



## **Frequently asked questions about administering diabetes care in public and the work place**



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## Diabetes affects us all

Diabetes now accounts for more than 7% of the entire United States population. This number is growing at an alarming and epidemic rate. The chances are high that you will encounter someone with diabetes in public, the work place, or even someone in your own family or circle of friends may be diagnosed with diabetes.

Understanding and tolerance are necessary on both the part of a person with diabetes and those in the general population so that people with diabetes can test blood sugars and inject insulin whenever necessary – even in public places and at work and in schools.

Diabetes is incurable. It is a life sentence to regimented lifestyle and shots. If diabetes care is compromised for fear of public scrutiny, it can have long-lasting effects on society as a whole because of the high cost of diabetes complications – most of which can be prevented by tight control of blood sugars.

You can help those living with diabetes by understanding supporting their need to test blood sugars and inject insulin, even at times where it may seem inappropriate to people around them.

Persons with diabetes can and should try to be aware of how their self-care might affect other people. They should ensure public safety by properly disposing of all sharps used in testing and injecting. By turning potentially confrontational situations around and helping to educate others about diabetes by addressing public concerns rather than being defensive, the more likely we are to all pool together to find a cure for diabetes.

## Diabetes statistics

In 1995 an estimated 135 million people world-wide had diabetes. In 2006 that number had climbed to 194 million. By the year 2050 the estimated number of persons with diabetes will be projected to be around 333 million.

- 1.5 million new cases of diabetes are diagnosed annually in persons aged 20 and older.
- Diabetes is the fifth leading cause of death in the United States.
- The risk of premature death for a person with diabetes is two times greater than that of people without diabetes.

- Diabetes is the leading cause of all new cases of blindness in people aged 20 to 74.
- Diabetes is the leading cause of all treated end-stage renal kidney disease, accounting for 44% of all cases.
- Diabetes currently represents 19% of the total cost of health care in the United States.
- 60-70% of all patients with diabetes suffer nerve damage as a complication of high blood sugars (hyperglycemia).
- People with diabetes account for more than 60% of all non-accidental amputations of lower limbs (toes, feet, legs).
- Each year more than 82,000 amputations were performed on persons with diabetes due to complications of their disease.
- People with diabetes are two to four times more likely to die from a stroke than non-diabetic persons.
- Depression strikes people with diabetes at double the rate of the general population.

Statistics from “The Impact of the Epidemic: *United States Diabetes Fact Sheet.*”  
12/26/2006 [www.lilly.com/news/pdf/byetta\\_usdiabetes\\_facts\\_060606.pdf](http://www.lilly.com/news/pdf/byetta_usdiabetes_facts_060606.pdf)

## How do we improve these statistics?

The largest study ever conducted on diabetes and blood sugar control is called the Diabetes Control and Complications Trial (DCCT). This study showed that keeping blood sugars under tight control dramatically reduced the risk and diabetes complications. In fact, the DCCT showed:

“All DCCT participants were monitored for diabetic retinopathy, an eye disease that affects the retina. Study results showed that intensive therapy reduced the risk for developing retinopathy by 76 percent. In participants with some eye damage at the beginning of the study, intensive management slowed the progression of the disease by 54 percent.”<sup>(4)</sup>

“Participants in the DCCT were tested to assess the development of diabetic kidney disease (nephropathy). Findings showed that intensive treatment prevented the development and slowed the progression of diabetic kidney disease by 50 percent.”<sup>(4)</sup>

“Participants in the DCCT were examined to detect the development of nerve damage (diabetic neuropathy). Study results showed the risk of nerve damage was reduced by 60 percent in persons on intensive treatment.”<sup>(4)</sup>

The conclusions of the DCCT support a person's need to test blood sugars and inject insulin whenever it is required (intensive insulin therapy). To delay, and leave high blood sugars untreated, dramatically contributes to the likelihood of developing serious, long-term complications later.

For more information about the DCCT visit <http://diabetes.niddk.nih.gov/dm/pubs/control/>

## **Frequently asked questions about diabetes care in public**

### **1. Aren't there laws that prohibit people with diabetes from administering medical care involving blood in public places?**

No. In fact, the opposite is true. There are many laws that protect people with diabetes so that they *can* test blood sugars and inject insulin, glucagon, or BYETTA in most public places, facilities, businesses, and transportation systems without restrictions. However, some laws do affect how and when students may self-care in the public and private school setting so it is important to check your own individual state's laws regarding students with diabetes.

