

Diabetes and African Americans

Background:

- According to the Department of Health and Human Services/The Office of Minority Health, diabetes is a disease in which blood glucose levels are above normal. People with diabetes have problems converting food to energy. After a meal, food is broken down into sugar called glucose, which is carried by the blood to cells throughout the body. Cells use the hormone insulin, made in the pancreas to help them process blood glucose to energy (November 2005).
- There are three types of diabetes: (1) Type 1 diabetes, (2) Type 2 diabetes, and (3) Gestational diabetes.

Type 1 diabetes occurs when the pancreas no longer creates insulin needed to process glucose. The body's immune system attacks or destroys its own insulin that it creates. Although Type 1 diabetes can occur at anytime, it usually is diagnosed in early childhood or young adulthood. People who have Type 1 diabetes must take insulin either by injection or pump otherwise their condition can result in falling into a coma or even death (Department of Health and Human Services 2005).

- Type 2 diabetes is when the body's pancreas produces insulin but in insufficient amounts, or the body does not use it appropriately to break down sugar in the body. People over the age of 40 usually develop Type 2 diabetes, however the condition can occur in people of younger ages (Department of Health and Human Services 2005).
- Gestational diabetes occurs when women are pregnant, usually because of a shortage of insulin. Women who develop gestational Diabetes are at increased risk of developing type 2 diabetes later in life, usually within the next 20 years (Department of Health and Human Services 2005). Women who have gestational diabetes that goes undetected are at risk of having to birth large babies, weighing more than nine pounds (National Diabetes Information Clearinghouse (NDIC)).
- Signs or symptoms of diabetes may include extreme thirst, frequent urination, increased hunger or fatigue, rapid weight loss, difficulty healing sores, dry, itchy skin, loss of feeling or tingling in your feet, blurred eyesight (National Diabetes Information Clearinghouse (NDIC)).
- Diabetes can be diagnosed during an office visit with a doctor or physician after being tested with a fasting blood glucose test or an oral glucose test. Your doctor can inform you of what stage of diabetes you may be in, if at all. A normal glucose level should range between 70 and 120 (National Diabetes Information Clearinghouse (NDIC)).

- Treatment for diabetes varies depending on the type of diabetes that you have.
- People who have Type 1 diabetes must check their glucose levels numerous times daily and take insulin either by pump or injection to maintain an adequate level of insulin in their body. They should eat a specific diet and exercise daily (National Diabetes Education Program).
- People who have Type 2 diabetes should take their medication for diabetes, be watchful of their diet, exercise, maintain their cholesterol and blood pressure and if recommended by their doctor, take an aspirin daily (National Diabetes Information Clearinghouse (NDIC)).
- Women who develop gestational diabetes while pregnant can sometimes control their glucose or sugar levels by diet, or sometimes have to take insulin shots until the completion of their pregnancy. After the birth of the baby, the glucose levels usually return to normal but they should keep a watch on their glucose levels because developing gestational diabetes is an indicator that they may develop Type 2 diabetes later in life.
- Having diabetes affects other areas of the body. Diabetes affects the eyes, kidneys, teeth, and nerves, gums (National Diabetes Information Clearinghouse (NDIC))
- Having diabetes can lead to kidney failure, blindness, stroke, nerve problems, gum infections, or even amputations of body parts (U.S. Department of Health and Human Services), heart disease, damaged blood vessels (National Diabetes Information Clearinghouse (NDIC)).

Statement of problem:

- According to Healthy People 2010, their goal is stated as the following: “Through prevention programs, reduce the disease and economic burden of diabetes, and improve the quality of life for all persons who have or are at risk of diabetes” (Healthy People 2010).
- Healthy People 17 objectives are:
 - 5-1. Increase the proportion of persons with diabetes who receive formal diabetes education,
 - 5-2. Prevent diabetes,
 - 5-3. Reduce the overall rate of diabetes that is clinically diagnosed,
 - 5-4. Increase the proportion of adults with diabetes whose condition has been diagnosed,
 - 5-5. Reduce the diabetes death rate,
 - 5-6. Reduce diabetes-related deaths among persons with diabetes,
 - 5-7. Reduce deaths from cardiovascular disease in persons with diabetes,
 - 5-8. Decrease the proportion of pregnant women with gestational diabetes,

