



Diabetes In-control **NOW!**

Inside This Issue

Welcome letter1

Steps to Diabetes Control ..2-3

Nutrition Corner.....4-5

Who's Who6

Research Focus.....7

Diabetes Institute8

Summer 2005

Volume 1, Issue 2

Letter from the Director of the Diabetes Institute

Dear Readers,

Welcome back to Diabetes In-control NOW! the newsletter of the Walter Reed Health Care System Diabetes Institute. As you know, diabetes is a very serious disease that can cause problems like blindness, heart disease, kidney failure, and amputations. By taking good care of yourself through diet, exercise, and medications you can control your blood sugar and decrease your risk of complications from diabetes. This issue will focus on the recognition and treatment of diabetic eye disease.

With the aging of the population, the number of Americans with major eye disease is increasing, and vision loss is becoming a major public health problem. By the year 2020 the number of people who are blind or have low vision is expected to increase substantially. According to an article in the Archives of Ophthalmology (April, 2004), blindness or low vision affects 3.3 million Americans age 40 and over or one in 28. This figure is projected to reach 5.5 million by the year 2020. Low vision and blindness increase significantly with age, particularly in people over age 65.

Diabetes presents an additional risk for eye disease. Diabetes is the leading cause of blindness in the United States for persons between the ages of 20 and 74 years. Eye disease is 25 times more common among people with diabetes than in the general population. Diabetic eye disease refers to a group of eye problems that people with diabetes may face as a complication of diabetes. All can cause severe vision loss or even blindness. Diabetic eye disease includes:

- ✓ Diabetic retinopathy—damage to the blood vessels in the retina
- ✓ Cataract—clouding of the eye's lens
- ✓ Glaucoma—an increase in the fluid pressure inside the eye that may damage the optic nerve resulting in vision loss.

The most common diabetic eye disease is diabetic retinopathy. The longer someone has diabetes, the more likely he or she will develop diabetic retinopathy. Nearly half of all people with diabetes will develop some degree of diabetic retinopathy during their lifetime. There is, however, good news. Although diabetic retinopathy cannot be prevented, there are two things you can do protect your vision. Control your blood sugars and get a dilated eye exam at least once a year. Finding and treating the disease, before it causes vision loss or blindness, is the best way to control diabetic eye disease.

We hope this issue will provide you with the information you need about diabetic eye disease and the steps you can take to slow its onset and progression.

Sincerely,

Robert A Vigersky, COL MC
 Medical Director, Diabetes Institute

Your Diabetes Clinics

Washington DC

**Walter Reed
 Army Medical Ctr.**
 Endocrinology
 202-782-6750

Internal Medicine
 202-782-1952

Virginia

**DeWitt Army Community
 Hospital**
 703-805-0714

**Family Health Center of
 Fairfax**
 703-970-4228

Rader Family Practice Center
 703-696-2977

**Family Health Center of
 Woodbridge**
 703-576-1364

Maryland

**Kimbrough Ambulatory Care
 Center**
 301-677-8496

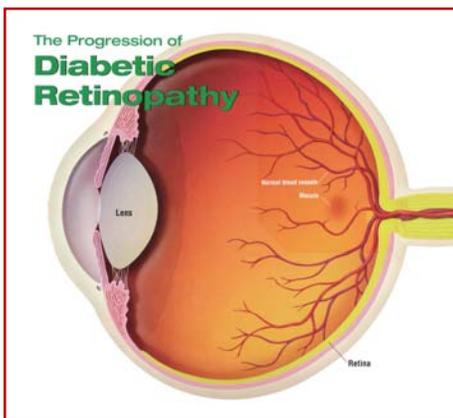
Diabetic Eye Disease—Are you at risk?

Diabetic eye diseases refer to a group of eye problems that people with diabetes may face as a complication of this disease. All can cause severe vision loss or even blindness. Diabetic eye disease may include retinopathy, cataracts, and glaucoma. The most common diabetic eye disease is diabetic retinopathy. This disease is the leading cause of blindness in American adults.

