



Association of
Diabetes Care & Education
Specialists



Managing Blood Sugar with Time-in-Range

You may know that the A1C test measures your average blood sugar level over the past 3 months. But have you heard of another measurement, called **time-in-range**?

Time-in-range, or TIR, is the amount of time your blood sugar level is in your target range, something your A1C doesn't tell you. Time-in-range is sometimes shown as the number of hours you spend in your target range per day. Knowing both your A1C and your time-in-range can help you better manage your blood sugar and stay healthy.

Learn about time-in-range — and use your own time-in-range to better manage your diabetes.

In this material, you'll learn:

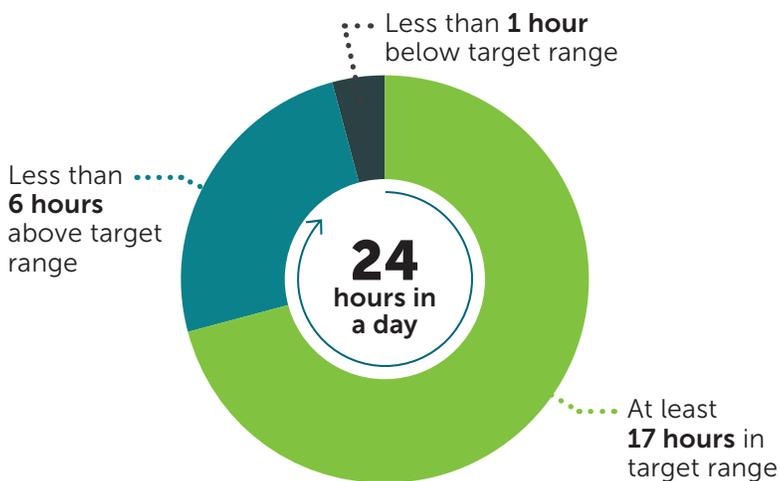
- What time-in-range is
- How to find out your time-in-range
- How to use time-in-range to manage your blood sugar
- How to meet your goal for time-in-range

What is time-in-range?

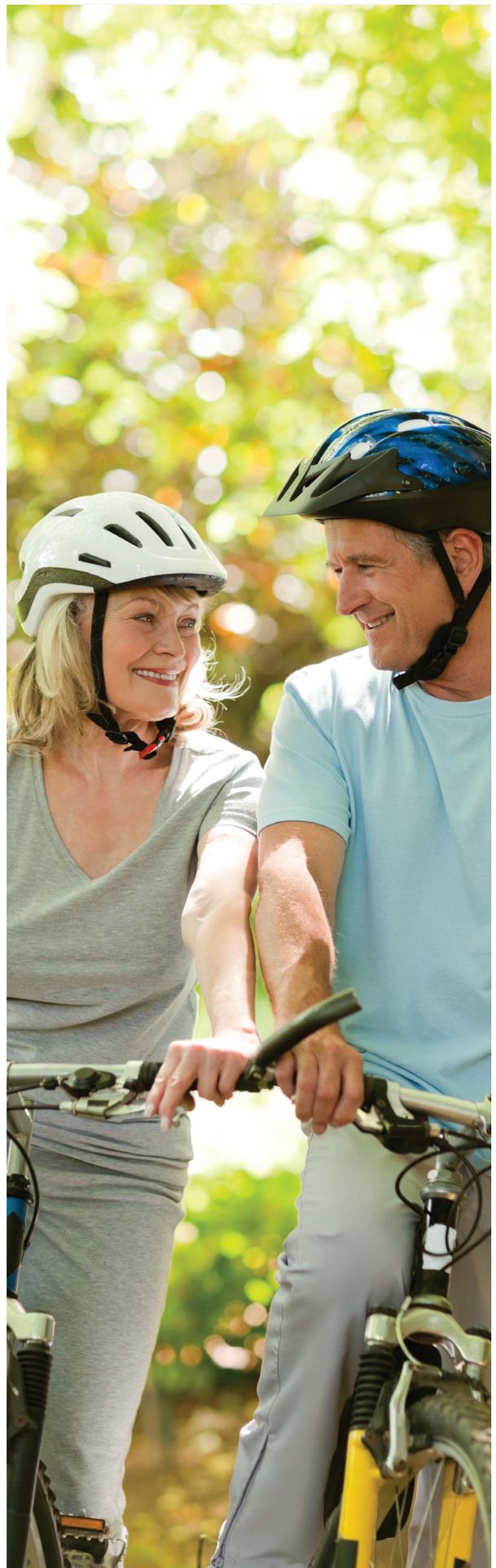
Time-in-range, or TIR, is the amount of time your blood sugar level is in your target range, which is your ideal blood sugar range. Many people have a target blood sugar range of 70 to 180 mg/dL (milligrams per deciliter), but this range isn't right for everyone. Work with your health care provider to figure out your own target range.