There may also be laws in your state or local jurisdiction that mandate how medical waste from diabetes care (i.e., syringes) must be disposed of but these laws vary depending upon where you live.

For more specific information on diabetes and civil rights laws see the section at the end of this publication, "Diabetes and civil rights law."

### **2. How do I know the person is really diabetic and not injecting some other (illegal) drug for recreation?**

Simple. Insulin is *not* injected into a vein – ever – unless it is done in a hospital setting through an IV line. Illegal drugs like heroin and crack are *always* injected into veins. Typically, IV drug users will tie a tourniquet around an arm or leg to make veins more accessible; people with diabetes never use a tourniquet as veins are not involved.

Insulin is not a recreational drug; in fact, insulin is not a drug, but a hormone produced by the beta islets cells of a healthy pancreas. A person who does not need insulin will very likely die if they inject insulin needlessly, in fact, a person with diabetes must properly calculate the amount of insulin needed or risk serious health complications, including death.

### **3. Why can't a person use some other testing device instead of pricking a finger? Do they really have to draw blood?**

While there are several devices that can test blood glucose (i.e., GlucoWatch and canula devices that are inserted under the skin and worn all the time) they are not always covered by

insurance and are very expensive. Additionally, some of these new devices are not considered safe for pediatric use yet because they are not as accurate.

Alternative devices cause some discomfort to the person using them, and in some cases may hurt more than using a lancing device. Alternative testing devices must be calibrated daily which means comparing a sample of blood from the alternative device with a blood sample drawn from a lancet. If how a person feels does not match with a reading from an alternative device, patients are instructed to retest using a fingertip lancet. For now, alternative testing devices, supplement, but do not replace, the need to also use a traditional lancing device.

Because testing blood sugars is such a critical part of diabetes care, it is the personal decision between a patient and a doctor how and when to test blood sugars.

#### **4. Why can't a person with diabetes wait a few minutes and go find a private place to test blood sugar?**

There is no way to be certain if blood sugars are normal, too high, or too low, without checking a blood sample. If a person with diabetes feels “shaky” or a child with diabetes doesn't seem well, it is critical to stop and check blood sugars immediately because seconds lost while heading to a private place to test can mean the difference between treating a low with juice and having to call the paramedics.

A person who is taking care of their own diabetes can quickly become confused if blood sugar drops too low. If this happens even an adult will not be able to treat themselves and someone else will have to feed the person a fast sugar, inject glucagon, and/or call 911.

It is important to note that even if a person with low blood sugar is still conscious they may not be able to swallow or chew and may still require an injection of glucagon. Delaying testing even a few minutes in order to find a discreet place to test really can make a big difference in the life of a diabetic. In fact, delaying blood sugar testing could even cost them their life.

#### **5. Why can't a person with diabetes check their blood sugar or take their insulin before heading out to a public place like a restaurant?**

Sometimes, they can and do. But it is important to understand that when a person should test their blood sugar depends on a lot of things that are not consistent in day-to-day diabetes care. Illness, medications, stress, foods eaten, in fact many things in daily life, all can have a rapid and dramatic affect on blood sugar – making it higher or lower, and sometimes in a matter of minutes.

In general, people with diabetes have the most unstable, dynamic blood sugar changes in the 1-2 hours just before the next meal, and are more likely to be stable after eating only *if* the proper amount of insulin has been injected. Without proper timing of a blood sugar check it is easy to miscalculate the amount of insulin needed.

Another major factor in how close to eating a person needs to test blood sugar is the type of insulin a person takes. For example, rapid-acting insulin can begin to work in as little as 5-10 minutes. A person with diabetes needs to know what their blood sugar reading is as close to injection time as possible because sudden changes in blood sugar levels often occur in people with diabetes – especially in children. A blood sugar reading too soon before a meal or injection could give false information about how much insulin is needed.

If a person injects insulin to cover food to be eaten within a certain time frame and the food is not eaten during that time, it will result in an overdose of insulin. Once insulin has been given to cover a meal, the person is committed to having to eat within a certain period of time, and has to eat the right amount of food. . “Insulin shock” occurs when too much insulin has been given. This state can easily become a life-threatening medical emergency.

Simply stated, all persons with diabetes – especially children, those newly diagnosed, on insulin pumps, or who have brittle diabetes, or who take rapid-acting insulin – should test as close to the time of eating/injection as is possible. To do otherwise, puts them at serious risk for medical complications.

