<th>Total</th>
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<td>Yuba</td>
<td>48%</td>
<td>15%</td>
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### California

|          | 46% | 9% | 55% |

Note: Small counties pooled by region - see policy brief. Estimates of prediabetes are based on predictive models developed using 2009-2012 NHANES data and applied to CHIS 2013-14 data. Prediabetes estimates include adults with undiagnosed diabetes (approximately 3.9% of adults nationally).
### Prediabetes Rates by Race & Ethnicity

<table>
<thead>
<tr>
<th>Race &amp; Ethnicity</th>
<th>Age Group</th>
<th>All Adults</th>
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<tr>
<td></td>
<td>18-39</td>
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<tr>
<td>Latino</td>
<td>36%</td>
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<td>Asian</td>
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<tr>
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<td>51%</td>
</tr>
<tr>
<td>California</td>
<td>33%</td>
<td>49%</td>
</tr>
</tbody>
</table>
A Generation in Jeopardy

Policy Recommendations

Diabetes is one of the most alarming epidemics facing California and a fundamental health equity issue. To prevent diabetes rates and diabetes-related costs from continuing to rise, coordinated and collective action is imperative, with a special focus on low-income communities and communities of color where the burden of diabetes and prediabetes is the greatest. The following are the California Center for Public Health Advocacy’s key policy recommendations for reducing rates of prediabetes and diabetes in California.

1. Increase dedicated funding in the California state budget for initial equity-focused diabetes prevention efforts.

In fiscal year 2014, California earmarked no state monies specifically for diabetes prevention.¹ State funding of $0.03 per capita (all from federal funds) was the lowest in the nation.² As a first step, California should allocate state general funds comparable to other large states such as New York, which spends $0.42 per capita for basic diabetes prevention efforts, which would amount to $16 million per year annually in California and should focus particularly on communities where diabetes and prediabetes rates are highest. The state should also raise funds for comprehensive diabetes prevention efforts through other means, such as a statewide sugar tax or soda tax with funding distributed proportionately to rates of diabetes and prediabetes.

2. Require public and private insurance reimbursement of structured lifestyle modification programs designed to reduce the risk of diabetes among those with prediabetes, such as those recognized by the CDC’s National Diabetes Prevention Program.

Results from the Diabetes Prevention Program clinical trial show that completing their program, losing five to seven percent of total body weight and exercising 30 minutes per day can reduce diabetes risk by up to 58 percent; up to 70 percent for those age 60 and older.³ Diabetes prevention program coverage by Medi-Cal programs is particularly important because it provides health care coverage to many Californians who are at the greatest risk for diabetes.

3. Enact state and local policies that reduce consumption of added sugars, particularly policies encouraging children to drink water instead of sugar-sweetened beverages.

If we are serious about turning around the diabetes epidemic, we must focus on the biggest culprits to have the greatest impact. Sugar-sweetened beverages are the number one source of added sugars in the American diet,⁴ they are a leading and proven contributor to the development of diabetes,⁵,⁶ and they are specially marketed in low-income communities and communities of color where consumption rates are already the highest.

Endnotes:
Type 2 diabetes, if not managed properly, can affect every part of the body. The disease can have debilitating physical effects, including damaged blood vessels, heart attacks, strokes, blindness, liver disease, certain kinds of cancer, kidney failure, bone fractures and amputations.

**Eye Complications:**
glaucoma, cataracts, retinopathy, macular edema and blindness

**Mental & Neurological Disorders:**
depression and Alzheimer’s disease

**Skin Complications:**
bacterial infections, fungal infections, itching, diabetic dermopathy, necrobiosis lipoidica diabeticorum, diabetic blisters and eruptive xanthomatosis

**Heart Complications:**
high blood pressure (hypertension), heart attack, stroke and peripheral arterial disease (PAD)

**Foot Complications:**
nerve damage, changes in the shape of feet and toes, skin damage, calluses, ulcers, poor circulation and amputations

**Other Major Complications:**
- Neuropathy (nerve damage)
- Diabetic ketoacidosis (DKA), which can lead to diabetic coma or even death
- Kidney disease
- Hyperosmolar Hyperglycemic Nonketotic Syndrome (HHNS)
- Gastroparesis
WHAT ARE PREDIABETES & DIABETES?