Experts recommend that most people with diabetes spend:

- ✔ At least 17 hours a day, or 70 percent of their time, in their target range (this means your A1C is likely less than 7)
- ✔ Less than 6 hours a day, or 25 percent of their time, above their target range
- ✔ Less than 1 hour a day, or 4 percent of their time, below their target range



Some people have different time-in-range goals than these. Talk with your health care provider to figure out the right time-in-range goal for you.

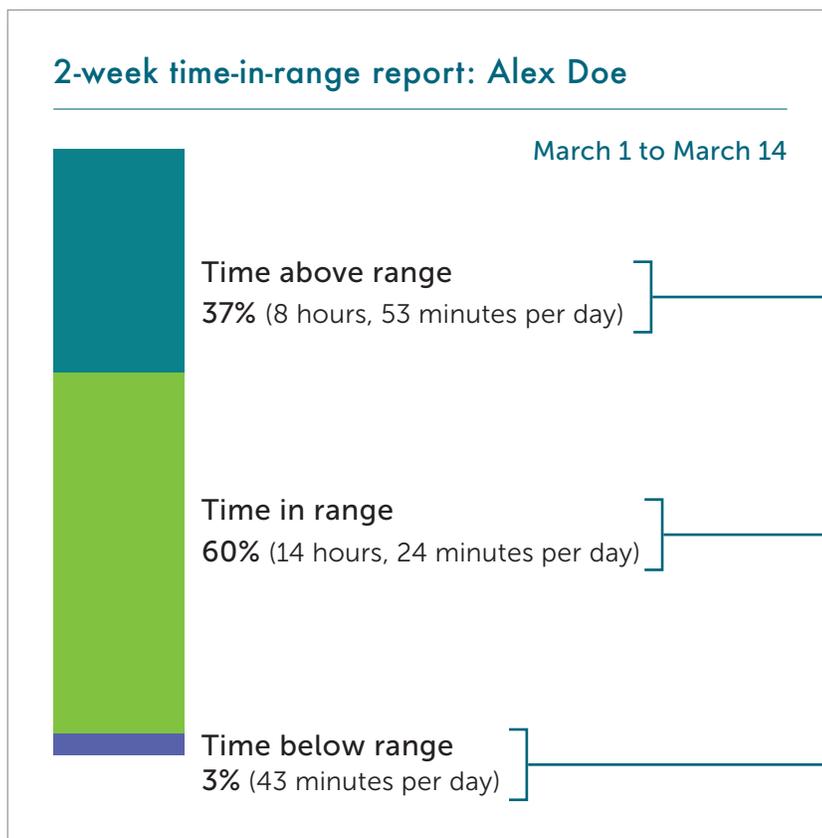


How do I find out my time-in-range?

If you use a continuous glucose monitor, or CGM, to check your blood sugar, the software or app that came with your CGM will automatically calculate your time-in-range (TIR).

Take a look at this sample time-in-range report for someone with diabetes. The report covers a 14-day period. It shows:

- How much time Alex Doe spent in their target range
- How much time they spent above their target range (high blood sugar)
- How much time they spent below their target range (low blood sugar)



Based on expert recommendations, Alex Doe:

- ⊗ Didn't meet their goal to spend less than 6 hours a day above their target range (**high blood sugar**)
- ⊗ Didn't meet their goal to spend at least 17 hours a day in their target range
- ✓ Met their goal to spend less than 1 hour a day below their target range (**low blood sugar**)

Your CGM app or software will provide reports with similar information. You can download the reports to your smartphone, tablet, or computer. The most accurate time-in-range reports include CGM readings from at least 14 days in a row.

How do I use time-in-range?

When you know your time-in-range (TIR), you can use it along with your A1C to better manage your blood sugar.

Your time-in-range report gives you information that can help you figure out if you need to make changes to your diabetes management plan. The report shows you exactly how much time you're spending in your target range — and how much time you're spending with high and low blood sugar. This can help you figure out what's causing your highs and lows.

For example, you might notice your time-in-range is different on a day when you ate thin-crust pizza than a day when you ate deep-dish pizza. Or maybe it's different on a day when you worked out than a day when you didn't.

When you understand what's causing your high and low blood sugar, you can make changes to help you feel better and reduce your risk for serious problems.