## **6. What is wrong with testing/injecting in the bathroom at the restaurant? It is close to the table so these things could still be done close to a meal.**

Would you want to have a sterile medical procedure done while sitting on a dirty toilet in a room filled with bacteria and germs? One where your skin would be pierced exposing you to urine, blood, fecal matter, and bacteria? Would you want your child’s pediatrician giving a shot or drawing blood in a public restroom?

Preparing insulin requires a clean environment and often a stable surface to place their insulin and testing gear. A lap on a toilet is not sterile, nor stable. A restaurant table is also not likely to be sterile, but it is stable and exposure to human waste is less likely than it would be in a bathroom.

A second consideration is how it makes a person feel who already has a disease that is not their fault. Insisting diabetics provide necessary medical care to stay alive in public bathrooms can lead to feeling stigmatized as if s/he were injecting illegal drugs and somehow is seen as either a threat or insult to those around them. Injecting insulin is not illegal, immoral, or something a diabetic can simply put off until later: insulin keeps them alive.

## **7. Since blood is drawn during *blood* sugar testing by lancets that pierce the skin, what are the health dangers and risks to me?**

As long as you do not pierce your own skin with the same lancet another persons uses there is no risk of contracting a blood-borne disease. Even if you did prick yourself on a used lancet the risk of disease transmission is not great but you should immediately call your own personal physician for advice.

Most persons with diabetes use a lancing device because they are easier to carry and cause a lot less pain than the disposable kind used in doctor's offices. A lancet is placed inside the lancing device which remains in an "off" position. Unless someone purposely sets the trigger mechanism and then "fires" it, the lancet will not pierce. If you don't play with a lancing device, consider yourself perfectly safe.

The amount of blood on a used lancet is not a lot. You are more likely to come into greater quantities of HIV and hepatitis contaminants in a hospital, doctor's office, or even on a playground. Still, it is the personal responsibility of anyone who uses a lancing device (or syringe) to properly dispose of their sharps in a sharps or other hard container (baggies and soft plastic containers are not sufficient). If a person uses a metal tin such as a small, used coffee tin, the container should be clearly marked that it contains medical waste. When full, the sharps container should be taken to a sharps disposal point in your local community (i.e., fire departments often have free sharps container exchange and disposal programs).

If you see a person with diabetes tossing used lancets into the common trash, you should be concerned. In many places it is even illegal to toss lancets into the regular trash. A used lancet that is not in the lancing device is basically a small weapon – a short plastic stick with a long, exposed sharp needle point. It can deeply prick anyone who stuck their hands into the same trash bin. Even if there was no risk of disease transmission, there is always the risk of infection – and being stuck with a disposable lancet really hurts!

If you are not comfortable talking to a person who improperly disposes of their sharps, you should report them to your human resources representative or your boss.

**8. It is well documented that injection needle users who share unclean needles are at great risk of being infected with HIV. Doesn't this mean that used needles from diabetes care pose the same level of risk to me?**

These studies are scary and should be taken quite seriously but it is important to bear in mind that these studies are about illegal intravenous (IV) drug users and not about patients with diabetes. *Diabetic patients are not IV drug users and do not inject into a vein.*

Illegal IV drug users often share needles that have not been properly sterilized. They also share water, dipping dirty syringes into community water before passing to the next person to be used. Patients with diabetes use a clean needle one time and then dispose of it. Even in the case of insulin pens which are reused, a new, sterile needle tip is attached to the pen with each use, removed after injection and thrown away.

During IV drug use, sharing unclean needles allows a direct exchange of blood from one person's body into the bloodstream of another. When a person puts a needle into a vein, s/he pulls back on the plunger to make sure that they are in a vein, and if they are, blood will enter the syringe. Some of this blood may still be in the syringe when it's given to a second person.

When a person injects insulin it is not into the vein. They do not pull back on the plunger; they only *push* the plunger to inject the insulin into fatty tissue. The entire syringe (or needle tip if a pen is being used) are then disposed of in a portable sharps container.

It has also been well documented that in IV drug users (and the general population) the greatest risk of becoming infected with HIV is from sexual acts without proper protection.

## **9. Still, what would happen if I accidentally pricked myself on a syringe or used lancet?**

To get a disease from a used syringe or lancet (“sharps”) the person who first used the sharps would have to have a disease, have transmitted enough blood onto the sharps so that when you were pricked their blood came into contact with your own blood stream.

