

BLOOD SUGAR MONITORING

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Use this handout to learn more about blood sugar, when to monitor, and how to evaluate your numbers.

“Blood glucose” vs “blood sugar”: What’s the difference?

These terms mean the same thing!

I had a “Hemoglobin A1c” test done by my doctor. What does this test tell me?

This test measures how much glucose has attached to the hemoglobin in your blood. It is used to predict what your “average blood sugar” is over a 3-month time period. You can use this chart (right) to translate the percent into an average blood sugar number. A “normal” level is less than 5.6. This test is usually done every 90 days. Read more about it [here](#).

My recent A1c results:



Date: _____

A1C: _____

Optimal A1C level			Good A1C level			Nominal A1C level		
Hba1c	mg/dl	mmol/l	Hba1c	mg/dl	mmol/l	Hba1c	mg/dl	mmol/l
4.0	65	3.6	5.0	101	5.6	6.0	136	7.6
4.1	69	3.8	5.1	104	5.8	6.1	140	7.8
4.2	72	4.0	5.2	108	6.0	6.2	143	8.0
4.3	76	4.2	5.3	111	6.2	6.3	147	8.2
4.4	79	4.4	5.4	115	6.4	6.4	151	8.4
4.5	83	4.6	5.5	118	6.6	6.5	154	8.6
4.6	86	4.8	5.6	122	6.8	6.6	158	8.8
4.7	90	5.0	5.7	126	7.0	6.7	161	9.0
4.8	93	5.2	5.8	129	7.2	6.8	165	9.2
4.9	97	5.4	5.9	133	7.4	6.9	168	9.4

Slightly high A1C			High A1C level			Very high A1C		
Hba1c	mg/dl	mmol/l	Hba1c	mg/dl	mmol/l	Hba1c	mg/dl	mmol/l
7.0	172	9.6	8.0	207	11.6	9.0	243	13.6
7.1	176	9.8	8.1	211	11.8	9.5	261	14.6
7.2	180	10.0	8.2	215	12.0	10.0	279	15.6
7.3	183	10.2	8.3	218	12.2	10.5	297	16.6
7.4	186	10.4	8.4	222	12.4	11.0	314	17.5
7.5	190	10.6	8.5	225	12.6	11.5	332	18.5
7.6	193	10.8	8.6	229	12.8	12.0	350	19.5
7.7	197	11.0	8.7	232	13.0	12.5	368	20.4
7.8	200	11.2	8.8	236	13.2	13.0	386	21.4
7.9	204	11.4	8.9	240	13.4	13.5	403	22.4

What tools are available for monitoring blood sugar at home?

Finger Stick Monitors	Continuous Glucose Monitors (CGM)
	
<p>Various brands are available. Cost is less than \$20 for the meter. Test strips and lancets must be purchased separately, although some may come with the original kit. Use this to check blood sugar any time you like.</p> <p>Requires a finger prick each time you test. Does not require a prescription to purchase. See next page of this handout for best monitoring strategies. Also check the chart (page 2) for how to assess your readings.</p>	<p>Various brands are available. Many require a prescription. Insurance may cover the cost; check with your carrier. CGM’s are usually worn on the back of your arm or on your abdomen. Wear continuously for 10–14 days (depends on the brand), then replace. Use an app on your smartphone to get your readings. Read the Healthline article below to learn more.</p>

Read [this article](#) from Healthline titled “7 Great Glucose Monitors and Meters” to compare the pros and cons of **finger-stick meters** versus **continuous monitors**.

What is a good range for blood sugar?

The American Diabetes Association (ADA) generally recommends the following target blood sugar levels:

Time of check	Target blood sugar levels for people <u>without</u> diabetes	Target blood sugar for people <u>with</u> diabetes
Before meals	Less than 100 mg/dL	80-130 mg/dL
1-2 hours after the start of a meal	Less than 140 mg/dL	Less than 180 mg/dL

Note that the goals for those with or without a diabetes diagnosis are different. The wider goal range for those with diabetes is mostly an effort to prevent low blood sugar for those taking insulin or medications that increase insulin release. This should not be confused with the overall mission (for all) of reducing blood sugar to the lowest achievable range. Tighter goals are discussed by Dr. Mowll in this podcast: "[How Often Should You Check Your Blood Sugar?](#)" (podcast is less than 20 minutes).

How often should I check my blood sugar?

You may be advised to "check your sugar 2-3 times per day." There is nothing wrong with checking some **random** blood sugars. However, **being more intentional about when and why you check** has some advantages. Checking blood sugar is all about GATHERING INFORMATION. It provides data that you can use to make better choices in the future, particularly regarding food selection, food timing, exercise and activity, sleep habits, etc. Let's make those finger sticks count! **Be strategic about it!**

STRATEGIC Blood Sugar Monitoring includes:

- BASELINE TESTING** - Need a time period at least 4-5 hours after eating. When you wake up in the morning is a good time to obtain this number. Another ideal time is before dinner, if it has been 4-5 hours since you have eaten. You don't need to do this every day. It won't be the same number every day anyway, and different things can affect it. We just want to know what the general range is, which you can learn by checking every few days to once/week.
- POSTPRANDIAL TESTING** = Measurement taken after eating.
 - **Check BEFORE eating the meal** to establish a baseline reading for that meal.
 - **Check at 1 hour** (after taking your first bite) to assess "glycemic response" or "peak response"
 - **Check at 2 hours** (after taking your first bite) to assess "glycemic control".

This type of testing can help you see how you respond to a variety of meals. Gather this information over time. Just pick one meal you want to know more about and give this a try. Use the log sheets later in this handout to record your numbers.

Are there other times it could be valuable to check?

- EXERCISE** - Check blood sugar before you begin and 30 minutes after.
- STRESSFUL TIMES** - Blood sugar can rise during stressful periods, partly due to the effect of cortisol (a "stress hormone").
- SICKNESS** - This is another form of stress on the body. Blood sugar may be higher than normal when you have an infection or experience illness of any kind.
- BEFORE BED** - If you have a tendency to have low blood sugar (hypoglycemia) at night, it would be valuable to check at this time. For most people, there is little value in checking before bed.

BASELINE TESTING LOG

MORNING LOG: Test within 30 minutes of waking up, before having coffee or anything besides water.

DATE	TIME	BLOOD SUGAR	COMMENTS

EVENING LOG: Test before dinner (4-5 hours since last snack or meal).

DATE	TIME	BLOOD SUGAR	COMMENTS

POSTPRANDIAL TESTING LOG

Use this to learn how specific foods, ingredients and meals affect your blood sugar.

DATE	TIME	FOOD TO TEST	BG* BEFORE EATING	@ 1 HR	@ 2 HRS	COMMENTS

*BG = Blood Glucose = Blood Sugar