Tip: If you're not sure how to see or download your time-in-range information from your CGM, ask your health care provider for help.



How can I meet my goal for time-in-range?

There are lots of things you can do to help prevent high or low blood sugar and meet your time-in-range (TIR) goal. These AADE7 Self-Care Behaviors® from the Association of Diabetes Care & Education Specialists can help you meet your time-in-range goal more often:



Healthy eating. Eat a variety of colorful vegetables, fruits, whole grains, dairy, and lean proteins — like chicken, turkey, fish, eggs, and beans. And limit how much salt, sugar, saturated fat, and trans fat you eat. Talk with your health care provider to figure out the right eating pattern for you.



Being active. Anything that gets you moving instead of sitting counts as physical activity. Work with your health care provider to figure out the best way for you to stay active safely.



Monitoring. Knowing your time-in-range will help you figure out if you need to make changes to your diabetes management plan. Ask your health care provider what else you can do to monitor your health.



Taking medications. It's important to take your medicines at the right times and in the right amounts to manage your blood sugar. Try using a medication reminder app to make sure you don't skip a dose.



Problem solving. Sometimes even when you're following your treatment plan and making healthy choices, you still might have trouble meeting your time-in-range



goal. If this happens, work with your health care provider to figure out what the problem might be and what you can do about it.

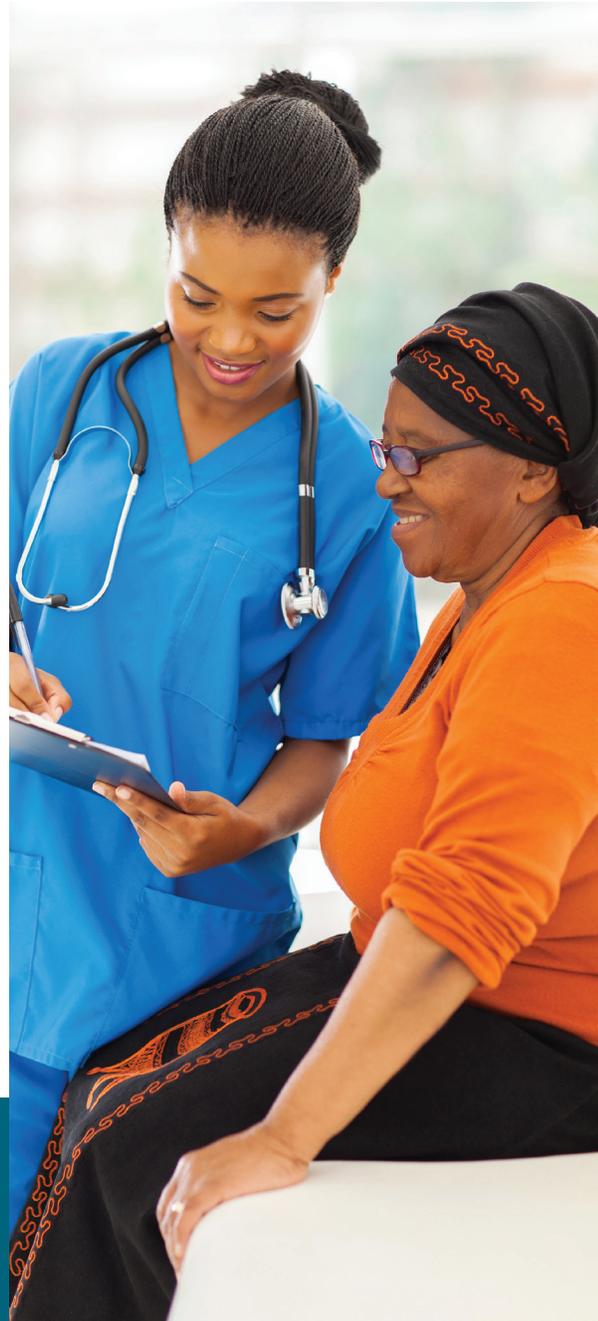


Healthy coping. Having a positive attitude about your diabetes management and positive relationships with others can help you stay healthy. But it's normal to have mixed feelings about your diabetes. If you're having trouble staying positive and keeping your stress levels low, ask your health care provider about resources or strategies you can try.



Reducing risks. Having diabetes makes other health problems more likely — but you can take steps to help prevent these. For example, it's important to get your shots and to get the health screenings your health care provider recommends. Ask your health care provider what else you can do to help prevent health problems.

Talk with your health care provider to learn how you can make time-in-range a regular part of your diabetes management.



You may access this time-in-range tip sheet at:

DiabetesEducator.org/GMonitoring

Developed in collaboration with

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