- Prediabetes - also referred to as impaired glucose tolerance or impaired fasting glucose - is a condition in which blood glucose levels are higher than normal but not high enough for a diabetes diagnosis. Without intervention, up to 30 percent of those identified with prediabetes will develop type 2 diabetes within five years, and as much as 70 percent will develop the disease in their lifetime. *

- Diabetes is a disease in which blood glucose (sugar) levels are higher than normal. Diabetes can be managed with proper treatment, and complications from type 2 diabetes can often be prevented or delayed with change in diet and exercise and close monitoring of blood sugar levels. 

WHAT CAUSES DIABETES?

- The most significant contributors to or causes of type 2 diabetes are poor diet and physical inactivity. Obesity is just one risk factor for diabetes among many. 

- Eating less fat, fried foods and sugar, in addition to exercising at least 30 minutes five days a week, can delay and possibly prevent the onset of type 2 diabetes.

- A growing body of research shows that sugary beverages – because they provide all of their calories as liquid sugar – are uniquely harmful. We absorb liquid sugar in as little as 30 minutes, much faster than eating a candy bar, leading to a spike in blood sugar that the body is not well equipped to handle, particularly in repetition. These spikes in blood sugar can overwhelm the body and lead to the transformation of sugar into fat in the liver, which contributes directly to the development of diabetes. 

- Drinking one or more sodas a day increases the risk of developing type 2 diabetes by 26 percent. 

Sources:

*See policy brief.
A Generation in Jeopardy

Prediabetes

FACTS

- More than 2.5 million California adults (9 percent) have diabetes.8
- 29.1 million children and adults in the United States (9.3 percent) have diabetes, and another 86 million have prediabetes (35 percent).9
- The prevalence of diabetes in the United States has more than tripled since 1980.10
- The prevalence of diabetes and prediabetes among adolescents rose from nine percent to 23 percent from 1999-2008.11
- Diabetes in California has increased 35 percent in the last 10 years.12

Prevalence of Diabetes

- Despite medical advances helping those with diabetes to live longer today than in the past, a 50-year-old individual with diabetes will, on average, die 8.5 years earlier than someone without diabetes.13
- Diabetes can lead to damaged blood vessels, heart attacks, strokes, blindness, liver disease, certain kinds of cancer, kidney failure, bone fractures and amputations.2
- In 2006, it was estimated that 60 percent of people with diabetes in the United States had one or more complications from the condition.14
- Diabetes in California has increased 35 percent in the last 10 years.12

Health Impact of Diabetes

- Diabetes contributed to 231,404 deaths in the United States in 2007.9
- More than 13,000 Californians undergo limb amputations every year, with the majority of them due to diabetes-related complications like infection and peripheral arterial disease.15
- Almost half of adults with diabetes in the U.S. do not receive the recommended diabetes care.16,17
- Diabetes can lead to damaged blood vessels, heart attacks, strokes, blindness, liver disease, certain kinds of cancer, kidney failure, bone fractures and amputations.2
- In 2006, it was estimated that 60 percent of people with diabetes in the United States had one or more complications from the condition.14
- Diabetes cost the United States an estimated $245 billion in 2012, with $176 billion in direct medical costs and $69 billion in indirect costs (e.g. lost productivity, disability and premature death).18
- Total health care and related costs for the treatment of diabetes in California alone is about $24.5 billion each year.19

Cost of Diabetes

- Average medical expenditures for people with diabetes are 2.3 times higher than for those without diabetes.18
- Hospital charges for the removal of a leg or foot due to diabetes complications totaled $205,502,679 in California in 2008, at a rate of $20,062 per hospitalization.20

Sources:
8. California Health Interview Survey, 2013-14
A Generation in Jeopardy

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In Jeopardy
A Generation

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THE CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY (CCPHA)
is an independent, nonpartisan, nonprofit organization at the forefront of solving the obesity and diabetes epidemics by advocating for policies that build a healthier California. CCPHA was founded in 1999 by the California Public Health Association-North and the Southern California Public Health Association. For more information, visit www.publichealthadvocacy.org.

THE UCLA CENTER FOR HEALTH POLICY RESEARCH
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THE CALIFORNIA ENDOWMENT
is a private, statewide health foundation that was established in 1996 to expand access to affordable, quality health care for underserved individuals and communities, and to promote fundamental improvements in the health status of all Californians. Through its ‘Health Happens Here’ campaign and ten-year initiative for Building Healthy Communities, The Endowment is creating places where children are healthy, safe and ready to learn. At its core, The Endowment believes that health happens in neighborhoods, schools and with prevention. For more information, visit www.calendow.org.