

## Testing Your Blood Glucose Accurately

It is important to test your blood glucose (sugar) accurately so you can manage your blood glucose levels. Keeping your blood glucose under control helps you feel better and lowers the risk of blindness, kidney disease, and nerve damage.

## Tips for Using Your Blood Glucose Meter

Although blood glucose meters are simple to operate, many things can go wrong. Follow the tips below to get the most accurate results from your blood glucose meter.

### Preparing to Test

Read and save all instructions for your meter and test strips.

Watch and practice with an experienced blood glucose meter user, a diabetes educator, or a healthcare professional. Don't be afraid to ask questions!

Wash your hands. Even small amounts of food or sugar on your fingers can affect your results.

Read the test strip packaging to make sure the strips will work with your meter.

Do not use test strips from a cracked or damaged bottle.

Do not use test strips that have passed their expiration dates.

Make sure you have entered the correct calibration code (if your meter requires one).

*Test strips may look alike, but they are not all the same. Strips often have very specific chemical coatings or sizes. Even if an incorrect test strip fits in your meter, it could give you the wrong results!*

## Testing Your Blood Glucose

Use the correct blood drop size. If there is not enough blood on the test strip, the meter may not read the blood glucose level accurately. Repeat the test if you have any doubts.

Let the blood flow freely from your fingertip; do not squeeze your finger. Squeezing your finger can affect the results.

Use a whole test strip each time you use your meter.

Insert the test strip into the meter until you feel it stop against the end of the meter guide.

*Even if your meter is supposed to give an error message when the blood drop is too small, the message may appear only when the drop is much too small. If the blood drop is too small, your meter can be wrong without giving an error message!*

## Maintaining Your Blood Glucose Meter

Keep your meter clean.

Test your meter regularly with control solution.

Keep extra batteries charged and ready.

Store your meter and supplies properly. Heat and humidity can damage test strips.

Replace the bottle cap promptly after removing a test strip.

## Following Up

Take your meter with you when you visit your doctor so you can compare it with your laboratory results.

Talk with your doctor or call the manufacturer's toll-free phone number if you are having problems with your meter.

## Note on Alternative Site Testing:

Some blood glucose meters can use blood samples from the upper arm, forearm, base of the thumb, or thigh.

Using alternative sites gives you more options. But be aware that blood glucose levels from these sites may not always be as accurate as readings from the fingertips. Alternative site results differ from fingertip results when glucose levels are changing rapidly such as after a meal, after taking insulin, during exercise, or when you are ill or under stress.

Use blood from a fingertip rather than an alternative site if:

- you think your blood glucose is low,
- you don't regularly have symptoms when your blood glucose is low, or
- how you feel doesn't match the results from the alternative site.

Caution: Not all meters can use blood from alternative sites, and not all alternative sites are the same. Only test from sites that are identified in the instructions. Alternative site testing is not for everyone. Talk with your doctor before you test from a site other than your fingertip.

For more information on glucose testing visit:

<http://www.fda.gov/diabetes>  
<http://www.fda.gov/cdrh/oivd>

## Recognizing Low and High Blood Glucose

Some people have recognizable symptoms of low or high blood glucose and some do not. The only reliable way to know when you have low or high blood glucose is to test it.

When your blood glucose is low, you may feel faint, shaky, dizzy, or confused. You may begin to sweat. You may have a headache, sudden behavior change, or seizure.

When your blood glucose is high, your symptoms may be similar to when your blood glucose is low. You may feel dizzy or have a headache. You may also feel thirsty or have an urgent need to urinate.

But many people have no symptoms with low or high blood sugar levels. Other people have symptoms that change over time, so they no longer recognize them. Often, older patients or people who have had diabetes for many years stop having symptoms.

## Blood Glucose Meters Are Not Perfect

Although blood glucose meters are generally reliable and help to manage diabetes, they are not perfect. The technology used in blood glucose meters is not as accurate as testing done in a hospital or a doctor's office.

Your blood glucose meter may give a wrong reading if you are dehydrated, are going into shock, or have a high red blood cell count (hematocrit). Even a very low blood glucose level can cause an incorrect reading.

If you suspect your blood glucose is too low or if you call your doctor or go to an emergency room, even if your meter shows that everything is fine.

## Reporting Problems With Your Glucose Meter

FDA encourages you to report any serious injuries, deaths or malfunctions you experience with medical products. FDA will take action when needed to protect the public's health.

Report the events to FDA at 1-800-332-1088 and to the product manufacturer.

## Endorsing Organizations

American Association for Home Care:

<http://www.aahomecare.org>

National Association for Home Care:

<http://www.nahc.org>

For additional government sources and information visit:

CDRH Home Healthcare Committee

<http://www.fda.gov/cdrh/cdrhhhc/>

Join the CDRH ContactsListing database to receive information about medical device news and events important to you.

<http://www.fda.gov/cdrh/contactslisting>



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## Home Healthcare Medical Devices: Blood Glucose Meters Getting the Most Out of Your Meter



Department of Health and Human Services  
Food and Drug Administration  
Center for Devices and Radiological Health