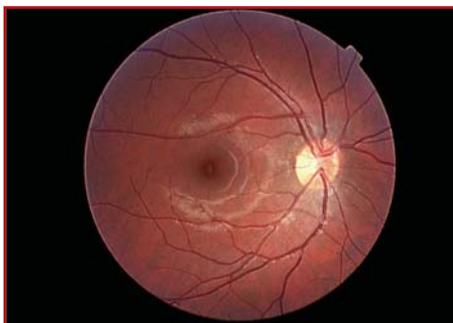
Persons with both type 1 and type 2 diabetes are at risk to develop diabetic retinopathy. The longer someone has diabetes, the more likely he or she will develop diabetic retinopathy.

How does the eye function?

Your eyes are very delicate and highly specialized. Light rays enter the eye through the cornea and the pupil and are focused by the lens onto the retina. The retina lines the inner surface of the eye.



Normal Retina



Normal Retina—Right Eye

The retina receives focused light rays and transforms the light image into nerve signals that the brain interprets as vision. A network of tiny blood vessels supplies the eyes with oxygen and feeds the macula, the central area of the retina that allows you to see fine details clearly.

What are its symptoms?

There are usually no symptoms in the early stages of the disease. Vision may not change until the disease becomes severe. There is no pain. Blurred vision may occur when the macula—the part of the retina that provides sharp, central vision—swells from the leaking fluid. This condition is called macular edema. If new vessels have grown on the surface of the retina, they can bleed into the eye, blocking vision. But, even in advanced cases, the disease may progress for a long time without symptoms. That is why regular eye examinations for people with diabetes are so important.

What are the stages of diabetic retinopathy?

There are three stages of diabetic retinopathy: nonproliferative retinopathy, proliferative retinopathy, and macular edema.

In nonproliferative retinopathy, high blood glucose levels damage the retina's small blood vessels which leak fluid into the retinal tissue. In addition, changes in the circulation to the retina deprive the retina of the oxygen it needs to function properly. These changes in blood vessels and circulation damage the sensitive retinal tissue.

Proliferative retinopathy is more involved. In proliferative retinopathy, the retina releases chemical messengers that stimulate the growth of new blood vessels to bring more oxygen to the retina. Unfortunately, the new vessels are very fragile and may leak blood into the retina. They may even burst and fill the back of the eye with blood, causing significant

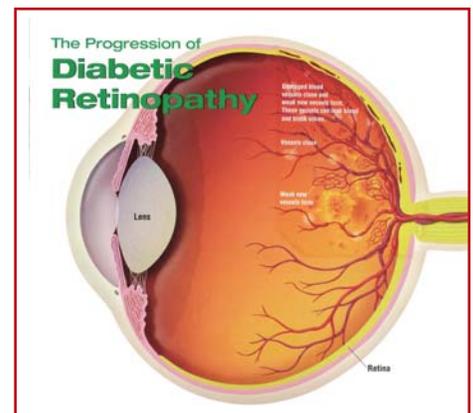


vision loss. Scar tissue accompanying the new vessels can pull on the retina, distorting vision and eventually causing the retina to separate from the underlying tissue (retinal detachment). Retinal detachment can threaten your sight.

Leakage from diseased or abnormal retinal vessels may cause a sight-threatening build-up of fluid in the macula, the central area of the retina that allows you to see fine details clearly. When fluid builds up here it causes macular edema. Macular edema can blur or distort your vision and may affect how you see colors.

How is retinopathy detected?

If you have diabetes, you should have your eyes examined at least once a year. The examination must allow your eye doctor to see the retina clearly enough to check for signs of disease. There are two



Proliferative Diabetic Retinopathy

ways that doctors can check your eyes for signs and symptoms of retinopathy and other disorders. One method involves the use of eye drops to enlarge your pupils prior to the examination. Another method uses a specialized camera to take images of your eyes.

Can retinopathy be treated?

Retinopathy can be treated with laser surgery in which a strong light beam is aimed into the retina to shrink the abnormal vessels. Laser surgery and appropriate follow up can reduce the risk of blindness by 90 percent. Although studies indicate that laser surgery slows the progression of retinopathy, it cannot restore vision that has already been lost. Laser surgery may also be used if you have macular edema. In this case the laser beam is used to seal leaking blood vessels.

Can diabetic retinopathy be prevented?

