

AMH *InsideOut*

Diabetes and Your Body

by Kelly Harnish, BS, CHES, AMH Health Education Specialist

Roughly 6% of the United States population has been diagnosed with type 2 diabetes, and many more are undiagnosed or have a condition called pre-diabetes. This article describes type 2 diabetes, diabetes management, and prevention methods.

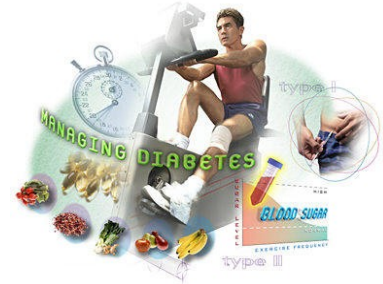
Type 2 diabetes, also known as adult onset diabetes, is a chronic health condition in which a person's cells are resistant to insulin. Our bodies' cells need glucose, a kind of sugar, for energy and survival. Insulin is a hormone secreted by the pancreas which allows glucose to leave the bloodstream and enter the cells. Think of one of your cells as a house with a locked door. You, the glucose molecule, are outside (in the bloodstream), and in order to get in, you need a key that will unlock the door. Insulin is the key which unlocks the cell so that the glucose can get inside the cell to energize it. In type 2 diabetes, the pancreas still produces insulin, but that insulin no longer unlocks the cell. Therefore, glucose remains in the blood stream, unable to provide energy. When the body is unable to pull the glucose out of the blood stream and into the cell, the result is high blood sugar, which is ultimately what causes complications.

Diabetes complications include heart attack, stroke, blindness, amputation, and kidney failure. These complications may sound severe, and perhaps melodramatic, but the potential for these complications to occur is real. Damage from high blood sugar is often asymptomatic and occurs over a

period of years. As blood vessels, nerves, and organs become damaged, your risk of diabetes complications increases.

- Heart disease, heart attack, heart failure, and stroke risks are doubled. Heart disease and stroke cause at least 65% of deaths from diabetes.
- Major eye complications (diabetic retinopathy) are linked to blood vessel problems in the eyes. Diabetes is a leading cause of preventable blindness, and increases the risk of cataracts and glaucoma are also common.
- Reduced blood flow to nerves and high blood sugar results in nerve pain, burning, numbness (peripheral neuropathy).
- Serious leg and foot infections, even gangrene and amputation, are due to poor blood circulation, lack of oxygen and nutrients to tissue, and nerve damage. Kidney damage (diabetic nephropathy) is a common risk for people with diabetes.

The complications of diabetes are indeed serious, but they are not inevitable. Keeping blood sugar under control is the most important factor in preventing them. Managing diabetes or preventing the onset of type 2 diabetes or pre-diabetes can be done by adopting and maintaining a healthy lifestyle. Exercise, at least 2 ½ hours of cardiovascular exercise per week, can assist your cells in being more responsive to insulin. Balanced nutrition, including whole grains, vegetables, fruits, nuts, beans, lean meats, low-fat dairy, and adequate water, allows your body to function at its peak.



You can learn about your diabetes risk by asking your health care provider for a fasting blood glucose screening. Pre-diabetes is defined as fasting blood glucose between 100-125. Type 2 diabetes is defined as fasting blood glucose greater than 125. It's a good idea to have your glucose checked at least every three years, as recommended by diabetes experts.

Being diagnosed with a chronic health condition such as diabetes can be overwhelming. There are new self-care responsibilities to adopt and physical symptoms to monitor. One of the best tools in managing diabetes is getting educated. AMH offers individual health coaching for weight and diabetes management. To set up an appointment, call AMH Health Education Services at 376-3939. In addition, Kadlec Hospital offers a four-week class at the Diabetes Learning Center. To learn more, visit <http://www.kadlecmed.org/services/diabetes.html>. **It's your health, own it!**

References: <http://diabetes.webmd.com/diabetes-complications-10/risk-of-complications?page=1>,

http://www.vivo.colostate.edu/hbooks/pathophys/endocrine/pancreas/insulin_phys.html

Invite AMH to be a guest at your next work group meeting.

June Feature Presentation: Diabetes Basics

By Shannon Haselhuhn or
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COOKING CLASS FOR DIABETES PREVENTION AND TREATMENT

FREE

Wednesday, June 30, 2010
11:30 am—1:30 pm or 5:00 pm—7:00 pm
At Kadlec Diabetes Learning Center
1305 Mansfield, Suite 4
Richland, WA 99352

****Pre-Registration Required: 942-2620****



WATCH FOR UPCOMING EVENTS WITH AMH

June
[Weight Loss Convoy \(ongoing\)](#)
[Site-Health Fairs \(10th\)](#)
[Tobacco Cessation Class \(starts 14th\)](#)

July
[Weight Loss Convoy \(ongoing\)](#)
[Site-Health Fairs \(8th\)](#)
[Tobacco Cessation Class \(ongoing\)](#)
[Site-Wide Summer Recreation Challenge \(starts 12th\)](#)

Select a link or visit our website: www.hanford.gov/amh

West Nile virus (WNV)

by L.B. Sandy Rock MD MPH—AMH Risk Communicator



This most important mosquito-borne viral illness in the United States first appeared in humans in Washington State in 2006, the last state in the lower 48 to achieve that distinction. That year, there were three known cases of West Nile virus; in 2009, there were 38, with one fatality. No one can predict what the coming season will bring; experience from other states suggests there will continue to be cases in 2010. There is no treatment for the illness, only prevention. While most (>95%) infected people have mild or no symptoms, a small percentage develop fever, headache, and rash. An even smaller percentage—particularly among those over 65—develops serious illness, including encephalitis (inflammation of the brain), which can be fatal or result in lingering or permanent neurological (brain and nerve) damage.

