Diabetes The Numbers

Presented by
Renee Crichlow MD, FAAFP
University of Minnesota, School of Medicine, North Memorial Family Medicine Residency Program

Revised March 2011
Diabetes: The Numbers

The National Diabetes Education Program

Changing the Way Diabetes is Treated.

Revised March 2011
Diabetes Mellitus
What is Diabetes?

• Diabetes is a group of diseases characterized by high levels of blood glucose (blood sugar)

• Diabetes can lead to serious health problems and premature death
Diabetes & Cardiovascular Disease

- Cardiovascular disease is the leading cause of death for people with diabetes.
- In adults with diabetes:
  - 68% die of heart disease or stroke.
  - The risk for stroke is two to four times higher.
  - 67% have high blood pressure.
  - Smoking doubles the risk for heart disease.

National Diabetes Fact Sheet, CDC, 2011.  
Revised March 2011
Diabetes Complications

• Diabetes is the leading cause of:
  – kidney failure
    • 48,374 people with diabetes began treatment for end stage kidney disease in 2008
  – new cases of adult blindness
    • 4.2 million people with diabetes aged 40 and older had diabetic retinopathy in 2005-2008
  – nontraumatic lower-limb amputations
    • Over 65,000 nontraumatic lower-limb amputations were performed in people with diabetes in 2006

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
The risk of periodontal disease is two to three times higher in adults with diabetes. About one-third of people with diabetes have severe periodontal disease.
Diabetes Complications

- 60% to 70% of people with diabetes have mild to severe nervous system damage
  - Almost 30% of people with diabetes aged 40 years and older have impaired sensation in the feet
- People with diabetes are twice as likely to have depression

National Diabetes Fact Sheet, CDC, 2011.
Common Types of Diabetes

- Type 1 diabetes in adults
  - 5% of diagnosed cases of diabetes
- Type 2 diabetes in adults
  - 90% to 95% of diagnosed cases of diabetes

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
Common Types of Diabetes

• Gestational Diabetes (GDM)
  • diagnosed during pregnancy
  • 5% to 10% of women with GDM are found to have diabetes, usually type 2, immediately following pregnancy
  • 35% to 60% of women with GDM will develop diabetes in the next 10 to 20 years
  • affects at least 7% of pregnancies

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1994

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1996

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1997

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1998

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1999

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2000

Revised March 2011

National Diabetes Education Program
www.YourDiabetesInfo.org • 1-888-693-NDEP (1-888-693-6337)
A joint program of NIH and CDC
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2001

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2002

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2003

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2004

Revised March 2011

National Diabetes Education Program
www.YourDiabetesInfo.org • 1-888-693-NDEP (1-888-693-6337)
A joint program of NIH and CDC
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2005

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2006

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2007

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2008

Revised March 2011
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

2009
Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

Centers for Disease Control and Prevention: National Diabetes Surveillance System
http://www.cdc.gov/diabetes/statistics

Revised March 2011
Millions of years → 27 years
U.S. Diabetes Prevalence
All Ages, 2010

• 25.8 million people have diabetes
  • **Diagnosed:** 18.8 million people
  • **Undiagnosed:** 7.0 million people

National Diabetes Fact Sheet, CDC, 2011. 

Revised March 2011
Estimated percentage of people aged 20 years or older with diagnosed and undiagnosed diabetes, by age group, United States, 2005-2008


Revised March 2011
Diabetes Incidence

A total of **1.9 million** new cases of diabetes were diagnosed in 2010 in the United States among people aged 20 years and older.


Revised March 2011

National Diabetes Education Program
www.YourDiabetesInfo.org • 1-888-693-NDEP (1-888-693-6337)
A joint program of NIH and CDC
American Indians and Alaska Natives & Diabetes

• About 16.1% aged 20 and older who are served by Indian Health Services have diagnosed diabetes
• Rates vary:
  – 5.5% of Alaska Native adults have diabetes
  – 33.5% of American Indian adults in southern Arizona have diabetes


Revised March 2011
African Americans & Diabetes

• 4.9 million; 18.7% of all African Americans aged 20 and older have diagnosed and undiagnosed diabetes
• Compared to non-Hispanic whites, the risk of diagnosed diabetes is 77% higher among African Americans

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
Hispanics/Latinos & Diabetes

• 11.8% of all Hispanics/Latinos aged 20 years and over have diagnosed diabetes

• Rates vary among groups:
  – Cubans & Central and South Americans  7.6%
  – Mexican Americans 13.3%
  – Puerto Ricans 13.8%

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
Asian Americans and Pacific Islanders & Diabetes

• 8.4% of all Asian Americans have diagnosed diabetes
• Prevalence data for diabetes among Pacific Islanders is limited

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
U.S. Diabetes Prevalence
People Younger than 20 Years of Age, 2010

- 215,000 or 0.26% of young people have diabetes
- Type 1 diabetes is more common than type 2, except in American Indian youth
- Type 2 diabetes is extremely rare in youth under 10 years of age
- Type 2 diabetes rates are higher in youth aged 10 to 19 years with higher rates among minority populations compared to non-Hispanic whites

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
U.S. Diabetes Prevalence

Young people aged 0-9

- Diabetes occurs in less than 1 in 1,000 young people aged 0 to 9 years
- Type 1 diabetes accounts for 97% of diagnosed cases of diabetes in this age group
- Non-Hispanic white youth have the highest rate of new cases of type 1 diabetes

U.S. Diabetes Prevalence
Young people ages 10-19

- Diabetes occurs in 1 in 357 young people aged 10 to 19 years
- Type 1 diabetes accounts for 81% of diagnosed cases in this age group
- Type 2 diabetes accounts for 6% (non-Hispanic white youth) to 76% (American Indian youth) of diagnosed diabetes in this age group

Every 24 Hours…

- 5225 new cases of diabetes are diagnosed
- 180 non-traumatic lower limb amputations are performed
- 133 people begin treatment for end-stage renal disease
- 634 people die of diabetes or diabetes is a contributing cause of death

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
Preventing Diabetes Complications

- Blood glucose control
- Blood pressure control
- Blood lipid control
- Preventive care practices for eyes, kidneys, feet, teeth, and gums

National Diabetes Fact Sheet, CDC, 2011.

Revised March 2011
What is insulin resistance?
A reduced response to circulating insulin

Liver
↑ Glucose output

Muscle
↓ Glucose uptake

Adipose tissue
↓ Glucose uptake

Hyperglycemia
Percentage of adults with diagnosed diabetes receiving treatment, United States 2007-2009

- Insulin only: 16%
- Oral medication only: 12%
- Insulin and oral medication: 14%
- No medication: 58%

Source: 2007–2009 National Health Interview Survey
Questions?

Renee Crichlow MD, FAAFP
North Memorial Family Medicine Residency Program
“Where Excellence Meets Caring”
Crichlow.umn@gmail.com

Revised March 2011

National Diabetes Education Program
www.YourDiabetesInfo.org • 1-888-693-NDEP (1-888-693-6337)
A joint program of NIH and CDC