Diabetic retinopathy cannot be prevented, but your risk can be greatly reduced. Several studies, including The Diabetes Control and Complications Trial (DCCT), and the Wisconsin Epidemiologic Study of Diabetic Retinopathy, showed that tight control of both blood pressure and blood glucose levels decreases the risk for retinopathy and slows the onset and progression of retinopathy. The DCCT also found that the group that tried to keep their blood sugar levels as close to normal as possible had much less kidney and nerve disease. Because mild abnormalities may not be detected by the general practitioner, the American Diabetes Association recommends that every patient with type 2 diabetes receive an eye examination once a year by an ophthalmologist or optometrist experienced in diagnosing the presence of diabetic retinopathy. It is very important to have an eye exam when you are first diagnosed with diabetes and periodically thereafter.

How common are the other diabetic eye diseases?

Blurred vision due to high blood sugar levels commonly occurs at the onset of diabetes and during periods when the

blood sugar is not well controlled. This is a temporary condition that will resolve in 6 to 8 weeks when blood sugar levels have been stabilized. Visual changes such as dimming of vision, flashing lights or double vision may be experienced during periods of low blood sugar (<70mg/dl).

Eye disease is 25 times more common among people with diabetes than in the general population. Common senile cataracts occur more frequently, at younger ages, and progress more rapidly in patients with diabetes. The diabetic cataract, a rare type of cataract associated with irregular fluid changes in the eye, can mature in a few days and progress very rapidly. Cataracts cloud the lens and make you feel as if you are looking through waxed paper. Diabetes also increases your risk of glaucoma.

What can you do to protect your vision?

Finding and treating the disease early, before it causes vision loss or blindness, is one of the best ways to control diabetic eye disease. Take these steps to reduce your risk and slow the progression of diabetic retinopathy:

Step 1: Control your blood sugar (A1C less than or equal to 7%).

Step 2: Control your blood pressure (less than or equal to 130/80).

Step 3: Stop smoking

Step 4: See your eye care professional at least once a year for a dilated eye exam or retinal imaging at a WRHCS clinic near you.

Step 5: Know the warning signs. No symptoms are present in the early stages, and only an eye care professional can recognize changes through a dilated eye exam. The following signs may be present in advanced disease:

- Blurred or loss of vision
- Difficulty reading
- Seeing spots or floaters

Step 6: Report any changes in vision to your diabetes or eye care specialist immediately.

What is Your Eye Q

Do you know that diabetic eye disease is a leading cause of blindness? If you have diabetes, do you know how to reduce your risk of vision loss? Answer the following questions to determine your Eye-Q.

1. People with diabetes are more likely than people without diabetes to develop certain eye diseases.
True False
2. Diabetic eye disease usually has early warning signs.
True False
3. People with diabetes should have yearly eye exams.
True False
4. Diabetic retinopathy is caused by changes in the blood vessels of the eye.
True False
5. People with diabetes are not likely to develop glaucoma.
True False
6. Laser surgery can be used to stop the progression of diabetic retinopathy.
True False
7. Cataracts are common among people with diabetes.
True False
8. One in every 12 people with diabetes age 40 and Older has vision threatening retinopathy.
True False
9. People who have good control of their diabetes are not likely to develop diabetic eye disease.
True False
10. The risk of severe vision loss and blindness from diabetic eye disease can be reduced.
True False

(courtesy of the National Eye Institute, National Institutes of Health.) (answers on page 6)

Nutrition Corner:

Are you planning a trip?

Did you know that...

You can travel wherever you want, whether camping or cruising, visiting a big city or a small town, rafting on a river, hiking in canyons, backpacking in National Parks, or trekking on camels across the desert. As long as you remember one thing you can go wherever you want to go and do whatever you would like to do.

What is that one thing?

Diabetes does not stay home. It goes wherever you go.

Food is one of life's necessities and eating one of life's greatest pleasures for most people. When traveling to other parts of the world, experimenting with regional foods and local cuisines, experiencing different food customs, or even visiting relatives who make your favorite desserts, sticking to your meal plan can be especially adventurous and challenging at times.

What can you do?