Even in the medical profession where workers are regularly exposed to blood and sharps, and even accidentally prick themselves on “dirty” sharps, disease transmission remains rare.

The best course of action is to simply not touch another person’s medical supplies unless absolutely necessary and if you have to give an injection to another person whose health history is unknown, try to use gloves.

If you do get pricked with a used (“dirty”) sharp, call your doctor immediately for advice.

## **10. I don’t want my children to see someone injecting. It’s rude and scary.**

According to the American Diabetes Association there are 20.8 million children and adults in the United States, or 7% of the population, who have diabetes.<sup>(2)</sup> Diabetes is becoming more common, in fact, at an epidemic rate. Society cannot hide 20.8 million people and we all need to work together to make living with diabetes easier.

People with diabetes are not trying to be rude. They don’t have a hidden diabetes awareness campaign agenda that they are trying to push upon you. They are taking care of their own health needs. Without taking insulin a person with diabetes could go blind, lose a foot, or even die.

Children are often afraid of things they don’t understand, or when they sense a parent’s apprehensions. Seeing someone inject insulin can easily be explained by saying that person has a disease that is not contagious and they need insulin to live. Insulin is not a drug – it is a hormone that is made by the body and a person with diabetes cannot make insulin so they must take it in a shot each day.

Giving a shot takes only a few seconds and children can be easily distracted for that short amount of time.

While an estimated 14.6 million have been diagnosed with diabetes, another 6.2 million people are unaware that they have the disease. And, according to the National Institutes of Health, about one in every 400 to 600 children and adolescents has type 1 diabetes.<sup>(3)</sup> Chances are pretty good that you or your children will be exposed to diabetes again in the future, maybe even because a friend or loved one develops diabetes. If you make the experience a negative one now and later down the road the child has a family member or friend with diabetes it will make it a harder adjustment for them.

## **11. I cannot stand to see blood or needles. How can I get my co-worker to stop doing these things in front of me?**

The best thing you can do is to simply talk with your co-worker. People with diabetes need to pay special attention to their care and may be so focused on what they are doing they might not realize something bothers you. If you have a specific objection, try to also have a possible solution in mind. For example, if your co-worker tests at his/her desk and tosses their used syringes into the trash, you can remind them of the health hazards and the need for safe and proper disposal. You might also let them know that under the Americans with Disabilities Act (ADA) their employer must allow, or provide, a sharps container at work for safe disposal of syringes.

If the issue is not health or safety related but one of personal discomfort caused by the site of blood or needles try to keep in mind that diabetes care is sometimes unpredictable. Testing cannot always be scheduled and a person's life might depend on fast detection of low blood sugars (hypoglycemia) and fast treatment.

In some cases, an employer may be willing to make minor accommodations for you (although this is not required by law) to help you deal with a co-worker who has diabetes.

For more information about diabetes accommodations and conflict resolution in the work place read IOH Publication PA-01-2006, "Diabetes in the real world: *A guide to diabetes etiquette, tolerance, and conflict resolution in the workplace and public social settings.*" Download: <http://www.isletsofhope.com/pdf/diabetes-in-the-real-world.pdf>

## **12. Why do people with diabetes get special accommodations at my expense?**

It's true that civil rights laws are on the side of the person with diabetes and your employer probably will not ask a person with diabetes to forfeit accommodations just because someone else complains (i.e., an employer is not likely to banish a diabetic to a public restroom to simply make you more comfortable). To do so would put the employer at risk of being in violation of civil rights laws. However, your employer may be willing to also offer *you* reasonable accommodations (which are not required by law) to help resolve conflicts over testing and injecting in the work place.

Accommodations for non-diabetic employees with a strong aversion to blood or needles might include being allowed to leave the area for a few minutes while the diabetic person administers care or allowing you to move to another office.

If the lunchroom is where you have troubles, ask to have a different lunch hour than the person testing and/or injecting in the work place cafeteria. Your employer might even be willing to designate a certain area in the lunchroom specifically for the person with diabetes, or, for a table that is “diabetes-free” for you. It is important, however, that you understand that Americans with Disabilities Act (ADA) strictly prohibits denying equal access to services, programs, employment, and opportunity to people with disabilities; diabetes included.