- 5-9. Reduce the frequency of foot ulcers in persons with diabetes,
 - 5-10. Reduce the rate of lower extremity amputations in persons with diabetes,
 - 5-11. Increase the proportion of persons with diabetes who obtain an annual urinary microalbumin measurement,
 - 5-12. Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least once a year,
 - 5-13. Increase the proportion of adults with diabetes who have an annual dilated eye examination,
 - 5-14. Increase the proportion of adults with diabetes who have at least an annual foot examination,
 - 5-15. Increase the proportion of persons with diabetes who have at least an annual dental examination,
 - 5-16. Increase the proportion of adults with diabetes who take aspirin at least 15 times per month, and
 - 5-17. Increase the proportion of adults with diabetes who perform self-blood-glucose monitoring at least once daily (Healthy People 2010).
- Healthy People use more than one source for obtaining data to measure progress made in addressing diabetes, including National Health Interview Survey (NHIS), CDC, NCHS; National Health and Nutrition Examination Survey (NHANES) CDC, NCHS; National Vital Statistics System (NVSS), CDC, NCHS; National Hospital Discharge Survey (NHDS), CDC, NCHS, and Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP.
 - Complications of diabetes can be managed or minimized by monitoring being selective of your diet, monitoring your blood pressure, weight, and levels of physical activity, taking insulin or prescribed medication, regularly testing your glucose or sugar levels and maintaining a close relationship with your medical providers and following their medical advice.
 - Maintaining your diet and blood pressure helps reduce the risk of cardiovascular disease.
 - Have regular eye exams (yearly) to reduce the chance of blindness (National Diabetes Information Clearinghouse (NDIC)).
 - Have dental exams twice, yearly to reduce gum disease or teeth loss (National Diabetes Information Clearinghouse (NDIC)).

Epidemiological picture of the issue:

- Although everyone can be affected by diabetes, African Americans are diagnosed and suffer from the effects of diabetes in the largest numbers.
- Diabetes is a serious health problem but one that can be controlled.

- According to the Center for Disease Control, diabetes is the sixth leading cause of death in the United States (2005).
- “3.2 million African Americans (20 years or older) or 13.3 percent have diabetes, one third whom are undiagnosed “ (National Diabetes Education Program 2005).
- According to the National Diabetes Education Program, 20.8 million Americans have diabetes (7 percent of the U.S. population). About 6.2 million don’t know they have diabetes. Every year 1.5 million people 20 years of age or older are diagnosed with diabetes (November, 2005).
- “More than 200, 000 diabetes-related deaths occur per year” (U.S. Department of Health and Human Services 2002).
- Healthy People 2010 state that “in the United States, diabetes is the leading cause of non-traumatic amputations, blindness among the working class of adults and kidney failure (end-stage renal disease).
- “African Americans are at risk of experiencing complications from diabetes that include cardiovascular disease, blindness, amputation, and kidney failure (American Diabetes Association).
- “African Americans are twice as likely to suffer from diabetes-related blindness” (American Diabetes Association).
- “African Americans are 1.5 to 2.5 times to suffer from lower limb amputations” (American Diabetes Association).
- “African Americans with diabetes are 2.6 to 5.6 times more likely to suffer from kidney disease” (American Diabetes Association).
- According to National Diabetes Education Program, it is estimated that cost for treatment of diabetes is \$132 billion annually (November, 2005).

Solutions:

-  Department of Health and Human Services
Centers for Disease Control and Prevention <http://www.cdc.gov/nccdphp/>

“According to Centers for Disease Control and Prevention (CDC), Chronic diseases—such as heart disease, cancer, and diabetes—are the leading causes of death and disability in the United States. These diseases account for 7 of every 10 deaths and affect the quality of life of 90 million Americans. Although chronic diseases are among the most common and costly health problems, they are also among the most preventable. Adopting healthy behaviors such as eating nutritious foods, being physically active, and avoiding tobacco use can prevent or control the devastating effects of these diseases.

CDC’s National Center for Chronic Disease Prevention and Health Promotion is at the forefront of the nation's efforts to prevent and control chronic diseases. The center conducts studies to better understand the causes of these diseases, supports programs to promote healthy behaviors, and monitors the health of the nation through surveys. Critical to the success of these efforts are partnerships with state health and education agencies, voluntary associations, private organizations, and other federal agencies. Together, the center and its partners are working to create a healthier nation” (Centers for Disease Control and Prevention).

-  American Diabetes Association
Cure • Care • Commitment® <http://www.diabetes.org/diabetes-research/ada-funded.jsp>

“The American Diabetes Association funds peer-reviewed projects aimed at preventing, treating, and curing all types of diabetes. Our projects cover such areas as genetics, islet cell biology, immunology, diabetes education and behavioral research. The Association also funds targeted research grants. Targeted research grants are "donor-driven." This means a donor provides the Association with funds to support a research topic that both the donor and the Association have interest in researching. Our core program offers investigator-initiated funding for basic and clinical science research awards. We also offer training awards to support scientists at various stages through their careers, from medical school through assistant professor (American Diabetes Association).

-  United States
National Institute of
Diabetes & Digestive & Kidney Diseases
of the National Institutes of Health <http://www.niddk.nih.gov/patient/dpp/dppos.htm>

“The Diabetes Prevention Program Outcomes Study is studying the long term effect of diet and exercise and the diabetes medication, metformin, on the delay of type 2 diabetes in participants of the [Diabetes Prevention Program \(DPP\)](#).

