Diabetes Newsletter

Golden Valley Memorial Hospital
Intelligent Medicine.

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How to Avoid Errors in Diabetes Care

by Patrick J. O'Connor, MD, MPH, JoAnn M. Sperl-Hillen, MD, and Becky Klein, RN CDE

Medical errors generally make the news only when they are particularly dramatic — the wrong leg is amputated, for example — or tragic — someone dies. But less sensational errors take place every day in numerous settings. Some errors happen in hospitals, some in doctors' offices, some in pharmacies, and some in people's homes, when, for example, two drugs are mixed up or a dose is forgotten.

With all of the steps involved in diabetes care, it is perhaps no surprise that about 80% of people with diabetes experience at least one error in their diabetes care over the course of any one year. Knowing about some of the most common sorts of errors in diabetes care can help you learn to avoid them.

Avoiding incomplete care

Controlling blood glucose levels is often the primary focus of diabetes care, but it should not be the only focus. That's because people with diabetes have a high risk of dying from a heart attack or stroke, so reducing that risk — by controlling blood pressure, controlling blood cholesterol, using aspirin when appropriate, and avoiding tobacco — is important, too. Failing to address a person's risk of heart attack and stroke could be called a medical error.

To get a very good idea of whether you are doing all you can do to prevent a heart attack or stroke, ask your doctor the following questions at your next visit:

- Is my A1C less than 7%? (Your glycosylated hemoglobin level, also called your HbA1c or A1C level, is a measure of blood glucose control over the previous 2–3 months. The lower it is, the lower your chances of developing diabetes complications.)
- Is my blood pressure less than 130/80 mm Hg?
- Is my LDL cholesterol ("bad" cholesterol) less than 100 mg/dl? (For people with heart disease, the recommended goal is less than 70 mg/dl.)
- Should I be taking an aspirin each day to prevent heart problems?
- Can you help me stop smoking?

If you are able to achieve the recommended goals for blood glucose, blood pressure, blood cholesterol, and smoking cessation and to maintain those goals over a period of five or more years, you can slice your risk of heart attack or stroke by more than half and very likely add several extra "good" years to your life. If you are not currently meeting these goals, ask your doctor what else can be done to lower your risk of heart attack and stroke.

Avoiding medication errors

Many medicines can be used to help control blood glucose levels, but not all are appropriate or safe for everyone with diabetes. In fact, it is estimated that about 10% of people with diabetes are on a medicine that may not be the safest choice for them. The table "Avoiding Medication Mistakes" gives some safety guidelines for choosing which drugs to take. Because so many treatment options are now available, and because so many drugs and other substances can interact with one another, it is important that you and your doctor pick out the medicines that are best for you. To do your part in avoiding medication errors, do the following:

- Tell your doctor about any prescription or over-the-counter drugs you are taking. Bring a list of all of your medicines to your appointments, or bring the drugs themselves (in their original containers).
- Fill all of your prescriptions at one pharmacy, if possible. This makes it easier for your pharmacist to detect potential problems.
- Keep an up-to-date list of your medicines in your wallet or purse. This can be particularly useful if you need emergency medical care.
- Talk to your doctor before starting any dietary or herbal supplements. Certain ones are known to interact with prescription drugs.

- When you refill your prescriptions, note whether your pills (or insulin) look different from those you normally take. If they do, check it out with your pharmacist.
- Don't stop taking a prescribed medicine because you feel better. Many drugs, including those prescribed to help with blood glucose, blood pressure, or blood cholesterol control, are needed to maintain desirable levels once they have been attained. Stopping other drugs, such as some antidepressants, abruptly can cause withdrawal symptoms.

To learn more about the medicines you take, read the information sheets given out with prescriptions by your pharmacist, or talk to your doctor, nurse, or diabetes educator about your medicines. Web sites such as www.webmd.com and www.diabetes.org also offer reliable drug information.

Remember, however, that the information you find on any Web site or book is general information, and that you are an individual with your own personal needs and response to medicines. So talk over what you learn, and your questions, with your doctor.

Avoiding complacency

It's tempting to think that once you've gotten things under control, you can just keep on doing what you're doing forever. But diabetes usually progresses over time, and over the years you will most likely need to increase your medicine doses or add additional medicines to reach your blood glucose, blood pressure, and cholesterol goals — even if you are eating right and getting regular physical activity. It would be a mistake for you and your diabetes care team not to pay attention to blood glucose levels that are gradually creeping up or to any other changes that might indicate that your regimen needs updating. Such changes might include rises in your blood pressure, blood cholesterol, or weight or the onset of any diabetes complications.

Even when your blood glucose, blood pressure, and blood cholesterol are at goal levels, you should have regular (annual or as recommended by your health-care provider) eye exams, foot exams, and tests for microalbuminuria (traces of protein in the urine that signal a higher risk for kidney and heart disease) to check for the presence of diabetes complications. When caught early, diabetes complications are much more treatable.

