

# GLUCOSE MONITORING

## Recommendations



**In addition to the benefits associated with continuous glucose monitoring (CGM), studies have shown that using a structured schedule for blood glucose monitoring leads to better glucose management and more timely therapy adjustments.**

### WHEN TO CHECK GLUCOSE

Each person's monitoring schedule should be individualized, but it often hinges on the type of therapy being utilized. The American Association of Clinical Endocrinologists and the American Diabetes Association recommend the following:

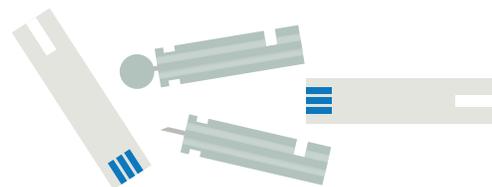
#### **THOSE USING INTENSIVE INSULIN THERAPY** (PUMP OR MULTIPLE DAILY INJECTIONS)

- Prior to meals, snacks and bedtime.
- Prior to exercise and driving (or other critical tasks).
- Occasionally 1-2 hours after meals.
- When low glucose is suspected and during recovery from lows.



#### **THOSE USING BASAL OR LONG-ACTING INSULIN ONLY**

- Fasting (upon waking).
- Bedtime.
- Periodically at other times of day (pre-meals, post-meals, middle of the night).



# Recommendations



## THOSE TAKING PREMIXED INSULIN ONCE OR TWICE DAILY

- Fasting.
- Before meals.
- Occasionally 1-2 hours after meals.

## NON-INSULIN USERS TAKING MEDS THAT CAN CAUSE HYPOGLYCEMIA

- Fasting.
- Periodically at other times of day (pre-meals, post-meals, middle of the night).

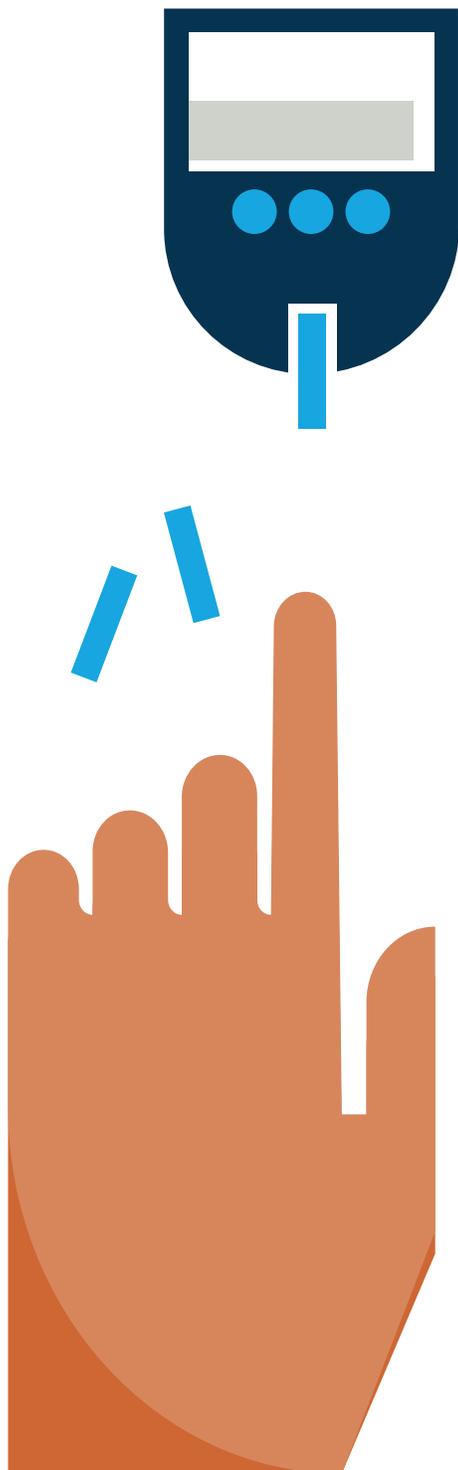
## WOMEN WITH GESTATIONAL DIABETES, NOT USING INSULIN

- Fasting.
- 1-hour post-meals.

## WHAT TO AIM FOR

Each person's glucose targets should be individualized and based on the recommendations of your healthcare providers. Certain conditions (pregnancy, presence or high risk of diabetes complications, low risk of hypoglycemia) may necessitate tighter targets.

Conditions like intensive insulin use, hypoglycemia unawareness, advanced or very young age, history of severe hypoglycemia, or unstable heart disease often require looser targets.



# Recommendations



## ENSURING ACCURACY

Research has shown that inaccurate glucose monitoring leads to an increased risk of hypoglycemia, more glucose variability and higher A1C levels. More accurate monitoring results in fewer lows and better A1C's.

One major source of meter inaccuracy is the design of the meter itself. Some meters are naturally more accurate than others. Current guidelines require meters to be within 15% of lab values at least 95% of the time. However, some meters are considerably more accurate than the bare minimum. This is important for those who base their insulin doses on meter readings. Check the product specifications section of the meter's user manual to see how often it is within 15%, 10%, and 5% of lab values. The higher the percentage of readings within these ranges, the more accurate the meter.

## OTHER FACTORS THAT CAN AFFECT ACCURACY

Underfilling test strips can cause errors in meters. Apply a blood sample to your strips. Any time the result is very different from what you expected, check again.

Alternate site testing (using blood samples from sites other than fingertips) may produce lower-than-actual readings when the glucose is rising quickly, and higher-than-actual readings when it is falling quickly. Use fingers for checking after meals and during exercise.

Contaminants on the skin (food, lotion, dirt) can artificially raise readings. Clean the skin before checking.

Extreme environmental conditions (altitude, temperature, humidity) can also influence meter accuracy. Check the meter manual for the conditions under which the meter is deemed accurate.

## BENEFITING FROM YOUR DATA

Reviewing data more often can lead to better glucose management, faster adjustment to changing conditions, better ability to predict and prevent hypoglycemia, a more positive approach to self-monitoring, and a reduced risk of complications and hospitalizations. Diabetes care and education specialists are uniquely qualified to help you analyze your glucose records and teach you how to evaluate your own data. Learn more at [DiabetesEducator.org/GlucoseMonitoring](https://DiabetesEducator.org/GlucoseMonitoring).