The DPPOS is designed as a follow-up study to the participants enrolled in the Diabetes Prevention Program (DPP). The DPP was a multi-center trial examining the ability of an intensive lifestyle or metformin to prevent or delay the development of diabetes in a high risk population due to the presence of impaired glucose tolerance (IGT). The DPP has ended early demonstrating that lifestyle reduced diabetes onset by 58% and metformin reduced diabetes onset by 31%. This group of participants is nearly 50% minority and represents the largest IGT population ever studied. Clinically important research questions remain that focus on 1) durability of the prior DPP intervention, 2) determination of the clinical course of precisely known new onset diabetes, in particular regarding CVD, CVD risk factors and atherosclerosis and microvascular disease, 3) close examination of these topics in men vs women and in minority populations. Clinically important research questions remain that focus on 1) durability of the prior DPP intervention, 2) determination of the clinical course of precisely known new onset diabetes, in particular regarding CVD, CVD risk factors and atherosclerosis and microvascular disease, 3) close examination of these topics in men vs women and in minority populations. DPPOS is made up of the 26 Diabetes Prevention Program (DPP) clinical centers and one data coordinating center funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)” (National Institute of Diabetes and Digestive and Kidney Diseases, February 2005).

Internet Resources:

American Diabetes Association. Research Supported by ADA. Retrieved April 23, 2006, from <http://www.diabetes.org/diabetes-research/ada-funded.jsp>

Department of Health and Human Services: Centers for Disease Control and Prevention. <http://www.cdc.gov/nccdphp/>

National Clearinghouse (NDIC): A service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIH. *Why It's Important to Take Care of Your Diabetes*. Retrieved February 7, 2006 from <http://diabetes.niddk.nih.gov/dm/pubs/type1and2/care.htm>

NATIONAL Diabetes Education PROGRAM, WORKING TOGETHER TO MANAGE DIABETES, *Diabetes: A Major Health Problem*. Retrieved February 8, 2006, from <http://ndep.nih.gov/diabetes/WTMD/diabetes.htm>

Bibliography:

American Diabetes Association. Research Supported by ADA. Retrieved April 23, 2006, from <http://www.diabetes.org/diabetes-research/ada-funded.jsp>

Centers for Disease Control and Prevention. National Diabetes Fact Sheet: general information

and national estimates on diabetes in the United States, 2005. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.

Center for Disease Control: Office of Minority Health. *Eliminate Disparities in Diabetes*.

Retrieved February 7, 2006, from <http://www.cdc.gov/omh/AMH/factsheets/diabetes.htm>

Department of Health and Human Services: Centers for Disease Control and Prevention.

<http://www.cdc.gov/nccdphp/>

National Clearinghouse (NDIC): A service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIH. *Why It's Important to Take Care of Your Diabetes*.

Retrieved February 7, 2006 from

<http://diabetes.niddk.nih.gov/dm/pubs/type1and2/care.htm>

National Clearinghouse (NDIC): A service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIH. *What Diabetes Is*. Retrieved February 7, 2006,

from <http://diabetes.niddk.nih.gov/dm/pubs/type1and2/what.htm>

NATIONAL Diabetes Education PROGRAM, WORKING TOGETHER TO MANAGE

DIABETES, *Diabetes: A Major Health Problem*. Retrieved February 8, 2006, from

<http://ndep.nih.gov/diabetes/WTMD/diabetes.htm>

NATIONAL DIABETES EDUCATION PROGRAM: U.S. Department of Health and Human

Services, National Institute of Health. *The Diabetes Epidemic Among African Americans*.

November, 2005.

National Diabetes Information Clearinghouse (NDIC): A service of the National Institute of

Diabetes and Digestive and Kidney Diseases (NIDDK) NIH, *Am I at Risk for Type 2*

Diabetes? Retrieved February 4, 2006, from

<http://diabetes.niddk.nih.gov/dm/pubs/riskfortype2/index.htm>

Statistics about African Americans & Diabetes- American Diabetes Association. *Diabetes*

Statistics for African Americans. Retrieved February 7, 2006, from

<http://www.diabetes.org/diabetes-statistics/african-americans.jsp>

U.S. Department of Health and Human Services: National Diabetes Education Program, The

Diabetes Epidemic Among African Americans. www.ndep.nih.gov November 2005.

U. S. Department of Health and Human Services: The Office of Minority Health. *Diabetes 101*.

Retrieved February 7, 2006, from

<http://www.omhrc.gov/templates/content.aspx?ID=3097>

U.S. Department of Health and Human Services. *Tracking Healthy People 2010*. Washington,

DC: U.S. Government Printing Office, November 2000. Retrieved from

<http://www.healthypeople.gov/Document/html/tracking/od05.htm>

U.S. Department of Health and Human Services: Healthy People 2010 Progress Review,

Diabetes December 18, 2002

United States National Institute of Diabetes & Digestive & Kidney Diseases of the National

Institutes of Health. *Diabetes Prevention Program Outcomes Study*. Retrieved April 23,

2006, from <http://www.niddk.nih.gov/patient/dpp/dppos.htm>

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