One often-dreaded change to a person's Type 2 diabetes regimen is the advice to start using insulin. The specific source of dread may be different for different people. Some people, for example, fear needles, while others equate insulin use with more severe disease or fear that the use of insulin may actually lead to complications rather than prevent them. Whatever the cause for resistance, the facts are that many if not most people with Type 2 diabetes eventually require insulin and that the use of insulin can lead to improved control and better quality of life. Optimal diabetes care typically involves frequent adjustments to your regimen for blood glucose, blood pressure, and blood cholesterol control. If your doctor has not adjusted your medicines or doses recently, ask him to review your medicines with a view to keeping you in good control.

As many tried-and-true medicines go generic, updating your drugs may save you money. Review them with your doctor or pharmacist with a view to lowering costs, and consider using combination tablets that contain more than one drug to reduce your co-pays and the number of pills you take each day. Often, it is both cheaper and safer to use older, proven medicines than to use brand-new ones.

Avoiding insulin errors

Nearly 5 million Americans with diabetes use insulin, which has saved or extended the lives of many more millions of people since it was discovered in 1922. The newer insulins offer a degree of flexibility and control that is greater than that of any other blood-glucose-lowering medicine. Yet there are some substantial risks associated with insulin use and some errors that need to be carefully avoided. Many people who take insulin use more than one type (usually a long-acting insulin and a rapid-acting one), and it's possible to confuse the two types of insulin and take the wrong one at the wrong time. There are a number of ways to avoid such a mix-up:

- Keep your rapid-acting and long-acting insulins in consistent and different locations.
- Mark your vials or pens in some way so it's clear which is which.
- Note whether one of your insulins is cloudy and one clear. (This won't be the case for everyone, but for some people it may be true.)
- Note whether the vials or pens for both types of insulin are the same or different shapes and sizes.
- Use a pen for one type of insulin and syringes and a vial for the other.
- Some people learn to adjust their mealtime doses of rapid-acting insulin based on their blood glucose level before the meal, the number of grams or servings of carbohydrate in the coming meal, and sometimes on any planned exercise. To make sure you are adjusting your doses correctly, be sure to perform regular blood glucose monitoring and to discuss your readings with your diabetes care team.
- Some other common mistakes are to skip a dose of long-acting insulin at bedtime because of a lower-than-normal reading (a decision that may cause blood glucose levels to run high all of the next day), to not take insulin when ill (also a decision that may result in high blood glucose), to draw up the wrong dose, to use a vial of insulin or pen beyond the number of days recommended by the manufacturer, and to expose insulin to temperature extremes, rendering it ineffective.
- Have a sick-day plan that you have discussed with your doctor and diabetes educator. It should specify how to maintain blood glucose control while you are ill and also when to call your health-care provider for advice.
- Read the information that comes with your insulin and be sure you are storing it correctly and are aware of the number of days an opened vial or pen can be used.

Avoiding hypoglycemia

Have you ever had a blood glucose reading of less than 70 mg/dl on your meter? If so, you have experienced the level of blood glucose at which most people are advised to treat for hypoglycemia. How did you feel? What did you do? It is common to occasionally have readings below 70 mg/dl if you are taking good care of your diabetes. Such low blood glucose levels are usually not a threat to your well-being — as long as you recognize the low blood glucose level and respond to it promptly and appropriately. Ignoring symptoms of hypoglycemia, on the other hand, can be extremely dangerous, particularly if they occur while you are driving. In that situation, you not only endanger your own life and that of any passengers in your vehicle, but also that of other motorists.

The take-home message is this: If you think your blood glucose level is low, address the problem promptly. Stop what you're doing, check your blood glucose level with your meter, and have a snack if necessary, even if you have to stop your car or interrupt a conversation to do it. (If you don't have your meter with you or can't use it for any reason, go ahead and treat your symptoms of hypoglycemia without checking your blood glucose level first.) Chew and swallow four glucose tablets (containing about 4 grams of carbohydrate each) or drink about 5 ounces of orange juice or a regular (not diet) soft drink. Taking glucose tablets is a good way to treat low blood glucose because it helps you to avoid overtreating. Sometimes, when people have had consistently higher-than-normal blood glucose levels for a long time, they feel symptoms of low blood glucose when their blood glucose level starts to approach normal. For example, a person who has an average blood glucose level of 200 mg/dl might start to feel symptoms of low blood glucose when his blood glucose level approaches 100 mg/dl. This person is not at risk for serious hypoglycemia. The way to know the difference between a potentially serious low blood glucose level and a false perception of low blood glucose is to check your blood glucose with your meter when you first feel the symptoms. However, as stated earlier, if you are not in a position to check your blood glucose level with your meter, the safest response is to assume it is low and treat it promptly.

Severe hypoglycemia is usually defined as a low blood glucose level that you must have assistance to treat (because, for example, you are too confused to eat or have lost consciousness). If you have ever experienced severe hypoglycemia, it is a good idea to have an emergency glucagon kit in your home or workplace (or both). A friend or family member can learn to give you a life-saving shot of glucagon in case you cannot eat or drink to raise your blood glucose level. However, if neither you nor a companion can deal with your low blood glucose level, instruct your companion to call 911. Paramedics can inject a glucose solution that immediately fixes the problem.

It is a good idea for anyone with diabetes to wear a medical identification bracelet indicating that he has diabetes, just in case he is ever unable to speak for himself.