Most employers are willing, when able, to offer a person with diabetes a private, clean place to test and inject insulin. It would not be unreasonable, if such accommodations were available, to ask that during “routine” diabetes care, the employee with diabetes perform their diabetes care in the area provided by the employer. Sometimes, however, it will be necessary for all diabetics to perform “emergency” blood sugar checks, or test sugars right before eating making an assigned area impractical. It would be nice if all care could be predicted and scheduled, but with diabetes, unpredictability is usually the case.

When airing your concerns about diabetes it is always best to be objective and calm and to have a positive suggestion in mind rather than just make a complaint. Working together, and showing that you have an understanding that blood sugar testing and insulin injections are medically necessary is the best way to get your concerns addressed.

## **General concerns about disease transmission from exposure to blood**

One way HIV can be transmitted is through blood products. Finger sticks and syringes both involve penetrating skin. For this reason, all used syringes, pen tips, lancets, and test strips should be treated as medical waste and disposed of properly.

While risk is minimal, employees have the right to request this protection and people with diabetes are required by law in some states to adhere to certain disposal standards. Individual city or county restrictions may also be in place regarding how medical waste from injections is to be disposed.

There are no health standards prepared by the CDC specifically addressing devices and procedures for diabetes self-care in the work place. However, the following standards prepared by the CDC for other similar situations, (where exposure to blood occurs) could possibly be applied to employees with diabetes.

*“In 1985, CDC issued routine precautions that all personal-service workers (such as hairdressers, barbers, cosmetologists, and massage therapists) should follow, even though there is no evidence of transmission from a personal-service worker to a client or vice versa. Instruments that are intended to penetrate the skin (such as tattooing and acupuncture needles, ear piercing devices) [IOH inserted comment: lancing devices and syringes also pierce the skin] should be used once and disposed of or thoroughly cleaned and sterilized. Instruments not intended to penetrate the skin but which may become contaminated with blood (for example, razors) [IOH inserted comment: used test strips and pads used to apply pressure after blood is drawn] should be used for only one client and disposed of or thoroughly cleaned and disinfected after each use. Personal-service workers can use the same cleaning procedures that are recommended for health care institutions.”<sup>(5)</sup>*

There is no known case on file with the Center for Disease Control (CDC) involving a person with diabetes transmitting HIV to another person in the work place via lancing devices, blood on desk, test strips, etc., or from used syringes.

## **Diabetes and civil rights law**

It is important to understand that even when a person with diabetes is not specifically classified as “disabled” there are no federal laws that prohibit a diabetic person from testing blood sugars or injecting insulin in public places. While some states have enacted laws that restrict diabetes care in public schools these laws may conflict with Federal civil rights laws and are being challenged in at least several states and so far, class action suits have been successful in the State of California.

Federal disability laws are geared towards protecting the rights of those with disabilities including those with diabetes and allowing them *equal* access to programs, employment, facilities, transportation, opportunities, and education.

Some states do have laws requiring the safe disposal and handling of medical waste including syringes from diabetes care to protect the health interests of the public. However, legislation aimed at the safe disposal of syringes is often hampered by concerns over whether such laws will encourage illegal IV drug use. Therefore, often, the disposal of used syringes is left to local jurisdictions and varies from place to place.

Key Federal protective laws affecting persons with disabilities in public and private places including the work place, schools, and day care are:

- The Americans with Disabilities Act (ADA)
- The Rehabilitation Act
- Individuals with Disabilities Education Act (IDEA)

## General sources of disability rights information

ADA Information Line: (800) 514-0301 (voice) (800) 514-0383 (TTY) [www.ada.gov](http://www.ada.gov)

Regional ADA & IT Technical Assistance Centers (800) 949-4232 (voice/TTY)  
[www.adata.org](http://www.adata.org)

The U.S. Department of Justice’s publication “A Guide to Disability Rights” can be found at <http://www.usdoj.gov/crt/ada/cguide.htm>.

Information about disability rights from the Equal Employment Opportunity Commission at: [http://www.eeoc.gov/abouteeo/overview\\_practices.html](http://www.eeoc.gov/abouteeo/overview_practices.html)

To find more information about living with diabetes, diabetes laws in your state, and advocacy resources, visit <http://www.isletsofhope.com>.

IOH Publication PA-04-2006 “Diabetes civil rights law: *An overview of your legal right to equal access accommodations and opportunity and the right to administer diabetes related self-care in public places and at work*” download: [www.isletsofhope.com/pdf/diabetes-civil-rights-law.pdf](http://www.isletsofhope.com/pdf/diabetes-civil-rights-law.pdf)

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