The virus first appeared in the United States in 1999 in New York City, presumably imported via international travelers. In 2002 and 2003, combined—the worst years so far in the U.S., there were more than 14,000 known human cases and more than 500 deaths. In 2009, there were 720 known cases and 32 deaths nationwide. Horses and certain bird species are intermediate carriers as well as target species of WNV. In fact, dead or dying birds and horses often signal the arrival of WNV in an area prior to occurrence of human cases. Control of mosquito populations and immunization of horses are two important measures that impede the spread of the virus. [Benton County Mosquito Control](#) routinely tests batches of collected mosquitoes for WNV, providing further prediction capability for WNV human cases.

Prevention of mosquito bites is the only way to avoid contracting WNV, accomplished by reduction of mosquito populations and use of personal protection. Mosquito control agencies have variable success in controlling mosquito populations by applying pesticides on waterway breeding grounds (larvicide) and spraying habitat of adult mosquitoes (adulticide). Eliminating standing water in yards (birdbaths, containers, wheelbarrows, old tires, tarps, even hollows in rocks) can reduce the number of mosquitoes; a female mosquito can lay as many as 200 eggs in one tablespoon of water!

Those who live near waterways know that these efforts are only partially successful; personal protection must also be employed to prevent mosquito bites. This includes avoiding the outdoors during morning and evening mosquito activity (biting) hours; wearing long-sleeved shirts and other skin-covering clothing, including hats; applying DEET- or picaridin-containing lotions on exposed skin; applying *permethrin*-containing repellent on clothes only. And make sure window screens are in good repair and doors don't get left open; the irritating whine of an approaching mosquito in the middle of the night can ruin sleep. Many other folk methods to ward off mosquitoes are touted but none proven; the Internet is filled with gadgets and gimmicks to purchase: *caveat emptor*—let the buyer beware! One method that appears to work, offered by an *InsideOut* reader: [goldfish](#), a natural predator for mosquito larvae, added to decorative ponds and other water features, including stock watering troughs. More information can be found at <http://www.hanford.gov/amh/?page=172>

RISK COMMUNICATION PRESENTATIONS AVAILABLE!

AMH Risk Communicator, Dr. Sandy Rock, will meet with your group to discuss one or more of several important and timely topics: **Chronic Beryllium Disease; West Nile virus; MRSA (methicillin-resistant *Staphylococcus aureus*).**

If you would like to schedule a presentation and Q&A session on any of these topics, please call or email Doc Rock at 372-0407 or sandy_rock@rl.gov

DIABETES LEARNING CENTER SUPPORT GROUP

TOPIC: CARDIOVASCULAR DISEASE AND DIABETES

SPEAKER: DR. JAMALI

WHEN: JUNE 16TH, 5:00-6:00PM

WHERE: CBC HEALTH SCIENCES BUILDING

OPEN TO COMMUNITY, NO COST.

Healthy Recipes

For more: [Healthy Recipes](#)

Honey-Mustard Turkey Burgers

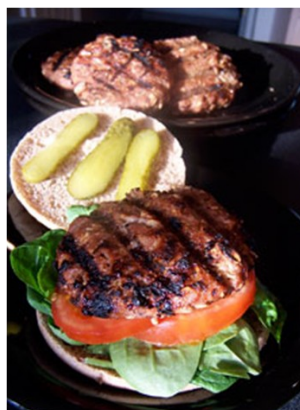
Serves 4

Ingredients:

- 1/4 cup coarse-grained mustard
- 2 tablespoons honey
- 1 pound ground turkey breast
- 1/4 teaspoon salt
- 1/4 teaspoon freshly ground pepper
- 2 teaspoons canola oil
- 4 whole-wheat hamburger rolls,
- Lettuce, tomato slices and red onion slices, for garnish

Preparation:

Prepare a grill. Whisk mustard and honey in a small bowl until smooth. Combine turkey, 3 tablespoons of the mustard mixture, salt and pepper in a bowl; mix well. Form into four 1-inch-thick burgers. Lightly brush the burgers on both sides with oil. Grill until no pink remains in center, 5 to 7 minutes per side. Brush the burgers with the remaining mustard mixture. Serve on rolls with lettuce, tomato and onion slices.



PER SERVING:

Calories	313
Total Fat	6
Saturated Fat	0
Cholesterol	45
Sodium	526
Carbohydrate	39
Dietary fiber	5
Protein	32
Potassium	6

Dietitian's tip: Burgers made with ground turkey are a lean alternative to beef burgers, providing you choose turkey ground from the breast. Regular ground turkey, which is a mixture of light and dark meat and some skin, contains almost as much fat as lean ground beef. A honey-mustard mixture keeps these low-fat patties moist and succulent.