Avoiding monitoring errors

Your blood glucose meter can provide you with some very useful and important information. When used properly, it can help you learn how specific types and amounts of food, physical activity, and possibly stress affect your blood glucose level. This information can help you plan what to eat and when to exercise, so you stay in better control and avoid low or high blood glucose. If you take insulin, your meter readings can guide you in tailoring your short-acting insulin doses to cover favorite meals or snacks.

To provide you with all of this information, however, your meter needs to be in good working order, and you need to know how to use it correctly. Here are some questions to ask yourself to help determine whether you're using your meter correctly for the most accurate results:

- Does your meter need to be cleaned periodically? Some do, so check the instruction manual that came with your meter.
- Do you use control solution occasionally to check the accuracy of your meter?

Are the date and time set correctly on your meter? This may be less important if you always record your blood glucose readings immediately by hand in a log, but if you rely on your meter's memory to keep track of your numbers, you need the correct date and time to observe trends in your blood glucose levels. When you start a new batch of test strips, do you need to enter a code in your meter? Some newer meters no longer require this step, but many still do. Those that do will not give accurate results if this step is skipped.

When you check your blood glucose, do you get your blood samples from approved body areas? Some meters can be used with blood samples from areas other than the fingertips (such as the palms or forearms), but some meters can only use blood from the fingertips.

Are you familiar with general procedure for checking your blood glucose level? Using a blood glucose meter requires that you perform numerous steps, from washing your hands to applying the blood sample to the right spot on the strip. Forgetting a step or performing steps out of order could result in an inaccurate result.

If you have any questions about the correct use of your meter, check your instruction manual, call the meter company's customer service number, or speak with your diabetes educator or another member of your diabetes care team. Your pharmacist may also be able to answer questions about the correct care and use of your meter.

How often and at what times of day you should check your blood glucose depends on many things, including what medicines you take, how much risk you have for developing hypoglycemia, and whether blood glucose information would be helpful to allow you to self-adjust your insulin doses. Many people who take multiple insulin shots (and their doctors) find that occasionally checking their blood glucose level about two hours after meals, in addition to before meals, can help them match their insulin doses to their eating habits and activity levels. Ideally, your blood glucose level two hours after a meal should be no more than 40 mg/dl higher than it was before the meal.

Some people check far more often than is necessary, while others don't check often enough. Discuss with your health-care provider how often to check your blood glucose, when to check, and what to do with your results.

Avoiding errors in the hospital

It's not unusual to be admitted to the hospital at some point in life, so when you have diabetes it makes sense to have some knowledge ahead of time about how your treatment plan could be affected by a hospitalization. Often, oral diabetes drugs are stopped at the time of hospitalization or surgery and insulin is used instead. Insulin has many advantages when you are in the hospital because it allows for a rapid response to changing blood glucose levels.

Typically, nurses will check your blood glucose level for you about four times a day. You can participate in your in-hospital diabetes care by knowing what your readings are and by making sure your meals are designed to accommodate your diabetes control plan. If you feel too ill to speak up on your own behalf, ask a friend or family member to speak up for you.

If possible, talk to your doctor ahead of time about which medicines to continue taking and which to stop (and when) before you enter the hospital. If you are having surgery, it's also a good idea to ask who will be in charge of your diabetes control while you are having surgery and recuperating from it.

If you are in the hospital to give birth, you may be able to retain control over your diabetes management tasks. Depending on the hospital's rules, some women are able to continue using an insulin pump during their stay and to do their own blood glucose monitoring. It's important to find out what's allowed ahead of time, however, so you know what's possible and what isn't.

Your diabetes control plan may change after a serious illness, surgery, or childbirth. Before you leave the hospital, make sure you have in writing what your medicines and doses should be when you arrive home. If some of the medicines you were taking before hospitalization are not on the list, ask why. Also, ask your usual pharmacist to check your new combination of medicines for potential drug interactions or anything that you may be allergic to. Communication is key

Not all diabetes management errors can be prevented, but many can, especially when you know about the types of errors that are likely to occur. One of the keys to preventing errors is communication with the members of your diabetes care team. If you are not sure how to carry out parts of your diabetes regimen or are not getting the results you expect from your efforts, speak to your doctor or diabetes educator. Regular adjustment of diabetes medicines is the norm as your needs change over time. If you notice changes in your blood glucose, blood pressure, or blood cholesterol levels over time, speak up so that adjustments can be made early and you can stay in the best health possible.

Clinton Support Group

TOPIC
Holiday Treats

DATE
Thursday,
December 10, 2009

TIME
10:30—11:30 a.m.

PLACE
GVMH Medical Plaza Classroom

Presented By:
Jamie Ketterman, RN, BSN, CDE

We will be making some healthy holiday snacks.

Windsor Support Group

TOPIC
Holiday Treats

DATE
Tuesday,
December 8, 2009

TIME
11:30 am—12:30 p.m.

PLACE
Windsor GVMH Medical Clinic Wellness Center

Presented By:
Jamie Ketterman, RN, BSN, CDE

We will be making some healthy holiday snacks.