Plan ahead

The planning you do before traveling can make a difference between a great adventure or a total flop. It just takes a little planning ahead to handle your diabetes. How you prepare depends on where you're going and for how long. Two weeks backpacking through Europe requires different planning than a week at the beach. Will you be crossing time zones? What kind of food will you eat and when will you eat? Will you be more active or less active than usual? Do you know how to make healthy food choices when eating in restaurants or when sitting down to those fabulous family reunions?

Take these steps to maintain target blood glucose levels

When flying you can request a special meal low in sugar, fat, or cholesterol. Make your request at least two days before the flight. Never take your pre-meal insulin unless your meal is in front of you. Otherwise, a delay in the meal could lead to low blood glucose. To be safe, always carry some food with you. If your meal is delayed or an order is mixed up, you won't be stuck with an empty stomach.



Drink plenty of fluids. Avoiding caffeinated and alcoholic beverages will minimize the effects of 'jet lag.' Take action breaks—when flying or traveling by bus or train—walk in the aisles every 2 hours. Driving? Take breaks to stretch or walk at rest stops or when getting gas.

Some basic tips:

- Carry hard candies or glucose tablets for treatment of hypoglycemia.
- Take along snacks when hiking or sightseeing. Don't assume you will be able to find food. Carry non-perishable snack foods such as cheese w/crackers, peanut butter w/crackers, and dry fruits.
- Meal replacement bars and/or snack bars are good to carry for delayed meals or skipped meals.
- When overseas avoid drinking tap water or using includes ice cubes made from tap water.
- Ask for a list of ingredients for unfamiliar foods. Some foods may upset your stomach and hurt your diabetes control.
- Test your blood glucose after you've eaten any foods that you're not used to eating.
- Eat something—a meal or a snack—about every 4–5 hours.
- If the big meal of the day will be served late at night, you may want to eat a snack at your usual supper time, and omit your bedtime snack.
- Make requests—most restaurants will grill instead of frying food, substitute one item for another, can food be grilled instead of fried; and serve sauces, gravies, and dressings on the side.

- Plan to split main dish with your companion to avoid take home leftovers.
- Avoid buffets unless you know you can resist eating too much or have a plan for exactly what you will eat.
- No matter what kind of diabetes you have or where your vacation takes you, it's smart to watch what you eat and drink.
- Fast food does not have to be Fat Food. The ground rules of healthy and good nutrition still apply when you drive through the fast food window.
- In some parts of the world, breakfast is very light so you may want to have something extra to add to it.

What if you get sick?

It is best to ask your doctor, pharmacist, or diabetes educator about taking your medicines (insulin or pills) when you are acutely sick. However, the following are good guidelines to follow when you are not feeling well:

- tips will help you control your blood sugar levels:
- Try to take medications/insulin as prescribed
- Eat meals and snacks as usual.

If you cannot eat because you do not like the food or you develop diarrhea or vomiting drink 4 oz (approximately 15 grams carbohydrates) of a sweetened beverage, such as regular soda, juice, frozen ice pops, sherbert, regular jello, soups or broth. Drinking about 1 to 1 cup every 1-2 hours will help you to remain hydrated, maintain good blood sugar levels, and maintain your energy level.

- Check your blood sugars several times a day
- If you have Type 1 diabetes or your blood glucose is above 250 on 2 consecutive tests, check your urine ketones.
- Do not exercise until your blood glucose is stable and you feel better.

A great adventure or a total flop?

Whether it is an exotic adventure to a far away place or time spent with beloved family members or friends, most of us look forward to our vacations.

Using the suggestions we have made in this issue of Diabetes In-control NOW! will enable you to avoid the pitfalls that may occur without adequate planning. It is possible to maintain good blood sugar levels and have a great adventure. The choice is yours!

Bon voyage and have a healthy summer.

