

Diabetes Sick Day Management

COVID-19 is associated with worse outcomes in patients with diabetes.

Coronavirus disease 2019 (COVID-19) caused by a novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has been associated with worse outcomes in patient with comorbidities including diabetes. Reports from past viral pandemics and early data from the current COVID-19 outbreak show an association between diabetes and viral infection leading to an increase prevalence of severe pneumonia, hospitalization, ICU admission, and mortality.

How do we help our patients with diabetes stay safe?

- Patients with diabetes should be encouraged to follow the Center for Disease Control and Prevention (CDC) recommendations to prevent the spread of COVID-19. The CDC has a [fact sheet](#) that can be utilized for patient education.
- Providers can prepare patients for self-management of diabetes during illness by providing a sick day plan and education to avoid uncontrolled hyperglycemia, dehydration, ketoacidosis, and severe hypoglycemia. The American Diabetes Association (ADA) has a [website](#) devoted to patient education on COVID-19 and sick day management.
- Referrals to the [Diabetes Educator Program](#) are encouraged to help support patients during these unique times. The AAMG Diabetes and Endocrinology Specialists office is holding telemedicine education appointments for patients whose diabetes care is managed by their primary care providers. Topics covered during these sessions may include how to plan meals with more limited food choices and how to exercise safely while staying at home.

Are there any recent updates on diabetes sick day management?

Traditional sick day management guidance still applies; however, with the addition of SGLT2 inhibitors and continuous glucose monitoring devices there have been recent updates

- Educate the patient not to avoid seeking help due to concerns about COVID-19 transmission
- Ensure patient has the necessary diabetes supplies: Glucometer, test strips, lancets, ketone test strips and an adequate supply of medication.
- Tell the patient to bring their testing supplies with them if they seek emergency or hospital care.
- Encourage the patient to stay well hydrated and eat regular meals. If they cannot eat regular meals, they can use simple carbohydrates like Jell-O or popsicles to avoid hypoglycemia.
- Have the patient check their blood glucose more often. If the patient is using a continuous glucose monitor provide education on medications that can interfere with readings.
- Have the patient monitor for blood or urine ketones. Urine test strips deteriorate within a month of opening the bottle. Ensure a fresh bottle is available.
- Hold SGLT2 inhibitors. Insulin doses may need to be titrated based on blood glucose levels

Why instruct patients to bring their testing supplies if they seek emergency or hospital care?

The Food and Drug Association (FDA) provided [guidance](#) that home glucometers may be used by patients with diabetes who are hospitalized to check their own blood glucose and provide the readings to the health care personnel caring for them to help limit exposure to COVID-19 and conserve PPE. **Why hold SGLT2 inhibitors?**

SGLT2 Inhibitors include canagliflozin (Invokana), dapagliflozin (Farxiga), and empagliflozin (Jardiance). These medications decrease plasma glucose by blocking the reabsorption of glucose in the kidney at the proximal tubule. In 2015, the FDA added a [warning](#) to the labeling of SGLT2 inhibitors because of an association with diabetic ketoacidosis (DKA). SGLT2 inhibitor-induced DKA is infrequent, but may occur at lower than expected glucose levels (euglycemic DKA). Early recognition and holding of SGLT2 inhibitors in situations that could precipitate DKA like acute viral illness is essential.

How can patients utilize continuous glucose monitoring (CGM) technology for sick day management?

CGM can provide a constant full picture of blood glucose levels throughout the day. The CGM monitors have predictive technology that can be used during sick day management to determine whether the glucose is continuing to rise, fall, or remaining stable. This feature helps patients determine if interventions are needed ahead of time to prevent significant hyper- or hypo- glycemia. Some CGM systems are not FDA approved to make treatment decisions such as insulin dose adjustments without confirmation from a finger stick. Also, various medications have been shown to affect the accuracy of CGM devices. Check the product guide for the device prior to giving guidance.

	Dexcom G6	Freestyle Libre Flash	Guardian Connect or Guardian 3	Eversense
FDA approved to make treatment decisions	Yes	Yes	No	Yes
Medication interactions	None	Vitamin C: false high High-doses of aspirin: false low	Acetaminophen: false high	Tetracycline: false low

Are there resources for patients that cannot afford their insulin due to the current economic crisis?

The Association of Diabetes Care and Education Specialists has a comprehensive [insulin cost-saving resource guide](#) that is updated frequently. Providers can also call "One Call" Care Management (443-481-5652) with the name and information of the patient that is unable to afford medications. The "One Call" Care Manager may refer the patient to the Ambulatory Care Pharmacists for recommendations on formulary alternatives, a therapeutic interchange, or other cost-saving measures. This service is not restricted to diabetes.

Other resources: The American Diabetes Association has a [COVID-19 webinar series](#) that reviews sick day management and more. This information is also available on their podcast: Diabetes Core Update