

# meter use: how much is enough?

When, why, and how to keep up your efforts with your meter, strips, and logs.

**H**ow often should you put a drop of blood on a test strip? There's no one-size-fits-all answer. Your type of diabetes and its duration, your treatment plan, your A1C target, your overall health and ability, your provider's recommendations, and your budget and health care plan are parts of the equation—and needs change.

The American Diabetes Association (ADA) Standards of Care guidelines, which are best-practice tools for providers and influence health plan coverage for meters and test strips, provide a starting point. The ADA says self-monitoring of blood glucose (SMBG) should happen three or more times daily for people using multiple insulin injections or an insulin pump. The ADA notes

that most people with type 1 diabetes and pregnant women taking insulin require significantly more frequent checks to safely reach A1C targets while avoiding low blood sugar (hypoglycemia). Health care providers are able to tailor these guidelines to each patient's needs.

Sheri Colberg-Ochs, Ph.D., professor of exercise science at Old Dominion University in Norfolk, Virginia, knows self-monitoring is an important tool—she is a person with diabetes (PWD) type 1 and a frequent meter user. "Most type 1s test at least four times a day, but I know people who have found it works to do up to 15," she says. Insulin-using PWDs may need checks before and after eating, exercising, and driving.



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### Monitoring and type 2

The best timing and frequency of SMBG for people with type 2 diabetes who do not take insulin is unclear. Simply checking blood sugars doesn't necessarily improve glucose control. The action the person takes based on SMBG results, such as healthful eating or exercising more, is what matters.

For non-insulin users, self-monitoring can be helpful if the results are used to learn how medications, food, and exercise affect blood sugars. The ADA notes that self-monitoring may help show how well treatment is working and may be useful in trying to achieve after-meal glucose targets.

### New situations

Diabetes educator and dietitian Mary M. Austin, R.D., CDE, FADE, of Shelby Township, Michigan, says new meds or a new diagnosis suggests frequent meter use. For example, insulin pumpers who are adjusting basal or bolus rates may want to check every time they eat.

"People with type 2 who are brand new to diabetes might want to test more often to see where they're having the most difficult time managing blood glucose," Austin says. "Once you've reached your target and have a stable medication regimen, you may just need to spot check two to three times weekly at varying times."

If people are not meeting their targets, she encourages checking frequently enough to observe and log highs and lows. That helps the PWD and the provider to pinpoint variables that may be causing blood sugars outside the target range.

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### When to check

PWDs not using insulin and with stable on-target A1Cs are often encouraged to do—at most—a once-daily fasting check. Results after fasting (after you wake up, before eating breakfast) often fall within target ranges, says Colberg-Ochs, but levels may be out of range at other times. Fasting tests may miss after-meal highs, which is something to suspect if your A1C is off target.

Austin suggests meal checks for insulin-dosing precision. "If you have type 1 and take insulin at mealtime," she says, "you want to check before the meal and two hours after to see what effect the food and insulin had on your blood sugar."

Before-and-after meal checks can show non-insulin users the effects of certain foods and portions on their blood sugars, too.


### Strip limits

Many health plans limit PWDs not taking insulin to 30 strips a month. For people who pay in full for strips, their budget may limit strips.

If you face limits on strips and don't use insulin, Austin says one option is to skip a fasting test on occasion to save strips for checks around meals (or when you're ill). Consider doing a before-breakfast check for three or four days and

then a postbreakfast check for a few days to look for patterns. Move to lunch and dinner checks to detect patterns for those meals.

Because there is limited risk of severe lows for most PWDs type 2 who don't use insulin or sulfonylureas (glipizide, glyburide), you may be able to switch your testing times to run experiments. "You have flexibility to look at patterns over time without causing immediate problems," Austin says. An insulin user who has strip limits is likely to need to save them to confirm and treat lows.

There are a few exceptions to strip limits for which you may qualify, including medication changes. "Your provider can prescribe additional strips for circumstances that seem necessary and override the default," Austin says. Frequent low blood sugars are another exception. If starting insulin, for example, is resulting in lows, ask your provider about a new prescription for more strips. Your provider can be your ally in helping you get the strips you need. 

Eric Butterman, [ericbutterman@yahoo.com](mailto:ericbutterman@yahoo.com), writes for consumer magazines such as *Men's Health* and *Fitness*.