Diabetes Classes

DeWitt Family Health Center

703.805.9310

Wednesday Evening

2nd & 4th Wednesdays every other month
from 6:00 pm – 9:00 pm
March, May, July, Sept & November

Thursday Morning

Every Thursday from 9:00 am – 12:00 noon

Fairfax Family Health Center

703.846.9503

Thursday Morning

1st and 3rd Thursdays of each month from
9:00 am – 11:30 am

Pre-diabetes Class

1st Thursday in April, June, August, October,
December from 1:00 pm – 4:00 pm

Woodbridge Family Health Center

703.550.2671

Monday Evening

1st and 3rd Monday of each month from
5:30 pm – 7:30 pm

Tuesday Morning

1st and 3rd Tuesday of each month from
9:00 am – 11:30 am

Pre-diabetes Class

4th Monday of each month from
2:00 pm – 5:00 pm

Walter Reed Army Medical Center

202.782.3308

Wednesday

2nd and 3rd Wednesdays of each month from
8:15 am – 3:30 pm

Weekends

Dates to be announced

Meet the Team

Ophthalmologists, optometrists, and certified technicians are available throughout the Walter Reed Health Care System to perform dilated eye exams or obtain retinal images using a stereoscopic, non-mydratic digital retinal cameras.

The images obtained using the specialized camera are sent via the internet to the Walter Reed Department of Ophthalmology for evaluation. Your doctor or nurse practitioner will receive the results and inform you. Please call one of the clinics listed on page 1 to make an appointment for either a dilated eye exam or retinal imaging using the specialized camera.

Pictured above from left to right are several members of the Diabetes Institute Retinal Imaging Team.



Diane Humphrey, Certified Imaging Technician; Todd Woods, Project Officer; Susan Walker, Program Manager; Tony Hooker, Technical Support; COL Robert Vigersky, Medical Director; Anna Lutz, Certified Imaging Technician; Ngina Givens, Certified Imaging Technician. Not pictured: COL Thomas Ward (WRAMC Department of Ophthalmology) and Doreen Huylebroeck, Certified Imaging Technician, Family Health Center of Fairfax.

What is Your Eye Q Answers *(from page 3)*

People with diabetes are more likely than people without diabetes to develop certain eye diseases.

True. Diabetic eye disease includes diabetic retinopathy, cataracts, and glaucoma. The longer a person has diabetes, the more likely he or she will develop diabetic eye disease.

Diabetic eye disease usually has early warning signs

False. Often there are no warning signs in the early stages of diabetic eye disease. Vision may not change until the disease becomes severe.

People with diabetes should have yearly eye examinations.

True. Everyone with diabetes should get an eye examination through dilated pupils at least once a year. Because diabetic eye disease usually has no symptoms, regular eye exams are important for early detection and timely treatment.

Diabetic retinopathy is caused by changes in the blood vessels in the eye.

True. In some people, blood vessels in the retinal may swell and leak fluid. In other people, abnormal new blood vessels grow on the surface of the retina.

People with diabetes are at low risk for developing diabetes.

False. Glaucoma is almost twice as likely to occur in people with diabetes than those without diabetes. Glaucoma is usually treated with medications or laser or other surgery.

Laser surgery can be used to halt the progression of diabetic retinopathy.

True. In laser surgery, a special beam of light is used to shrink the abnormal blood vessels or seal leaking blood vessels. Laser surgery may reduce the five year risk of vision loss from advanced diabetic retinopathy by more than 90%.

Cataracts are common among people with diabetes.

True. People with diabetes are twice as likely to develop cataracts and to develop them at an earlier age than are those without diabetes. Cataracts can usually be treated with surgery.

One in every 12 people with diabetes age 40 and older has vision threatening retinopathy.

True. Diabetic retinopathy is the most common diabetic eye disease. It is also one of the most common eye diseases in Americans age 40 and older. With the aging of the population, the number of Americans with major eye diseases is increasing and vision loss is becoming a major public health problem.

People who have good control of their diabetes are not likely to develop diabetic eye disease.

False. Even with good control of blood glucose, there is still a risk of developing diabetic eye disease. However, studies show that careful management of blood sugar levels slows the onset and progression of diabetic retinopathy.

The risk of severe vision loss and blindness from diabetic eye disease can be reduced.

True. With early detection and timely treatment, the risk of blindness from diabetic eye disease can be reduced.

Assertiveness: An Important Skill in Diabetes Management

Erica M. Jarrett, Ph.D.

Are you comfortable asking for advice or saying no? If someone is acting or speaking inappropriately to you, do you stand up for yourself and confidently speak your mind? Are you able to express your anger appropriately? Refuse unreasonable requests? Handle arguments effectively?

If you answered "NO" to even a couple of these questions, you may have difficulty being assertive. Being able to assert yourself—that is, being able to declare who you are and what you're about with confidence and without apology—is not just an important social skill, it is a skill that empowers you to do what is right for you.

