CONTINUOUS GLUCOSE MONITORING AND INTERFERRING SUBSTANCES

Abott/Freestyle Reference 3 and 4	**Freestyle Libre 14 Day:** **Aspirin:** Medications that contain salicylates, like aspirin, may interfere with sensor glucose readings. **FreeStyle Libre 2 and Libre 3:** **Vitamin C (ascorbic acid):** Taking more than 500 mg of ascorbic acid per day may falsely raise the sensor glucose readings. This could cause you to miss a severe low glucose event. **FreeStyle Libre 2 Plus**: **Vitamin C (ascorbic acid):** Taking more than 1000 mg of Vitamin C per day may falsely raise sensor glucose readings. This could cause a missed severe low glucose event. **Lingo:** **Vitamin C (ascorbic acid):** Taking more than 1000 mg of Vitamin C per day may falsely raise sensor glucose readings. This could cause a missed severe low glucose event. *Vitamin C can be found in supplements including multivitamins and cold remedies such as Airborne® and Emergen-C®. Vitamin C is active in the body for ~12-24 hours, maximal deviation 2-3 hours after ingestion.*
Dexcom Reference 5, 6 and 7	**Stelo, G6 and G7:** **Hydroxyurea** can cause your glucose readings to be higher than your actual glucose, which could result in missed hypoglycemia alerts. **Acetaminophen** more than 1 gram every 6 hours (>4 gm/day) in adults may falsely elevate your sensor glucose readings. **Hydroxyurea: an antineoplastic drug with brand names: Hydrea, Litalir, Droxia, and Siklos. Used primarily in some chemotherapy and treatment of sickle cell anemia*.
Medtronic Guardian Reference 8	**Guardian 3 and Guardian 4:** **Hydroxyurea** can cause your glucose readings to be higher than your actual glucose, which could result in missed hypoglycemia alerts. **Acetaminophen** any dose may falsely elevate your sensor glucose readings. *Acetaminophen can affect glucose up to 8 hours after ingestion*
Senseonics Eversense Reference 1	**Mannitol or Sorbitol** delivered intravenously or via peritoneal dialysis may cause falsely elevated glucose readings. **Tetracycline** may interfere with glucose readings, check with BG value.

2025 ADA Standards of Care recommends clinicians review factors that may affect accuracy, including medications and supplements, for potential interfering substances.[1] Advise blood glucose testing if sensor glucose values are unreliable![1]

Contributed by Christine Craig, MS, RD, CDCES - Founder, Nutrition for Daily Living. Created 4/2024. Updated 1/2025

Courtesy of Diabetes Education Services www.DiabetesEd.net For educational purposes only.

CONTINUOUS GLUCOSE MONITORING AND INTERFERRING SUBSTANCES

Other considerations when Sensor Glucose is different from Blood Glucose:

- **SG does not equal BG:** Physiological differences between the interstitial fluid (sensor glucose) and blood glucose (glucose meter) may result in differences in glucose readings from CGM and blood glucose readings. These differences may be observed most significantly during times of rapid change in blood glucose, such as after eating, dosing insulin, or exercising.
- **Compression of sensor:** Review patient positioning and questionable low glucose event. Compression lows occur most often overnight due to sleeping directly on the sensor. Other factors: placement around a beltline, other very tight clothing restrictions, or if positioned within the interior of the upper arm.
- **Consider insertion site selection and proper taping (when indicated) technique.** Check skin integrity (thinness of skin or loose skin), scar tissue or other individual placement concerns. Review each manufacturer's recommended insertion techniques and troubleshoot individual patient requirements for sensor site selection.

Freestyle Libre 3 and 4 are the only sensors currently on the market able to be worn during 1.5T and 3T magnetic resonance imaging (MRI), data may be inaccurate during and up to 1 hour after.[3] Eversense's transmitter must be removed before MRI procedure.

References:

1. American Diabetes Association Professional Practice Committee; 7. Diabetes Technology: Standards of Care in Diabetes—2025. *Diabetes Care* 1 January 2025; 48 (Supplement_1): S146–S166. https://doi.org/10.2337/dc25-S007

2. Heinemann L. Interferences With CGM Systems: Practical Relevance? J Diabetes Sci Technol. 2022 Mar;16(2):271-274. doi: 10.1177/19322968211065065. Epub 2021 Dec 15. PMID: 34911382; PMCID: PMC8861798.

3. Full Indications and Important Safety Information. Download On April 17th 2024 From: https://www.freestyle.abbott/us-en/safety-information.html

4. Lingo Safety Information. Downloaded on January 26th, 2025 from https://cms-d.hellolingo.com/content/dam/bts/bluebird/dtc/us/safety/Lingo_Safety_Info_July2024.pdf

5. Stelo User Guide. Downloaded on January 26th, 2025 from https://dexcompdf.s3.us-west-2.amazonaws.com/Stelo/AW-1000421-10+Stelo+User+Guide.pdf

6. Interfering Substances and Risks. Downloaded on April 17th 2024 from: https://www.dexcom.com/en-us/interference.

7. Dexcom G7 Safety Information. Downloaded on April 17th 2024 from: https://dexcompdf.s3.us-west-2.amazonaws.com/en-us/G7-CGM-Users-Guide.pdf#page=12

8. Medtronic Device Safety Information. Downloaded on April 17th, 2024 from: https://www.medtronicdiabetes.com/important-safety-information

9. Maahs DM, DeSalvo D, Pyle L, Ly T, Messer L, Clinton P, Westfall E, Wadwa RP, Buckingham B. Effect of acetaminophen on CGM glucose in an outpatient setting. Diabetes Care. 2015 Oct;38(10):e158-9.

Contributed by Christine Craig, MS, RD, CDCES - Founder, Nutrition for Daily Living. Created 4/2024. Updated 1/2025

Courtesy of Diabetes Education Services www.DiabetesEd.net For educational purposes only.