How can lack of assertiveness in social interactions affect your diabetes control?

The following are three common scenarios that individuals with diabetes often struggle with because achieving and maintaining good blood glucose control often involves negotiating their needs and the needs of others in their interpersonal domains:

Scenario #1:

Shelia travels to a family reunion. Her Aunt Florence offers her a piece of her "famous fried chicken" and is upset when Shelia politely refuses. In fact, she insists that she has a piece of fried chicken! Shelia doesn't want to hurt her aunt's feelings so she eats two pieces of fried chicken. (Family Domain)

Scenario # 2:

Todd looks at his watch again. The meeting is running late and it's way past time for him to check his blood sugar level and eat a snack. He thinks of getting up and just leaving but immediately shrugs the idea off. He's only been on the job a few weeks, leaving would embarrass him, and he worries that everyone else would misunderstand. So he waits, feeling ever more tense and distracted, until the meeting finally comes to an end and he feels free to hurry back to his office. (Work Domain)

Scenario # 3:

Jim is having difficulty meeting his blood

glucose goals, but he really likes his health care provider and is afraid he will disappoint her if he tells her about his diabetes management problems. So instead of telling her about the problems he has encountered trying to follow his diabetes regimen he tells her what he believes she wants to hear. (Health Care Professional Domain)

As you can see, being unassertive in any of these scenarios will impact your diabetes management.

What is assertiveness?

Being assertive means expressing feelings directly and honestly; asking for what you want directly; and saying no, firmly and clearly, to something you don't want or feel unable to do. It also involves being able to ask for help, and advocating for your needs in interpersonal situations. Assertiveness is the middle ground between being too passive and not standing up for ourselves and being aggressive and running over other people's rights and feelings. It gives others the opportunity to really understand you—what you need, what's important—and helps them know how they can best be part of your life. Most of all, perhaps, by paying attention to your needs and assertively communicating them to others, you're reaffirming to yourself that who you are and what you need are important and, by your example, showing others that they have the right to feel exactly the same way.

What situations call for assertiveness?

Assertiveness skills can be helpful in any situation where you feel that your feelings are important and need to be heard by others. This can be at work with a boss or co-worker, at home with a spouse or children, or with a health care professional. Assertiveness can help you say things that are hard to say or that you think others might not want to hear. These skills are useful for helping you say things you may have been thinking about for a long time but have not been able to say.

Steps toward assertiveness

Here's a six-step plan to get you going:

Step 1: Define your barriers.

Maybe you are a pro at bringing snacks wherever you go and monitoring your blood sugar, but it is more difficult for you to refuse inappropriate food when it is offered. Or you may have discovered that it is difficult for you to go out and eat with your friends, because they don't support your healthy food choices.

Step 2: Pay attention to your thoughts.

Unsettling feelings of guilt or embarrassment come from unsettling thoughts—that your supervisor thinks you aren't attentive because you're eating snacks during a meeting. Rather than letting thoughts such as these take over, evaluate and challenge those thoughts: Will everyone really notice or care? (Probably not.) What's the worst thing that's likely to happen? (Some people may whisper among themselves.) Is there anything you could do or say to help ease the situation? (There usually is.) Do you have a right to take care of yourself? (Yes.)

Step 3: Develop a plan.

Think about what you could actually say or do the next time the situation comes up. It is important to be specific—to work out what words you are going to use or what action you are going to take so that you don't have to wing it.

Step 4: Seek support if you need it.

Support can come in a lot of forms - informal support (friends or family) or formal support (physicians, nurse practitioners, diabetes educators, or clinical health psychologists). It may be having your husband hold your hand under the table when you tell the waiter exactly what you need him to do. It may be having your doctor write a letter to the insurance company explaining why she feels you need a new blood glucose meter with some special features. It may be writing down on an index card what you want to say to your doctor at your next appointment, not only so you can be sure it's clear, but also so you



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Diabetes In-control NOW! Is published four times each year by the Walter Reed Health Care System Diabetes Institute. This newsletter is designed to provide timely and useful information that we hope will help those with diabetes and their families live long and live strong.

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Our Mission ▶ **Your Health**

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